

# DICTIONARY OF ARTIFACTS

Barbara Ann Kipfer

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المنارة للاستشارات



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# PREFACE

*A Dictionary of Artifacts* is for students, archaeology professors, archaeologists, museum staff, archaeology volunteers, and general readers who want informative definitions in accessible language about the vocabulary describing artifacts. More than 2000 entries cover all aspects of artifacts: specific artifact types, prominent examples of artifacts, technological terms, culture periods, words associated with the making of and description of artifacts (including materials and methods), principles and techniques of examination and identification, and terms regarding the care and preservation of specimens.

Artifacts are anything made and/or used by humans, including tools, containers, manufacturing debris, and food remains. The coverage includes vocabulary used to describe artifacts (e.g., plaited, tenoned), vocabulary concerned with their discovery, analysis, typology, dating, and conservation (e.g., cordage, seriation), and types of basic artifacts (e.g., abrader, milling stone). This is neither an encyclopedia nor an encyclopedic dictionary. This book does not include architecture (e.g., building components, features) or specific historical artifacts (e.g., the Hope Diamond). Only very major subtypes are defined; for example, not every type of adze, point, or ware is included. Major time periods are included, but only the ones that are fairly uncontroversial and those referred to in the definitions of other entries.

The entries in this book are terms regarding:

- artifact analysis, examination, and identification
- artifact care, handling, and preservation
- artifact decoration
- artifact description (shape, use-wear, function)
- artifact production and technology (including materials and methods)

- prominent examples of artifacts (but not every type of adze, point, ware, etc.)
- specific artifact types (in bone/horn, ceramic, glass, lithic, metal, shell, textile/basket, wood, etc.)

Knowledge about artifacts is helpful to students in many areas, especially in the field and on visits to museums. Artifacts are the tangible remains of our ancestors and awareness of them and their importance is beneficial to a student's well-rounded education. *A Dictionary of Artifacts* will also be useful for teaching. However, many very technological and methodological entries that are only of interest to professional archaeologists are not included, as well as the thousands of possible pottery types and – if you think about it – the whole gamut of possible artifacts (cell phone, cellophane tape!?).

While most archaeologists generally know the meaning of terms used in the areas of their own research, it is often difficult to find good definitions of artifacts for unfamiliar time periods or cultures. This book attempts to be cross-cultural and cross-Atlantic in selections and definitions. A certain number of out-of-date terms are defined because these terms appear in literature that is still read.

This book is an especially good introduction to the world of artifacts, culling the types of entries that are found in larger and more general archaeological dictionaries and adding to that list in useful ways without getting overly technical or specialized. The reader will not find very specific artifacts, all possible cultures, all of the highly technical words for a field – such as all the techniques and materials used for preserving ceramics or lithics in the laboratory. *A Dictionary of Artifacts* puts into one place the basic terminology for all categories of artifacts.

Barbara Ann Kipfer, PhD

# ACKNOWLEDGMENTS

Bronze Age looped palstave ax. Courtesy of Museum Reproductions; Department of Archaeology Teaching Collection, University of Reading

Egyptian basket, New Kingdom, 1411–1375 BC. Courtesy of akg-images

Clay tablet showing record of food supplies, from southern Iraq, c. 3000 BC. Courtesy of British Museum

Hymn to Ur-Nammu, cuneiform script on clay, c. 2060 BC. Courtesy of akg-images

Knives. Courtesy of akg-images

Mud brick from Thebes stamped with name of Ramesses II, 19th Dynasty, 1250 BC. Courtesy of British Museum

Piece mold: terracotta mold of a man on horseback, Mesopotamia, 2000–1600 BC. Courtesy of British Museum

Pressure-flaked blade: ripple flaked flint knife, Egyptian, late Predynastic period, c. 3200 BC. Courtesy of British Museum

Woodland vessel. Courtesy of University of Arkansas Museum



# A

**abacus:** a calculating table or frame, specifically one in which balls slide upon wires, used for the mechanical solution of arithmetical problems.

**Abbevillian:** name for the period of the earliest hand-ax industries of Europe, taken from Abbeville, the type site near the mouth of the River Somme in northern France. The site is a gravel pit in which crudely chipped oval or pear-shaped hand axes were discovered, probably dating to the Mindel glaciation. This was one of the key places which showed that man was of great antiquity. In 1939, Abbé Breuil proposed the name Abbevillian for both the hand ax and the industry, which preceded the Acheulian in Europe.

**Abejas phase:** first important agricultural phase in the Tehuacan Valley of Mexico, dated 3500–1500 BC, after the introduction of maize.

**Abingdon ware:** a Neolithic pottery c. 3900–3200 BC, found in a causewayed camp about 15 km south of Oxford, England. The pottery is fairly heavy and formed into round-bottomed bowls with frequent-stroke decoration and some having handles.

**abrade:** to scrape or wear away by friction or erosion. [abrasion (n.)]

**abrader:** a stone tool with abrasive qualities, such as pumice or sandstone, used in grinding, smoothing, sharpening, or shaping tools or other objects. [abrading stone]

**absolute age:** amount of time elapsed, with reference to a specific time scale, since an object was made or used.

**absolute dating:** determination of age with reference to a specific time scale, such as a fixed calendrical system or in years before present (BP), based on measurable physical and chemical qualities or historical associations such as coins and written records. The date on a coin is an absolute date, as are AD 1492 and 501 BC. [see relative dating]

**absorption:** process by which a liquid is drawn into and fills the pores of a permeable, porous body.

**Abydos, tablets of:** two hieroglyphic inscriptions containing the names of Egyptian kings that were found on the walls in a small temple at Abydos, Egypt. The first tablet has the names of the kings of the 12th and 18th dynasties and it is now in the British Museum. The second tablet begins with Menes, one of the first kings of Egypt, and has a complete list of the first two dynasties as well as a number of names from the 3rd, 4th, 5th, 6th, 9th, 10th, and 11th dynasties. It was discovered in 1864 by Auguste Mariette, who published the book *Abydos* in 1869.

**Abydos ware:** pottery of Canaanite (Syro-Palestinian) origin found in the royal tombs of the 1st and 2nd dynasties (the Old Kingdom) at Abydos, Saqqara, Abusir el-Melek, and other sites in Upper Egypt, dating to the Early Bronze Age II (3300–2700 BC). The pottery, often red-rose slipped and burnished or painted with geometric motifs, includes jugs, bottles, and jars. Most common are the red-slipped jugs, some of a hard-baked “metallic” quality, with handles attached to the rim and a typical stamped base. This pottery class took its name from Abydos, the first site at which it was found, in Upper Egypt.

**acanthus:** conventionalized representation of the leaf of the *Acanthus spinosus* plant, found on the lower parts of Corinthian and Composite capitals, and also used for enrichment of various elements in Classical architecture.

**accession:** an object acquired by a museum or collector as a part of a permanent collection; also, the act of processing and recording an addition to a permanent collection.

**accession catalog:** an accounting system used in the lab after artifacts and ecofacts are initially processed and providing the numbers with which artifacts and ecofacts are marked for storage. Its records describe and record what was found during an archaeological investigation and it is the primary record for all materials after excavation. [accession catalogue]

**accession number:** number assigned to an archaeological collection that identifies its origin; part of the catalog number.

**aceramic:** without pottery or not using pottery; a term applied to periods and societies in which pottery is not used, especially in contrast to other periods of ceramic use and with neighboring ceramic cultures. Aceramic societies may use bark, basketry, gourds, leather, etc. for containers.

**Aceramic Neolithic:** early part of the Neolithic period in western Asia before the widespread use of pottery (c. 8500–6000 BC) in an economy based on the cultivation of crops or the rearing of animals or both. Aceramic Neolithic groups were in the Levant (Pre-Pottery Neolithic A and B), Zagros area (Karim Shahir, Jarmoan), and

Anatolia (Hacilar Aceramic Neolithic). Aceramic Neolithic groups are rarer outside western Asia.

**Acheulian:** a European culture of the Lower Paleolithic period named for Saint-Acheul, a town in northern France, the site of numerous stone artifacts from the period. The conventional borderline between Abbevillian and Acheulian is marked by a technological innovation in the working of stone implements, the use of a flaking tool of soft material (wood, bone, antler) in place of a hammerstone. This culture is noted for its hefty multipurpose, pointed (or almond-shaped) hand axes, flat-edged cleaving tools, and other bifacial stone tools with multiple cutting edges. The Acheulian flourished in Africa, western Europe, and southern Asia from over a million years ago until less than 100,000 years ago and is commonly associated with *Homo erectus*. This progressive tool industry was the first to use regular bifacial flaking. The term *Epoque de St Acheul* was introduced by Gabriel de Mortillet in 1872 and is still used occasionally, but after 1925 the idea of epochs began to be supplanted by that of cultures and traditions and it is in this sense that the term Acheulian is more often used today. The earliest assemblages are often rather similar to the Oldowan at such sites as Olduvai Gorge. Subsequent hand-ax assemblages are found over most of Africa, southern Asia, and western and southern Europe. The earliest appearance of hand axes in Europe is still referred to by some workers as Abbevillian, denoting a stage when hand axes were still made with crude, irregular devices. The type site, near Amiens in the Somme Valley, contained large hand-ax assemblages from around the time of the penultimate interglacial and the succeeding glacial period (Riss), perhaps some 200,000–300,000 years ago. Acheulian hand axes are still found around the time of the last interglacial period, and hand axes are common in one part of the succeeding Mousterian period (the Mousterian of Acheulian tradition) down to as recently as 40,000 years ago. Acheulian is also used to describe the period when this culture existed. In African terminology, the entire series of hand-ax industries is called Acheulian, and the earlier phases of the African Acheulian equate with the Abbevillian of Europe. [Acheulean, Acheulian industry]

**Achzib ware:** a Phoenician, Iron Age II, red-slip pottery type consisting primarily of jugs with a trefoil mouth of “mushroom” rims, red slipped, and highly burnished.

**acid etching:** use of hydrofluoric acid to etch a pattern onto a glass surface.

**acinaces:** a short sword or scimitar, often very short and worn suspended from a belt around the waist, and used by Eastern nations of antiquity, especially the Medes, Persians, and Scythians.

- acisculus:** a small pick used by stone-cutters and masons in early Roman times.
- aclis:** a small javelin or harpoon, consisting of a thick short pole set with spikes. This massive weapon resembles a trident or angon. [aclys, aclyx]
- acoustic vase:** large earthenware or bronze vases that were used to strengthen actors' voices and were placed in bell towers to help boost the sound of church bells. A church in Westphalia contains fine 9th-century Badorf wares, and larger relief-band amphorae were used in 10th- and 11th-century churches. [acoustic vessel]
- acquisition:** first stage of the behavioral processes (followed by manufacture, use, and deposition), in which raw materials are procured.
- acratophorum:** a Greek and Roman table vessel for holding pure wine, as opposed to the crater which held wine mixed with water. This vessel was often made of earthenware and metal, though some were gold or silver.
- acrolith:** a Greek statue, of which the head and extremities were of stone or marble and the trunk crafted of wood which was either gilt or draped. The acrolith period was the infancy of Greek plastic art.
- acroterion:** a sculptured figure, tripod, disk, or urn, made of bronze, marble, or terra cotta, placed on the apex of the pediment of a Greek temple or other substantial building.
- activity:** used to describe the customary use of a given artifact, such as food preparation.
- activity area:** 1. A place where a specific ancient activity was located or carried out, such as food preparation or stone toolmaking. The place usually corresponded to one or more features and associated artifacts and ecofacts. In American archaeology, the term describes the smallest observable component of a settlement site. 2. A patterning of artifacts in a site indicating that a specific activity, such as stone toolmaking, took place.
- activity set:** a set of artifacts that reveals the activities of a person.
- acute:** in lithics, severe short angles coming to a sharp point.
- AD:** used as a prefix to a date, it indicates years after the birth of Christ or the beginning of the Christian calendar. Anno Domini (Latin) means "In the year of our Lord." The lower case "ad" represents uncalibrated radiocarbon years and AD denotes a calibrated radiocarbon date or a historic date that does not need calibration. There is no year 0; 1 BC is followed by AD 1.
- additive:** an organic or mineral material mixed with clay by the potter to modify its properties in forming, drying, and firing. [temper]
- additive technology:** manufacturing processes in which material is added to an original mass to form an artifact. Ceramic production and basketmaking are additive technologies.



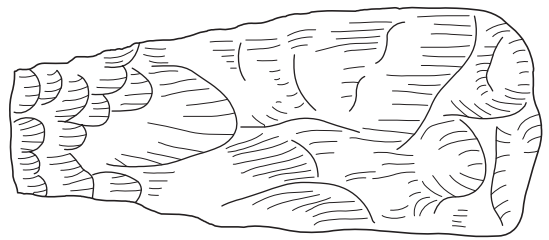
**Adena:** a widespread Native American culture of the Early Woodland period in the Ohio Valley and named after the Adena Mounds of Ross County. It is known for its ceremonial and complex burial practices involving the construction of mounds and by a high level of craftwork and pottery. It is dated from as early as c. 1250 BC and flourished between c. 700 and 200 BC. It is ancestral to the Hopewell culture in that region. It was also remarkable for long-distance trading and the beginnings of agriculture. The mounds (e.g., Grave Creek Mound) are usually conical and they became most common around 500 BC. There was also cremation. Artifacts include birdstones, blocked-end smoking pipes, boatstones, cord-marked pottery, engraved stone tablets, and hammerstones. Artifacts distinctive of Adena include a tubular pipe style, mica cutouts, copper bracelets and cutouts, incised tablets, stemmed projectile points, oval bifaces, concave and reel-shaped gorgets, and thick ceramic vessels decorated with incised geometric designs. [Adena point]

**Adena-Rossville point:** contracting stemmed point with a narrower section at the base than the main part of the arrowhead point.

**adobe:** Spanish term for sun-dried mud brick; also the name for a structure built out of this material. These claylike buff or brown mud bricks were not fired, but hardened and dried in the sun. The material was also used as mortar, plaster, and amorphous building material for walls. Adobe structures are found in the southwestern US and Mexico where there is heavy-textured clay soil and a sunny climate. These structures were often houses, temples, and large solid platforms in the shape of truncated pyramids.

**adsorption:** capacity of a material to accept and retain another substance, such as moisture, on its surface.

**adze:** a cutting tool, similar to an ax, in which the blade is set at right angles to the handle or haft. One of the earliest tools, it was widely distributed in Stone Age cultures in the form of a handheld stone chipped to form a blade. By Egyptian times, it was made of stone, metal, or shell and had acquired the handle. It is distinguished from the ax (working edge parallel with the haft) by its asymmetrical cross-section. This carpenter's tool was used for rough dressing of timber and possibly for tree felling and for hollowing out a dugout canoe. The adze also was used in the ritual ceremony "opening of the mouth" in Egypt; touching it to the mouth of the mummy or statue of the deceased was thought to restore the senses. [adz, adze blade]



Adze

**adze hammer:** a shaft-hole adze with additional hammer knob, normally of polished stone.

**Aeginetan marbles:** archaic Greek sculpture discovered in the temple of Pallas-Athene at Aegina, an island in the Saronic group of Greece. They are in the Glyptothek at Munich, Germany. Aegina's period of glory was the 5th century BC, which left a legacy of sculpture.

**aegis:** a shield or defensive armor in ancient mythology, from the Greek word for shield; also used to describe the representation of a necklace on the head of a deity.

**egyptiaca:** a term sometimes applied to Egyptian objects found outside the borders of Egypt.

**aeolipilae:** name of a Greek metal vase with a narrow opening. It was filled with water and placed on a fire to make the chimney draw better or to indicate the wind's direction. [aeolipylae, eolipyle]

**aestel:** an object to point at words whilst reading.

**African red-slip ware:** a type of red gloss pottery made in North Africa from the 3rd to 6th centuries AD. The pieces had stamped decoration and were widely distributed.

**agate glass:** a striped-pattern glass created by mixing molten glass of different colors. The colored bands resemble those of natural agate.

**agateware:** any pottery that is veined and mottled to resemble agate.

**Age of Discovery:** a time of Western expansion through European exploration, discovery, and enlightenment about the world, which occurred from about the 15th through the 18th centuries, c. 1515–1800.

**aggregate:** an inert component such as grog or potter's flint in ceramic bodies (especially triaxial bodies). [filler, temper]

**aging:** storing prepared ceramic material (as a wet plastic clay body) to improve its working properties by thorough wetting of particles, slow compression, bacterial action (souring), and other processes.

**aiguille:** a needle-shaped drill for boring holes in rock or masonry.

**Ajuerado phase:** earliest phase of pre-village, pre-agriculture in Tehuacan Valley, Mexico, from c. 7200 to 7000 BC. There was hunting and gathering.

**alabaster:** a term used by Egyptologists for a type of white, semitransparent or translucent stone used in statuary, vases, sarcophagi, and architecture. It is a form of limestone (calcium carbonate), sometimes described as travertine. It was used increasingly from the Early Dynastic period for funerary vessels as well as for statuary and altars. Alabaster is found in Middle Egypt, a main source being Hatnub, southeast of el-Amarna. The sarcophagi of Seti I (British Museum) is a fine example. An alabaster (also alabastron or alabastrum) is also the name of a small vase or jar for precious perfumes or oils made of this material. It was often globular with a narrow mouth and often without handles.

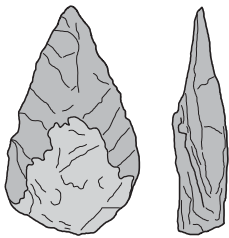
- alabastron:** a Greek container made of alabaster, but sometimes clay, used for unguents. [alabastrum]
- albarello:** a late medieval (15th to 18th centuries) Near East, Spanish, and Italian apothecary pottery jar. It was made in the form known as majolica or with a fine tin glaze over typically blue designs imitating the forms of Arabic script. Its basic shape was cylindrical but incurved and wide-mouthed for holding, using, and shelving. They average 18 cm (7 inches) high and are free of handles, lips, and spouts. A piece of paper or parchment was tied around the rim as a cover for the jar. Drug jars from Persia, Syria, and Egypt were introduced into Italy by the 15th century, and luster-decorated pots influenced by the Moors in Spain entered through Sicily. Spanish and Islamic influence is apparent in the colors used in the decoration of early 15th-century Italian albarelli, which are often blue on white. A conventional oak-leaf and floral design, combining handsomely with heraldic shields or with scrollwork and an inscribed label, frequently occurs. Geometric patterns are also common. By the end of the 18th century, albarelli had yielded to other containers. Albarelli have occasionally been found in Britain and the Netherlands. [albarelli (pl.)]
- albarium:** a white lime coating or type of stucco used in Roman times, used to cover brick walls after cement was applied. The mixture contained chalk, plaster, and white marble.
- album:** in Roman and Greek antiquity, a blank tablet on which praetors' edicts and other public notices were recorded for public information. It was also a space on the surface of a wall, covered with white plaster, upon which were written such announcements or advertisements. Afterwards, this term was extended to denote any kind of white tablets bearing an inscription.
- alembic:** a round apparatus formerly used in distilling, consisting of a cucurbit or gourd-shaped vessel containing the substance to be distilled and the upper part, the alembic proper, which was a head or cap. The beak or downward-sloping spout of the apparatus conveyed the condensed product to another vessel.
- Alexandrinum:** a type of mosaic used especially for Roman rooms, notably in the 9th century. It used tiny, geometrically shaped pieces of colored stone and glass paste that were arranged in intricate geometric patterns dotted with large disks of semiprecious stones. It often was of only two colors, red and black, on a white ground.
- Alfred Jewel:** an elaborate gold ornament which is an example of 9th-century Anglo-Saxon craftsmanship and found at Somerset, England in 1893 (now in Ashmolean Museum, Oxford). It consists of an enameled plaque with an oval portrait in different-colored cloisonné, enhanced with filigree wire and backed by a flat piece of gold engraved with

foliate decoration. Engraved around the frame are the Old English words which translate to “Alfred ordered me to be made,” assumed to be King Alfred.

**alkaline glaze:** a relatively low-fired glaze with a high concentration of alkali elements in its composition, often with wood ash in significant quantity.

**Allerød oscillation:** an interstadial (transient) period of glacial retreat at the close of the Würm glacial stage in Europe, dated to c. 12,000–11,000 years ago. This temporary increase in warmth allowed forests to establish themselves for a time in the ice-free zones. Radiocarbon dates show similar conditions prevailed in North America at about the same time. It was followed by another cold, glacial advance.

**alloy:** any of a number of substances which are a mixture of two or more metals, such as bronze (copper and tin), brass (copper and zinc), or tumbaga (copper and gold). An alloy has properties superior to those of the individual metals. They are not simple mixtures, but complex crystalline structures that may differ considerably from any of their constituents. Slight alterations of the proportions of the metals can bring significant changes in the properties of the alloy. Alloys containing only two major metals are known as binary alloys and those with three as ternary alloys. Gold is alloyed with various metals; when mixed with mercury it is called an amalgam, and with silver, it is called native gold. Bronze was the most important alloy in antiquity. The term is also used to describe the technique of mixing the metals.



**all-purpose tool:** a rare stone artifact that could be used for perforating, cutting, and scraping – normally larger than a thumb scraper or a drill but smaller than a large knife or scraper. It always has one end worked to a point for perforation with the opposite end worked in the form of an end scraper. One side is worked rather delicately for use as a knife. It is almost always oblong in shape.

**altarpiece:** a decorative piece connected to the altar.

**alternate flaking:** the opposite face of each edge is steeply flaked and each face opposing the beveled edge is flatly flaked.

**alternating retouch:** retouch that occurs on an edge of a lithic flake in such a way that it alternates between the dorsal and ventral sides from one end to the other of the edge. [alternate retouch]

**Altitheermal:** a warm, dry postglacial period in the western United States c. 5600–2500 BC. Coined by Ernst Antev in 1948, the term describes a time during which temperatures were warmer than at present. Other terms, like “long drought,” are also used.

**Amarna period:** a phase in the late 18th dynasty, including the reigns of Akhenaten, Smenkhkare, Tutankhamen, and Ay (1379–1352 BC), when important religious and artistic changes took place. The name is derived from the site of Akhenaten’s capital at Tell el-Amarna.

**amber:** fossilized pine resin, a transparent yellow, orange, or reddish-brown material from coniferous trees. It is amorphous, having a specific gravity of 1.05–1.10 and a hardness of 2–2.5 on the Mohs scale, and has two varieties – gray and yellow. Amber was appreciated and popular in antiquity for its beauty and its supposed magical properties. The southeast coast of the Baltic Sea is its major source in Europe, with lesser sources near the North Sea and in the Mediterranean. Amber is washed up by the sea. There is evidence of a strong trade in amber up the Elbe, Vistula, Danube, and into the Adriatic Sea area. The trade began in the Early Bronze Age and expanded greatly with the Mycenaeans and again with the Iron Age peoples of Italy. The Phoenicians were also specialist traders in amber. The soft material was sometimes carved for beads and necklaces.

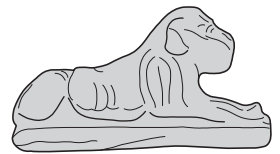
**Amersfoot interstadial:** an interstadial of the Weichselian stage that has radiocarbon dates between 68,000 and 65,000 bp, but it is possibly earlier.

**amorphous:** having no definite form or distinct shape.

**amphora:** a large Greek or Roman earthenware storage jar, with a narrow neck and mouth and two handles (“two-eared,” each called an *anem*) at the top. The body of the jar is usually oval and long, with a pointed bottom. It was used for holding or transporting liquids, especially wine or oil, and other substances such as resin. Its shape made it easy to handle and ideal for tying onto a mule’s or donkey’s back. They were often placed side by side in upright positions in a sand-floored cellar; sinking them into the sand or ground kept the contents cool. Amphorae were also made of glass, onyx, gold, stone, and brass and some had conventional jar bottoms with a flat surface. The container would be sealed when full, and the handle usually carried an amphora stamp, impressed before firing, giving details such as the source, the potter’s name, the date, and the capacity. Amphorae were probably not normally reused. [amphorae (pl.)]

**ampulla:** a small Greek or Roman globular flask or bottle with two handles and a short narrow neck. It was used for holding oil for bathers (called *ampulla oleria*) or wine, oil, vinegar, and other beverages for table use (then called *ampulla potaria*). These small containers were usually the form of a globe or bladder, though sometimes shaped like a lentil with rounded sides. [ampullae (pl.)]

**amulet:** small good-luck charms, often in the form of gods, hieroglyphs, and sacred animals and made of precious stones or faience. They were especially popular with Egyptians and other Eastern peoples, worn in life and placed in burials or within mummy wrappings. Amulets were supposed to afford protection and may have been thought to imbue the wearer with particular qualities. Some superstitiously thought amulets



could heal diseases or help the wearer avoid them. [meket, nehet, peripta, sa, wedja]

**amulet capsule:** a case or container for an amulet.

**amygdaloid:** almond-shaped; a term used to describe elongated ovate or cordiform biface tools.

**anachronistic:** pertaining to the representation of something as existing or occurring at other than in its proper time, particularly earlier, and involving or containing anything out of its proper time.

**anaglyph:** a term describing any work of art that is carved, chased, embossed, or sculptured – such as bas-reliefs, cameos, or other raised working of a material. Materials which are incised or sunken are called intaglios or diaglyphs. The Egyptians also used the term anaglyphs for a kind of secret writing.

**analysis:** a stage of archaeological research that involves describing and classifying artifactual and nonartifactual data.

**analytical type:** arbitrary groupings that an archaeologist defines for classifying artifacts; groups of attributes that define convenient types of artifacts for comparing sites in space and time.

**Anathermal:** a period of cool climate in the area of North America that occurred from about 7000 to 5000 BC. This was Ernst Antev's name for the first of the Neothermal periods and it is thought to have started off cool before becoming somewhat warmer.

**ancestor bust:** small, painted, apelike busts that were the focus of ancestor worship in Egypt's New Kingdom. Many were of limestone or sandstone, with some smaller examples made of wood and clay.

**anchor:** a heavy object used to moor a ship to the sea bottom, typically having a metal shank with a pair of curved, barbed flukes.

**anchor ornament:** an anchor-shaped, terra cotta object with a perforation through the shank. These were widespread in the Early Bronze Age of Greece and appear later in Sicily and Malta. Grooving, as if from thread wear, suggests that these objects may have been part of looms.

**Andean chronology:** chronological systems of the Central Andes area with two main stages, Preceramic and Ceramic. The Ceramic is broken down into: Initial Period, 1900–1200 BC, Early Horizon 1200–300 BC, Early Intermediate Period 300 BC to AD 700, Middle Horizon 700–1100, Late Intermediate Period 1100–1438/1478, and Late Horizon 1438–1532. These Horizon periods are times of widespread unity in cultural traits. Intermediate periods are times of cultural diversification.

**Andenne ware:** a medieval glazed ware made around Andenne on the River Meuse. The potters produced ordinary unglazed wares as well as finer pitchers and bowls. The glazed wares were widely traded in western Europe from the late 11th century to the 14th century.

**andesite:** a dark, fine-grained volcanic rock.

**Anglian:** quaternary glacial deposits found in East Anglia, England. Other possibly related and isolated patches exist elsewhere in Britain, but they are older than the extreme range of radiocarbon dating and paleomagnetism shows them to be younger than 700,000 bp. This period sometimes equates with the Elster glacial maximum and dates to c. 400,000–300,000 years ago. During the Anglian-Elsterian glaciation in Europe a large ice-dammed lake formed in the North Sea, and large overflows from it initiated the cutting of the Dover Straits. In East Anglia, the deposits are stratified below Hoxnian and above Cromerian interglacial deposits, and Acheulian and Clactonian artifacts are found in the sediments. Most of the evidence of human activity in Britain and Europe is later than this time. Anglian is more often used to describe the group of deposits or the one glaciation (antepenultimate) of that time.

**angon:** a long spear with a double barb where one barb is longer than the other.

**aniconic:** a seal bearing no image.

**animal bell:** a bell worn by an animal, e.g., sheep, goats, cows and hawks, to inform the owner of the animal's position.

**animal style:** a term describing a type of gold production whose themes were animals and which arose from the Scythians, a seminomadic people from the Eurasian steppes who moved from southern Russia into the territory between the Don and the Danube and then into Mesopotamia. During the 5th to 4th centuries BC, this style appeared on shaped, pierced plaques made of gold and silver, which showed running or fighting animals (reindeer, lions, tigers, horses) alone or in pairs facing each other. The animal style had a strong influence in western Asia during the 7th century BC. Ornaments such as necklaces, bracelets, pectorals, diadems, and earrings making up the Ziwiye treasure (found in Iran near the border of Azerbaijan) show evidence of highly expressive animal forms. This Central Asian Scythian–Iranian style passed by way of Phoenician trading in the 8th century BC into the Mediterranean and into Western jewelry. The most popular themes are antlered stags, ibexes, felines, birds of prey and, above all, the animal-combat motif, which shows a predator, usually bird or feline, attacking a herbivore. The joining of different animals and the use of tiny animal figures to decorate the body of an animal are also characteristic. Animal bodies were also contorted – animals curved into circles and quadrupeds with hindquarters inverted. The term is shorthand for this complex of motifs and treatments, which for long periods represented the art of the vast steppe zone of Europe and Asia. The transformations they underwent in the course of their long history on the steppes often leave the sources and affiliations of particular versions obscure.

**ankh:** Egyptian hieroglyphic sign for life, consisting of a T-shape surmounted by a loop. It represents a sandal strap or the handle of a mirror. The ankh is commonly shown being carried by deities and pharaohs and was widely used as an amulet. Temple reliefs frequently included scenes in which a king was offered the ankh by the gods, thus symbolizing the divine conferral of eternal life. It was used in some personal names, such as Tutankhamen. It was adapted by Coptic Christians as their cross.

**anklet:** an ornamental chain worn around the ankle.

**annealing:** the treating of a metal or alloy with heat and then cold – or the repeated process of heating and hammering to produce the desired shape. After casting metal, it may be necessary to further process it by cold working, hammering, and drawing the metal – either to produce hard cutting edges or to produce beaten sheet metal. Hammering makes the metal harder, though more brittle and subject to cracking, because it destroys its crystalline structure. Annealing, the reheating of the metal gently to a dull red heat and allowing it to cool, produces a new crystalline structure which can be hammered again. The process may be repeated as often as is necessary. The final edge on a weapon may be left unannealed as it will be harder and last longer.

**annular:** ring-shaped.

**annular ring nail:** a nail with sharp-edged ridges that lock into wood fibers and greatly increase its holding power.

**ansa:** Latin term for handle or anything handlelike, such as an eyelet, haft, or hole. Any vessel or vase with large ears or circular handles on the neck or body is said to have ansae. [ansae (pl.)]

**ansa lunata:** a handle or handles on a vessel or vase going in two opposite directions or in two diverging projects. The term describes Terramara pottery of the Apennine culture and vessels of central Europe of the Middle to Late Bronze Age.

**antefix:** ornamental tiles fixed to the eaves and cornices of ancient Greek and Roman buildings to decoratively conceal the ends of the rain tiles. The term also refers to vertical ornamental heads of animals, etc. that were the spouts from the gutters. [antefixal (adj.)]

**anterior scar height:** bivalve measurement.

**anthropoid:** of human form; manlike. Taken from the Greek term for man-shaped, it is used to describe sarcophagi and coffins and other artifacts of human shape. The term is also used to describe a being that is only human in form or an anthropoid ape (gibbons, orangs, chimpanzees, gorillas). [anthropomorphous]

**anthropomorph:** a representation of the human form in art, such as those found on ancient pottery; figure, object, or rock art with or using a human shape. The term also refers to the attribution of human



features and behaviors to animals, inanimate objects, or natural phenomena. [anthropomorphic figure; anthropomorphism (n.); anthropomorphic (adj.)]

**anthropomorphic:** manlike; used to describe artifacts or art work decorated with human features or with a manlike appearance. [anthropomorphous]

**antimony:** a brittle metallic substance that has been used in the preparation of yellow pigments for enamel and porcelain painting. It forms a fourth constituent in alloys, along with nitrogen, phosphorus, arsenic, bismuth, and some others in forming triads and pentads.

**antler:** lowest, forward branch of the horn of a deer – bonelike material that is grown and shed annually. Antlers indicate the sex of the species, for example only male red deer, fallow deer, and elk (moose) have antlers. They may also indicate whether a site is occupied seasonally as they are naturally shed in the winter, except for female reindeer that shed their antlers in spring. Antlers were a valuable material for making many tools.

**antler sleeve:** a section of deer antler carved into a cavity or hole at one end to hold a stone axhead. The piece was either set into a socket in a haft or perforated to attach to the haft. This material was used for its resilience and shock-absorbing value in toolmaking. Roughly trimmed antler picks have been used in construction and flint mining.

**anvil:** a block, usually of iron, upon which objects are shaped and hammered, e.g., in smithing.

**anvil stone:** a stone on which other stones or materials (such as food) are placed and crushed with a stone tool.

**anvil technique:** a prehistoric method of making chipped stone tools that involves striking a stone repeatedly against a static boulder used as an anvil. [anvil flaking]

**aplastics:** intentional or accidental inclusions in pottery clays before firing; particulate matter in a clay body that does not contribute to plasticity or that reduces the plasticity of the clay. [aplastic, temper]

**apothecary jar:** a jar used to store medicines, drugs, or the constituent parts of medicines and drugs.

**apotropaic:** of statues, etc., supposedly having the power to avert evil influences or bad luck.

**appliqué:** decoration or ornament applied to or laid on another material, such as metal on wood or embroidery on cloth; a ceramic finishing technique that involves joining shaped pieces of a plastic body to a leather-hard surface by pressure. The applied pieces can be functional (e.g., handles) or decorative (e.g., figures).

**Apulian pottery:** an important type of south Italian pottery, mostly decorated in the red-figured technique. Production seems to have

started in the late 5th century BC and may have been influenced by Athenian pottery. One of the early centers may have been Tarentum. In the middle of the 4th century the scenes became more ornate with additional figures inserted in the field and an increased use of added colors. Plain wares were also produced.

**aquamanile:** used for holding water and washing hands, usually in the shape of an animal.

**arc style:** an early style of Celtic art in which compass-drawn geometric motifs predominate.

**archaeological chronology:** establishment of the temporal sequences of human cultures by the application of a variety of dating methods to cultural remains.

**archaic, Archaic:** a term used to describe an early stage in the development of civilization. In New World chronology, it is the period just before the shift from hunting, gathering, and fishing to agricultural cultivation, pottery development, and village settlement. Initially, the term was used to designate a nonceramic-using, nonagricultural, and nonsedentary way of life. Archaeologists now realize, however, that ceramics, agriculture, and sedentism are all found, in specific settings, within contexts that are clearly archaic but that these activities are subsidiary to the collection of wild foods. In Old World chronology, the term is applied to certain early periods in the history of some civilizations. In Greece, it describes the rise of civilization from c. 750 BC to the Persian invasion in 480 BC. In Egypt, it covers the first two dynasties, c. 3200–2800 BC. In Classical archaeology, the term is often used to refer to the period of the 8th to 6th centuries BC. The term was coined for certain cultures of the eastern North America Woodlands dating from c. 8000 to 1000 BC, but usage has been extended to various unrelated cultures that show a similar level of development but at widely different times. For example, it describes a group of cultures in the eastern US and Canada that developed from the original migration of man from Asia during the Pleistocene, between 40,000 and 20,000 BC, whose economy was based on hunting, fishing, and shell and plant gathering. Between 8000 and 1000 BC, a series of technical achievements characterized the tradition, which can be broken into periods: Early Archaic 8000–5000 BC, with a mixture of Big Game Hunting tradition with Early Archaic cultures, also marked by post-glacial climatic change in association with the disappearance of late Pleistocene big game animals; Middle Archaic tradition cultures from 5000 to 2000 BC; and a Late Archaic period 2000–1000 BC. In the New World, the lifestyle lacked horticulture, domesticated animals, and permanent villages.

**archaic majolica:** a series of jugs and bowls of the early 13th to late 16th centuries in Tuscan and Italian towns. They were decorated with geometric motifs, leaves, and other forms outlined in brown and set into green or brown backgrounds. They were sold as far apart as Spain, North Africa, and northern Europe. There seems to be a connection to earlier Byzantine and Persian products. [archaic maiolica]

**archaistic:** imitatively archaic; affectedly and deliberately antique.

**ard:** an ancient light plow with a simple blade that was used to scratch the surface of the soil rather than turn furrows. It was drawn by animals or people and grooved the ground, but it had no mold board or colter and therefore did not turn over the soil. With this type of plow cross-plowing was usually necessary, with a second plowing at right angles to the first.

**Ardagh Chalice:** a large, two-handled silver cup decorated with gold, gilt bronze, and enamel, that is one of the finest examples of early Christian art from the British Isles. Discovered in 1868, along with a small bronze cup and four brooches in a potato field in Ardagh, Ireland, the chalice may have been part of the buried loot from a monastery after an Irish or Viking raid. The outside of the bowl is engraved with the Latin names of some of the Apostles. There are similarities between the letters of the inscription and some of the large initials in the Lindisfarne Gospels, which probably dates from about AD 710 to 720. Thus, the Ardagh Chalice is thought to date from the first half of the 8th century. The chalice displays exceptional artistic and technical skills applied to a variety of precious materials. So far, its manufacture has not been attributed to a particular workshop but the chalice does have similarities to the celebrated Tara brooch and the Moylough belt-reliquary. It is now housed in the National Museum of Ireland at Dublin.

**Arezzo vase:** red-clay Arretine pottery of which many fine examples have been found in or near the town of Arezzo in Tuscany, an important Etruscan city. The red-lustered ware was ornamented in relief and shows evidence of Greek origin.

**argillite:** a compact metamorphic rock formed from siltstone, shale, or claystone and intermediate in structure between shale and slate. It is cemented by silica but has no slaty cleavage.

**Argonne ware:** pottery type of the 4th century AD, usually red. Vessels are decorated with horizontal bands of impressed geometric patterns, executed with a roller stamp. The ware was made in the Argonne, northeast Gaul. [Marne ware]

**armlet:** a band or bracelet worn round the upper part of a person's arm.

**armor:** protective clothing with the ability to deflect or absorb arrows, bullets, lances, swords, or other weapons during combat. There are three main types: (1) armor made of leather, fabric, or mixed materials reinforced by quilting or felt; (2) mail of interwoven rings of iron or steel; and (3) rigid armor of metal, plastic, horn, wood, or other tough material, including plate armor of the Middle Ages' knights. Armor was used well before historical records were kept by primitive warriors. The first was likely made of leather hides and included helmets. It was found that in the 11th century BC, Chinese warriors wore five to seven layers of rhinoceros skin. Greek heavy infantry wore thick, multilayered linen cuirasses in the 5th century BC. Armor is found along with arrows, clubs, hammers, hatchets, and other weaponry and is often ornamented. The defensive armor, shield, and thorax were called *hopla*, and people wearing them were called *hoplites*. [armour, arms, body armor]

**Armorican ax:** rather plain and shoddily made type of socketed bronze ax produced in the period 650–600 BC at the very end of the Bronze Age of northern France (Hallstatt II). Mostly found in large hoards, in which few examples appear to have been finished or used. This has led to the suggestion that they were somehow connected with emergency trade in metal rather than finished products.

**Armorican coin:** collective name for coinage issued by a range of tribes living in Brittany, France during the early 1st century BC.

**Armorico-British dagger:** type of bronze dagger found in the Wessex I phase of the Early Bronze Age (c. 1700–1500 BC) in southern Britain. It has a flat triangular blade, lateral grooves, six rivets for attaching the blade to the hilt, and sometimes a small tang or languette to assist securing the blade to the hilt. Traces of wooden and leather sheaths have been found with some blades; the hilts were probably of wood. [Breton dagger]

**Arretine ware:** a type of bright red, polished pottery originally made at Arretium (modern Arezzo) in Tuscany from the 1st century BC to the 3rd century AD. The term means literally “ware made of clay impressed with designs.” The ware was produced to be traded, especially throughout the Roman Empire. It is clearly based on metal prototypes and the body of the ware was generally cast in a mold. Relief designs were also cast in molds which had been impressed with stamps in the desired patterns and then applied to the vessels. The quality of the pottery was high, considering its mass production. However, there was a gradual roughness to the forms and decoration over the four centuries of production. After the decline of Arretium production, *terra sigillata* was made in Gaul from the 1st century AD at La Graufesenque (now Millau) and later at other centers in Gaul. Examples have come from Belgic tombs

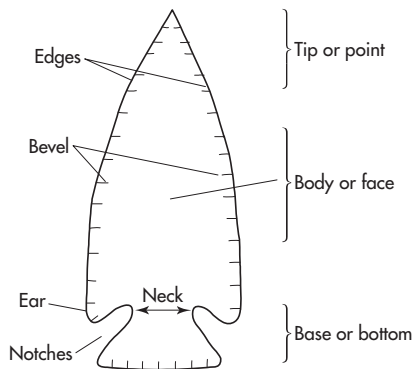
in pre-Roman Britain and from the port of Arikamedu in southern India. The style changes and the potters' marks stamped on the vessels make these wares a valuable means of dating the other archaeological material found with them.

**arris:** sharp ridge or edge formed by the junction of two smooth surfaces, especially on the midrib of a dagger or sword, or in moldings. [arris, arrises (pl.)]

**arrow:** a weapon consisting of a stick with a sharp pointed head, designed to be shot from a bow.

**arrow straightener:** a stone with a regular, straight groove on one face. It is thought to have been used to smooth wooden shafts of arrows, so the name is misleading. [arrowshaft straightener]

**arrowhead:** a small object of bone, metal, or stone that has been formed as the pointed end of an arrow for penetration and is often found at sites of prehistoric peoples. The earliest known are Solutrean points of the Upper Paleolithic. Arrowheads are often the only evidence of archery since the arrow shaft and bow rarely survive. The term projectile point is generally preferable because it avoids an inference regarding the method of hafting and propulsion. Most often, arrowheads were placed in a slot in the shaft, tied, and then fixed with resin. [arrowhead, projectile point]



**articular surface:** portion of a bone connecting with other bones.

**artifact:** any object (article, building, container, device, dwelling, ornament, pottery, tool, weapon, work of art) made, affected, used, or modified in some way by human beings. It may range from a coarse stone or a needle to a pyramid or a highly technical accomplishment – these objects are used to characterize or identify a people, culture, or stage of development. The most common artifacts are pieces of broken pottery, stone chips, projectile points, and tools. The environment may play a part in the nature of an artifact if it has been seriously

altered by people through fire, house and road construction, agricultural practices, etc. Therefore, the line is sometimes hard to draw between a natural object and one used by man, but there is no doubt when it can be shown that people shaped it in any way, even if only accidentally in the course of use. Artifacts are individually assignable to ceramic, lithic, metal, or organic, or other lesser used categories. A sociotechnic artifact is a tool that is used primarily in the social realm. A technomic artifact is a tool that is used primarily to deal with the physical environment. [artefact]

**artifact type:** a description of a category of artifacts that share a set of somewhat variable attributes, such as spoons or tables; a population of artifacts that share a recurring range and combination of attributes. [artefact type]

**artifact typology:** placement of materials in a geographic, temporal, etc. context with other similar artifacts; the study of artifact classes with common characteristics; classification according to artifact type. [artefact typology]

**Arundel marbles:** a collection of marbles and ancient statues taken from Greece and Asia Minor at the expense of Thomas Howard, Earl of Arundel (1585–1646) and given to Oxford University in 1667, which came to be known as the Arundel (or Oxford) marbles. [Oxford marbles]

**aryballos:** term for a small Greek vase or a large Inca pottery jar. The Greek flask was one-handled, normally globular (quasispherical or pear-shaped), with a narrowing neck. It was used mostly for oil, perfume, unguent, or condiments and stood about 5–8 cm (2–3 inches) high. Aryballos were originally made at Corinth from about 575 BC. There were painted patterns on them until 550 BC and sometimes patterns were engraved. From the Greek for “bag” or “purse.” The Inca version was a large jar with a conical base, tall narrow neck, and flaring rim. It was used for carrying liquids, designed to be carried on the back by a rope which passed through two strap handles low on the jar’s body and over a nubbin at the base of the jar neck. [aryballus]

**arystichos:** a Greek or Roman vessel for drawing water, especially from amphorae. [arusane, arustis, aruter, ephebos, oinerusis]

**as:** a small Roman bronze coin, four of which made a sestertius and 16 made a denarius.

**askos:** an asymmetrical vessel, often squat and duck-shaped, with an off-center mouth, convex top, and single arching handle. It was originally shaped like a leather bottle (uter) for holding water, oil, or wine. Some examples have two mouths, one for filling and one for emptying, and others are quite unbalanced and have strange mouths. It later

assumed the form of an earthenware pitcher. Askos were popular in the Aegean from the Early Helladic to the Classical period. From the Greek for “bag.”

**assemblage:** a group of objects of different or similar types found in close association with each other and thus considered to be the product of one people from one period of time. Where the assemblage is frequently repeated and covers a reasonably full range of human activity, it is described as a culture; where it is repeated but limited in content, e.g., flint tools only (a set of objects in one medium), it is called an industry. When a group of industries are found together in a single archaeological context, it is called an assemblage. Such a group characterizes a certain culture, era, site, or phase and it is the sum of all subassemblages. Assemblage examples are artifacts from a site or feature.

**assertive style:** any style with only vague associations with social identity, such as a tendency to wear certain types of clothing or jewelry.

**association:** co-occurrence of two or more objects sharing the same general location and stratigraphic level, that are thought to have been deposited at approximately the same time (being in or on the same matrix). Objects are said to be in association with each other when they are found together in a context that suggests simultaneous deposition. Associations between objects are the basis for relative dating or chronology, and the concept of cross-dating as well as in interpretation – cultural connections, original function, etc. of pottery and flint tools associated in a closed context – would be grounds for linking them into an assemblage, possibly making the full material culture of a group available. The association of undated objects with artifacts of known date allows the one to be dated by the other. When two or more objects are found together and it can be proved that they were deposited together, they are said to be in genuine or closed association. Examples of closed associations are those within a single interment grave, the material within a destruction level, or a hoard. An open association is one in which this can only be assumed, not proved. Artifacts may be found next to each other and still not be associated; one of the artifacts may be intrusive.

**astrolabe:** an instrument, usually consisting of a disk and pointer, formerly used to make astronomical measurements, especially of the altitudes of celestial bodies and as an aid in navigation.

**Asuka:** a culture and period in Japanese history during which the development of art, the introduction of Buddhism from Korea, and the adoption of a Chinese pattern of government were important. Located in the southwestern part of the Nara Basin (Yamato Plain), the culture flourished from AD 552 to 645. In art history, the Asuka culture refers

to early Buddhist art and architecture in the northern Wei style. In chronology, the Asuka period refers more to the reign of the Soga family during which Buddhism was promoted and a formal administrative structure with diplomatic relations was introduced. Many old temples and palaces are or contain surviving examples of Asuka architecture, sculpture, and paintings.

**Athenian pottery:** pottery produced in Athens from the Late Geometric period of monumental craters and amphorae through the Hellenistic period. The best known are the figure-decorated potteries of the Archaic and Classical periods that were widely exported along with plain wares.

**Atlantic period:** in Europe, a climatic optimum following the last Ice Age. This period was represented as a maximum of temperature, and evidence from beetles suggests it being warmer than average for the interglacial. It seems to have begun about 6000 BC, when the average temperature rose. Melting ice sheets ultimately submerged nearly half of western Europe, creating the bays and inlets along the Atlantic coast that provided a new, rich ecosystem for human subsistence. The Atlantic period was followed by the Sub-Boreal period. The Atlantic period, which succeeded the Boreal, was probably wetter and certainly somewhat warmer, and mixed forests of oak, elm, common lime (linden), and elder spread northward. Only in the late Atlantic period did beech and hornbeam spread into western and central Europe from the southeast.

**atlatl:** a New World version of a spear-throwing device, used by the Aztecs and other peoples of the Americas. It consisted of a wooden shaft used to propel a spear or dart and it functioned like an extension of the arm, providing more thrusting leverage. Atlatl weights are objects of



Atlatl

stone fastened to the throwing stick for added weight. These may be perforated so that the stick passes through the artifact, or they may

be grooved for lashing to the stick. In western North America it was the main hunting weapon from about 6500 BC until AD 500. [atl-atl, spear thrower]

**atlatl weight:** drilled or grooved stone or shell that was used to weight the atlatl. [atl-atl weight]

**attapulgitic:** one of several hydrous magnesian clays with a lathlike or fibrous particle shape, characterized by a chainlike structure.

**Attic black-figure ware:** type of pottery made in the Attica region of southern Greece from about 720 BC. Vase painters developed a characteristic style of decoration in which one or more friezes of human and animal figures are presented in silhouette in black against a red back-



ground. The delineation of the figures is sometimes heightened by the use of incised lines and the addition of white or purple color.

**attribute:** a distinct, individual characteristic of an artifact that cannot be further subdivided and distinguishes it from another; a logically irreducible character, such as length. An attribute is used to classify artifacts into groups and describes objects in terms of their physical traits such as color, design pattern, form, shape, size, style, surface texture, technology, and weight. Attribute analysis is a method of using these characteristics to statistically produce clusters of attributes in identifying classes of artifacts. [attribute state]

**attribute value:** particular value associated with an attribute of an item, e.g., “brown” as the attribute value of “attribute, color.”

**auger:** a tool used to probe into the ground and extract a small sample of a deposit without performing actual excavation. Its applications in archaeology are as a means of sampling and understanding the geological environment of a site and also for extracting peat for pollen analysis. There are various types of augers and they can be manual or power driven. Simple augers bring up samples on the thread of a drill bit. More elaborate ones open a chamber to collect a core after the drill has bored to an appropriate depth. Augering is generally restricted to the earliest stages of archaeological reconnaissance to determine the depth and characteristics of deposits.

**aureus:** a gold coin that was a unit of currency in the Roman Empire between 30 BC and 310 AD.

**auricle:** the corners of a stem of stemmed arrowhead types or the corners of the base of triangular types that are earlike.

**auriculate:** a major projectile form which has rounded or pointed ears that project from the concave base or stem of points or blades.

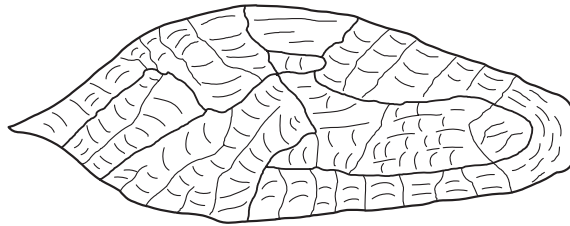
**Aurignacian:** a series of Upper Paleolithic cultures in Europe that existed from about 35,000 to 20,000 years ago (dates also given as 38,000–22,000 years ago). They were characterized by their use of stone (flint) and bone tools, the refinement of those tools, and the development of sculpture and cave painting. The culture is named for the type site Aurignac, in southern France, where such artifacts were discovered. In France it is stratified between the Châtelperronian and the Gravettian (and before the Solutrean and the Magdalenian), but industries of Aurignacian type are also found eastwards to the Balkans, Palestine, Iran, and Afghanistan. At Abri Pataud there is a radiocarbon date of before 31,000 BC for the Aurignacian, but there are possibly earlier occurrences in central and southeast Europe (Istállóskö in Hungary, Bacho Kiro in Bulgaria). There is still considerable dispute about the extent to which the Aurignacian is contemporary with the

cultures of the Perigordian group in southwest France. The sites are often in deep, sheltered valleys. Split-based bone points, carinates (steep-end scrapers), and Aurignac blades (with heavy marginal retouch) are typical of the Aurignacian. Aurignacian is also important as the most distinctive and abundantly represented of the early Upper Paleolithic groups.

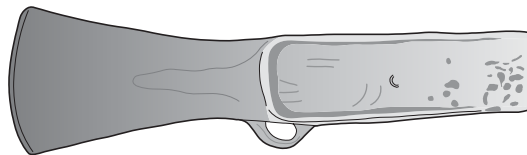
**authentic:** not counterfeit or copied.

**Avonlea point:** early bow and arrow projectile point dated AD 100–500, from North Dakota.

**awl:** a small tool consisting of a thin, tapering, sharp-pointed blade of bone, flint, or metal used for piercing holes, making decorations, or in assisting basketweaving. [bodkin, piercer, pricker]



**ax:** one of the last major categories of stone tool to be invented, around the end of the last Ice Age in the Paleolithic. It is a flat, heavy cutting tool of stone or metal (bronze) in which the cutting edge is parallel to the haft and which might have the head and handle in one piece. Its main function was for woodworking (hewing, cleaving, or chopping trees) but it was also used as a weapon of war, as the battle ax. There are many forms of ax, depending on the different materials and methods of hafting. The word ax is now used instead of celt. Hand ax is used to denote the earlier implement which was not hafted. In Mesolithic times, stone axes were usually chipped from a block of flint, and could be resharpened by the removal of a flake from the end. In the Neolithic, axes were polished and often perforated to aid hafting.



Bronze Age Looped Palstave Ax

Axes are now usually made of iron with a steel edge or blade and fixed by means of a socket in the handle. Smaller, lighter ones are called hatchets. [axe]

**ax hammer:** a tool consisting of an ax and a hammer combined, i.e., a shaft-hole ax having a hammer knob in addition. It was primarily a weapon of war, combining the functions of battle ax and mace. [axe hammer, axe-adze, hammer axe]

**ax trimming flake:** characteristic waste flakes struck off in the production of axes.

**axhead:** cutting or chopping part of an ax. [axehead]

**axhead roughout:** an unfinished, roughly shaped axhead. [axehead roughout]

**axis of detachment:** path of the force that removed a piece from the core of a stone tool, running from the point of impact on the platform of the artifact toward the distal end.

**axis of flaking:** an imaginary line drawn roughly down the middle of a lithic flake as viewed from the dorsal side and extending from the point of percussion, parallel to the direction of striking or the line of force during striking.

**axle:** a rod or spindle, either fixed or rotating, on which a wheel or group of wheels is fixed. The axle cap is usually made of iron; it bound the end of an axle and was perforated to allow a linch pin to pass through the axle and keep the wheel in place.

**Ayampitin point:** bifacially worked stone tips of willowleaf outline found among Archaic hunter-gatherer communities of the Peruvian highlands and coasts in 9000–7000 BC.

# B

- B ware:** ceramic amphorae of the east Mediterranean, from the 1st to the early 7th century AD and divided into four subgroups.
- bacini:** pottery vessels ranging in date from the 11th to 15th centuries and found in northern Italy, especially in medieval churches. They were placed in walls of churches, over church doorways, and in church towers for decorative purposes. These Italian vessels were imported from the Byzantine and Arabic world, but later Italian majolicas were made as bacini. Bacini were probably also used in southern Italian, Greek, and western European churches. Some were painted and incised; some were monochromic, while others had fantastic designs.
- backed blade:** in stone toolmaking, a small blade with one edge blunted by further chipping along one edge. This retouching technique was used so that it could be fitted snugly into a haft, to provide a finger-rest, or so that it could be held in the hand without cutting the fingers. [backed knife]
- backed bladelet:** a small stone blade with one edge blunted.
- backed flake:** a purposely created stone flake tool which is usually a decoration flake that retains a piece of the cortex on one side and a sharp edge on the other.
- backing:** 1. A type of steep retouch probably used to dull the edge of a flake, making it suitable for hafting or handling with fingers; common on the edge opposite the cutting edge of a knife. 2. Pertaining to enamel or pottery.
- backplate:** plate armor protecting the back; worn as part of a cuirass.
- backstrap:** a simple loom known in pre-Columbian America and in Asia and still used in western Mexico, Guatemala, and other places in Central America. A continuous warp thread passes between two horizontal

poles, one attached to a support and the other to a seated weaver, who adjusts the tension by moving forwards or backwards. The Navajo Indians wove blankets on a two-bar loom for centuries. Throughout the Caroline Islands (except Palau), strips of banana and hibiscus fiber are woven on backstrap looms.

**badge:** a distinguishing emblem or mark, often worn to signify membership, achievement, employment, etc.

**Badorf ware:** a type of pottery of the 8th to 9th centuries from the hills of Cologne, Germany. The globular pitchers and bowls of the Carolingian period are the best known. Badorf-ware kilns have been excavated at Bruhl-Eckdorf and Walberberg and products have been found in the Netherlands, eastern England, and in Denmark. In the 9th century, the pots began to be decorated with red paint. Gradually new forms and styles known as Pingsdorf wares evolved.

**bag:** a flexible container with an opening at one end.

**bag wear:** damage that can occur to artifacts and ecofacts during excavation, transportation, and cataloging.

**Baikal Neolithic:** Neolithic period of the Lake Baikal region in eastern Siberia. Stratified sites in the area show a long, gradual move from the Paleolithic to Neolithic stage, starting in the 4th millennium BC. The postglacial culture was not “true” Neolithic in that it farmed, but was Neolithic in the sense of using pottery. It was actually a Mongoloid hunting and fishing culture (except in southern Siberia around the Aral Sea) with a microlithic flint industry with polished stone blade tools together with antler, bone, and ivory artifacts, pointed- or round-based pottery, and the bow and arrow. Points and scrapers made from flakes of Mousterian flakes and pebble tools displaying the ancient chopping tool tradition of eastern Asia have also been found. There was a woodworking and quartzite industry and some cattle breeding. The first bronzes of the region are related to the Shang period of northern China and the earliest Ordos bronzes. The area covers the mountainous regions from Lake Baikal to the Pacific Ocean and the taiga (coniferous forest) and tundra of northern Siberia. A first stage is named for the site Isakovo and is known only from a small number of burials in cemeteries. The succeeding Serovo stage is also known mainly from burials with the addition of the compound bow backed with bone plates. The third phase, named Kitoi, has burials with red ocher and composite fish hooks that possibly indicate more fishing. The succeeding Glazkovo phase of the 2nd millennium BC saw the beginnings of metal-using, but generally showed continuity in artifact and burial types. Some remains of semi-subterranean dwellings with centrally located hearths occur, together with female statuettes in bone.

**balance:** an apparatus for weighing, usually consists of a beam on a pivot with a means of supporting the object to be weighed on one side and weights on the other.

**ball:** a round object used in games. [game ball]

**ball clay:** a fine-textured, highly plastic sedimentary clay, usually composed of the mineral kaolinite, typically containing considerable organic matter and firing white or cream. [ball-clay]

**ballista:** an ancient heavy missile launcher designed to hurl javelins or heavy balls on the principle of a crossbow. The smaller ballista was just that – a basic, large crossbow fastened to a mount. It was also used to hurl iron shafts, Greek fire, heavy darts, etc. during sieges. The huge, complicated Roman ballista, however, was powered by torsion derived from two thick skeins of twisted cords through which were thrust two separate arms joined at their ends by the cord that propelled the missile. The largest ballistas were quite accurate in hurling 27 kg (60-pound) weights up to about 450 m (500 yards). The catapult was yet another machine used for firing bolts and other arrow-like missiles. The two terms are often used interchangeably. [balista]

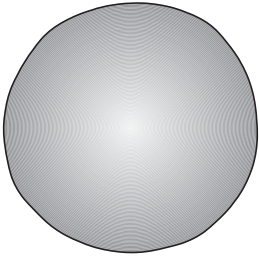
**baluster jug:** a general type of tall medieval jug used in Europe whose height is about three times its diameter.

**band:** a design element or fundamental part that is continued or repeated along a straight line that, on pottery, most commonly encircles the vessel but may also be vertical or diagonal.

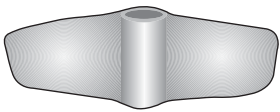
**Bandkeramik:** a pottery of the Danubian I culture, a Neolithic culture that existed over large areas of Europe north and west of the Danube River around the 5th millennium BC. It consists of hemispherical bowls and globular jars, usually round-based and strongly suggesting copies of gourds. The name refers specifically to the standard incised linear decoration – pairs of parallel lines forming spirals, meanders, chevrons, etc. There was farming of emmer wheat and barley and the keeping of domestic animals such as cattle. The most common stone tool was a polished stone adze. The people lived in large rectangular houses in medium-sized village communities or in small, dispersed clusters. [LBK, Linearbandkeramik, Linienbandkeramik (German)]

**Bann flake:** a type of leaf-shaped flake found widely amongst the later Mesolithic assemblages of Northern Ireland and the Isle of Man, and a component of the Bann culture. These are large flakes having no significant tang, with light retouch, either as elongated or laminar forms or as broader leaf-shaped forms with only very peripheral retouch at the bottom. [Bann point]

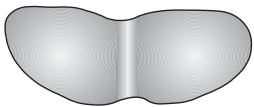
**bannerstone:** a stone atlatl – a throwing-stick weight – put on the shaft to give great propulsion to a thrown dart. The stone is perforated for



Ball



Drilled



Grooved

Bannerstones

hafting and often has a bipennate, “butterfly” or bannerlike appearance. [banner stone, birdstone, boatstone]

**Banshan:** site of a Neolithic cemetery in the Tao River valley of China, the type site of the Banshan (or Pan-shan) culture which belongs to the western or Gansu branch of the Yangshao Neolithic. Banshan is best known for its painted pottery first found in a grave in 1923. Pan-shan ware is generally considered to date between 2500 and 2000 BC, but it may extend as far back as 3000 BC or be as late as c. 1500 BC (the Shang dynasty). Most are unglazed pottery urns or reddish brown with painted designs in black and brown, probably applied with a brush, consisting of geometric patterns or stylized figures of people, fish, or birds. The wares were probably shaped on a slow or hand-turned wheel. The handles are set low on the body of the urns, and the lower part of the body is left undecorated – much like Greek Protogeometric funerary ware. It was an important find because of the lack of Neolithic Chinese pottery up to 1923. A late stage of Banshan is named after the site of Machang. [Pan-shan]

**bar hammer technique:** a stone-flaking technique using a bone, antler, wood, or other relatively soft material as a hammer to remove small, flat flakes from a core during flint knapping. These flakes have a characteristically long, thin form with a diffuse bulb of percussion. [cylinder hammer technique, soft hammer technique]

**bar iron:** a piece of iron cut from blooms and lengths of bar, probably for transportation, which were then reworked.

**barb:** a subsidiary point facing away from the main point that makes an arrowhead or spear hard to remove. [barbed (adj.)]

**barbed and tanged arrowhead:** triangular-shaped flint arrowheads of the later Neolithic and Early Bronze Age in Europe. They are distinctive in having a short rectangular tang on the base opposite the point, symmetrically set either side of which is a barb. The tang was used to secure the arrow tip to its shaft and usually projects slightly below the ends of the barbs.

**barbed dowel pin:** a wooden pin used to align parts, act as a pivot, or permit disassembly or separation.

**barbed point:** a bone or antler point with rows of barbs, usually on one side only.

**barbed wire:** strong wire with barbs at regular intervals used to prevent passage.

**barbotine:** a technique of decorating pottery by adding thick slip to the surface of a pot before firing. The term also refers to the creamy mixture of kaolin clay itself, for pottery ornamented with barbotine, and the technique of applying an incrustation of this mixture to a ceramic

surface for decorative effect. The slip was not applied evenly, but in order to form a thick incrustation in patches or trails. On certain types of pottery, such as the Nene Valley ware, the barbotine decoration may form a picture or a pattern. Sometimes the result is simply a roughened surface, rather like icing upon a cake. The method was particularly popular in Roman Gaul and Britain. [barbotine decoration]

**bar-gorget:** a barlike ornament, usually of polished stone and perforated, worn around the throat.

**barrel:** a cylindrical container, often of wood, that holds liquids.

**barrel urn:** type of large Middle Bronze Age pot found within the Deverel-Rimbury ceramic tradition of southern Britain c. 1500 BC through to 1200 BC. Barrel urns have a distinctive profile, wider in the middle than at the base or the rim, often with applied cordons that are decorated with fingertip impressions. They were used as storage vessels and as containers for cremations.

**bar-shaped ingot:** flat rectangular ingots of silver of Roman times in Britain.

**basal edge:** proximal edge of a triangular or lanceolate projectile or stem of a stemmed type. There are eight major types of basal edges: convex, straight, concave, auriculate, lobbed, bifurcated, fractured, and snapped.

**basal grinding:** the grinding of projectile points at their base and lower edges (so that the lashings will not be cut), a Paleoindian cultural practice. Basal thinning obtains the same result through the removal of small chips instead of grinding. [basal notching]

**basal notch:** a flaking technique applied to accommodate hafting, which involved the flaking of notches into the basal edge of a preform.

**basal thinning:** intentional removal of small, longitudinal flakes from the base of a chipped stone projectile point or knife to facilitate hafting.

**basal-looped spearhead:** type of leaf-shaped socketed spearhead of the European Middle Bronze Age which has two small holes or loops at the base of the blade, one either side of the socket – possibly for securing the metal spearhead to the wooden shaft or to tie streamers to the top of the spear.

**basalt:** a type of very hard, dark, dense rock, igneous in origin, composed of augite or hornblende and containing titaniferous magnetic iron and crystals of feldspar. It often lies in columnar strata, as at the Giant's Causeway in Ireland and Fingal's Cave in the Hebrides. It is greenish- or brownish-black and much like lava in appearance. It is also abundant in Egypt and Greece.

**base:** 1. Proximal or end portion of a knife, tool, or projectile point. The base is usually designed for hafting or gripping, but not designed or intended for cutting, scraping, or penetrating. Oftentimes, base edges were ground so that sharp edges would not abrade the hafting



materials and cause hafting failure with use. 2. Lower portion of a vessel from the lower boundary of the body to the place that would normally be in contact with the surface on which the vessel rested, sometimes a foot or tripod.

**baselard:** a type of dagger, usually used by civilians in the medieval period, with an H-shaped hilt.

**baseward flaking:** the removal of flakes from the distal tip at a downward angle towards the basal edge.

**basket:** a container that is usually woven and may have handles.



Egyptian basket, New Kingdom, 1411–1375 BC

**Basketmaker tradition:** Late Archaic and Post-Archaic sedentary communities living in southwestern parts of North America between c. 1000 BC and AD 750 with three main phases. Basketmaker Phase I, dated to c. 1000–1 BC, is essentially the same as the Archaic. Basketmaker Phase II, c. AD 1–450, is the same as the Desert Archaic and represents the beginning of a long-lived cultural tradition on the Colorado Plateau, which is referred to as the Anasazi. Basketmaker Phase III, c. AD 450–750 equates to a developed phase of Anasazi, when beans were added to the diet and there was a greater commitment to agriculture.

**basketry:** a class of artifacts created by the practice of weaving containers from vegetable fibers, twigs, or leaves. It was known in Mexico before 7000 BC and in Oregon before 8000 BC, and the earliest recorded examples in the Old World are from Fayum in Egypt, c. 5200 BC. However, taking into consideration the perishability of basketry, these may be comparatively late in the history of the technique. Basketry is not preserved in the same quantities as pottery and stone vessels. [cordage]

**bas-relief:** a low-relief technique of sculpture or carved work in which the figures project less than half of their true proportions from the surface on which they are carved. The term also describes sculptures or carvings in low relief. Mezzo-relievo means projecting exactly half; alto-relievo more than half. [basso-relievo, low relief, low-relief]

- Basse-Yutz:** bronze wine flagons found in Moselle, France, with coral and enamel inlay, from c. 400 BC. The pair is thought to have come from a Celtic chieftain's grave.
- bat:** a slab, disk, or board of plaster, fired clay, asbestos, or other slightly porous material used to dry a wet clay body by absorbing moisture from it, as a support in shaping an object from the clay, or as a detachable wheel head. [batt]
- baton:** a soft hammer used to strike flakes from a stone core, often made of antler, bone, or wood. [billet, percussor]
- bâton de commandement:** a name given to perforated batons made of antler rod of the Upper Paleolithic period in western Europe, from the Aurignacian period (30,000 years ago) through the Magdalenian. They have a hole through the thickest part of the head, are usually 30 cm (12 inches) long, but are often broken. The perforation is smooth and round, and highly decorated examples come from the Magdalenian culture. Their use is unknown.
- baton perce:** an Upper Paleolithic artifact, occasionally encountered in Aurignacian, Gravettian, and Solutrean assemblages but more typically found in Magdalenian toolkits. It consists of a decorated cylinder of antler with a hole through the thickest part. The baton may be decorated with intricate carving. Its function is unknown, although it is generally interpreted as a shaft straightener, from the use-wear in and around the hole. [perforated baton]
- battering-ram:** an ancient military engine used for smashing in doors and battering down walls. It consisted of a beam of wood with a head of iron – originally a ram's head but later in the form of a ram's head – and swung by chains from an overhead scaffolding. It had a roof to protect those working it from the missiles of the garrison.
- Battersea Shield:** a Late Iron Age parade shield found in the River Thames at Battersea, England. It is a fine example of insular Celtic art, with an elongated bronze body with rounded ends and decorated in relief and with red glass inlay.
- battle ax:** a type of prehistoric stone weapon, designed as a weapon of war. It is always of the shaft-hole variety, and frequently has a hammer, knob, or point at the opposite end from the cutting edge. In stone, they are common throughout most of Europe in the Late Neolithic and Copper Age, and are often associated with Corded ware and beakers. (The term Battle-ax culture is often used as a synonym for Corded ware or Single Grave culture.) Further east, more elaborate ones of copper or gold were more ceremonial than functional. The Vikings made iron battle axes and used them well into the Middle Ages. The pole ax is distinguished from the battle ax by a spike on the back of the ax. [battle-axe, battleaxe]

**Bayeux Tapestry:** a medieval embroidery depicting the Norman Conquest of England in 1066, which is considered a remarkable work of art and important as a source for 11th-century history. It consists of a roll of unbleached linen worked in colored worsted with illustrations and is about 70 m (75 yards) long and 50 cm (20 inches) deep. The work was probably commissioned by Bishop Odo of Bayeux, a half-brother of William the Conqueror, and took about 2 years to complete. It was likely finished no later than 1092. The tapestry depicts the events leading up to the invasion of England by William Duke of Normandy and the Battle of Hastings on October 14, 1066, when the English King Harold was defeated and killed. Though not proven, the tapestry appears to have been designed and embroidered in England. The themes are enacted much like that of a feudal drama or *chanson de geste*. The technical detail and iconography of the Bayeux Tapestry are of great importance. For instance, the 33 buildings depicted offer a look at the contemporary churches, castles, towers, and motte and bailey castles. The battle scenes give details on infantry and cavalry formations, Norman armor and weapons, and the clothing and hairstyles of the time. The invasion fleet consists of Viking double-enders (clinker-built long boats, propelled by oars and a single mast). The tapestry was discovered in the nave of Bayeux Cathedral in France by French antiquarian and scholar Bernard de Montfaucon, who published the earliest complete reproduction of it in 1730. It narrowly escaped destruction during the French Revolution, was exhibited in Paris at Napoleon's wish in 1803–04, and thereafter has been kept in the Bayeux public library.

**bayonet:** a blade adapted to fit the muzzle end of a rifle and used as a weapon in close combat.

**BC:** an abbreviation used to denote so many years before Christ or before the beginning of the Christian calendar. The lower case "bc" represents uncalibrated radiocarbon years; the capitals BC denote a calibrated radiocarbon date, or a date such as a historically derived one, that does not need calibration. There is no year 0: 1 BC is followed by AD 1.

**BCE:** an abbreviation used to denote so many years before the common era or before the Christian era. Dates are often listed as BCE (= BC) and CE (common era or Christian era = AD). In the Gregorian calendar, eras are designated BCE and CE, terms which are equivalent to BC (before Christ) and AD (Latin: anno Domini).

**Beacharra ware:** type of decorated Middle Neolithic pottery of western parts of Scotland. The ware is classified into three groups: (1) unornamented, bag-shaped bowls; (2) decorated, carinated bowls with a rim diameter less than the diameter at the carination and with incised



or channeled ornament; and (3) small bowls with panel ornament in fine whipped cord.

**bead:** a small, circular, tubular, or oblong ornament with a perforated center; usually made from shell, stone, bone, or glass.

**bead rim:** a rim in the form of a small, rounded molding, in section at least two-thirds of a circle. It was often used on bowls, dishes, and jars. [beaded rim]

**beadwork:** decorative work made of beads.

**beaker:** a simple pottery drinking vessel without handles, more deep than wide, much used in prehistoric Europe. The pottery was usually red or brown burnished ware, decorated with horizontal panels of comb- or cord-impressed designs. It was distributed in Europe from Spain to Poland, and from Italy to Scotland in the years after 2500 BC; the international bell beaker is particularly widespread, though uncommon in Britain. In Britain there are local variants: the long-necked (formerly A) beakers of eastern England and the short-necked (formerly C) beakers of Scotland. There were local developments elsewhere, such as the Veluwe beakers in the Netherlands. Beaker vessels are commonly found in graves, which were often single inhumations under round barrows; commonly associated finds include copper or bronze daggers and ornaments, flint arrowheads, stone wristguards, and stone battle axes. In many northern and western areas its users were the first to start copper metallurgy. The widespread distribution of beaker finds has led to the frequent identification of a Beaker people and speculations about their origins.

**beater:** 1. In music, a wooden or metal object used to provide a rhythm by striking another object. 2. A general tool used to beat objects with.

**beating:** a technique to thin and even out the walls of coil- or slab-built vessels after they have partially hardened to “leather” hardness, to improve the bonding between coils, or add surface texture. One holds an anvil or fist inside the vessel while the outside is struck repeatedly with a paddle, which can be wrapped with cord or fabric to add texture to the vessel surface. [beater-and-anvil, hammer-and-anvil technique, paddling]

**bec:** a Paleolithic flake-boring tool that was retouched on one edge to form a point.

**beehive quern:** type of rotary quern of Roman times with an extremely thick dome-shaped upper stone and a slightly flared base.

**Belgic pottery:** general term sometimes applied to the range of Late Iron Age wheel-turned pottery vessels found in southeastern England, especially Aylesford-Swarling pottery.

**bell:** the earliest bell founding (i.e., the casting of bells from molten metal) is associated with the Bronze Age. The ancient Chinese were superb founders, their craft reaching an apex during the Zhou/Chou dynasty

(c. 1122–221 BC). Characteristic were elliptical temple bells with exquisite symbolic decorations cast onto their surfaces by the *cire perdue* or lost wax process. Bells had an important ceremonial role in ancient China during the Zhou/Chou dynasty. The earliest Chinese bells, of the Shang dynasty (c. 1600–1123 BC), were mounted mouth upwards and struck. Later bells hung mouth downwards.

**bell beaker, Bell Beaker:** a type of pottery vessel found all over western and central Europe from the Final Neolithic or Chalcolithic, c. 2500–1800 BC. The culture's name derives from the characteristic pottery, which looks like an inverted bell with globular body and flaring rim. The beakers were valuable and highly decorated. They are often associated with special artifacts in grave assemblages, including polished stone wristguards, V-perforated buttons, and copper-tanged daggers.

**bell glass:** a bell-shaped glass cover used, especially formerly, as a cloche.

**bellarmine:** a capacious round-bellied jug or pitcher bearing a grotesque human mask. Originally created in the Netherlands as a burlesque likeness of Cardinal Bellarmine, the idea spread widely and the term later became applied to any jug bearing a human mask.

**bellows:** an object used to create a blast of air.

**belt:** a strip of leather or other material worn round the waist to support or hold in clothes or to carry weapons.

**belt hook:** small decorative and functional object used as a garment hook in China, Korea, and other Near Eastern areas as early as the 7th century BC. Belt hooks have been found in Han tombs in southwestern China, but this luxury item was most in vogue during the Warring States period (5th to 3rd centuries BC). These belt hooks were inlaid with gold or silver foil, polished fragments of turquoise, or more rarely with jade or glass; sometimes they were gilded. Most examples are bronze, often lavishly decorated with inlays, but some are made of jade, gold, or iron. The belt hook consists of a bar or flat strip curving into a hook at one end and carrying at the other end, on the back, a button for securing it to the belt. The hooks vary widely in size, shape, and design, and although contemporary sculptures sometimes show them at the waists of human figures, some examples are far too large to have been worn and their function is unclear. Textual evidence hints that the belt hook was adopted by the Chinese from the mounted nomads of the northern frontier of inner Asia, perhaps along with other articles of the horseman's costume. They were probably worn by both men and women. [toggle]

**benben stone:** a cult object made of stone, found at sites such as the one for the sun god Re at Heliopolis. The sacred stone symbolized the Primeval Mound and perhaps also the petrified semen of the deity. It served as the earliest prototype for the obelisk and possibly even

the pyramid. It was probably constructed in the early Old Kingdom, c. 2600 BC.

**bending:** a detached piece produced by cracks initiated away from the point of applied force. These flakes usually have a pronounced lip, contracting lateral margins immediately below the striking platform, and no bulb of force.

**Benton flaking:** this flaking technique involved the removal of large and small percussion flakes, which resulted in numerous step fractures. Pressure flaking was often used to form serrations. Oblique-transverse flaking was used to shape the blade of a few examples.

**bentonites:** a clay formed by the decomposition of volcanic ash, having the ability to absorb large quantities of water and to expand to several times its normal volume.

**Benty Grange helmet:** an Anglo-Saxon ceremonial helmet found in 1848 at a burial site in Benty Grange. Unlike the Sutton Hoo helmet, which has similarities to Swedish helmets, the Benty Grange example was undoubtedly of native workmanship. It is an elaborate object combining the pagan boar symbol with Christian crosses on the nail heads.

**betyl:** a sacred stone, often a standing stone fashioned into a conical shape.

**bevel:** a surface or edge which slopes away from a horizontal or vertical surface; the angle or inclination of a line or surface that meets another at any angle but 90°. [beveled (adj.)]

**beveled-rim bowl:** a widespread, crudely made conical pottery vessel formed in a mold and having a sloped rim, characteristic of the late Uruk period.

**Bewcastle Cross:** a runic standing cross monument in the churchyard of Bewcastle, Northumberland, northern England, dating from the late 7th or early 8th century. Although the top of the cross has been lost, the 4.5 m (15-foot) shaft remains, with distinct panels of the figures of Christ in Majesty, St. John the Baptist, and St. John the Evangelist, while on the back there is an inhabited vinescroll. Like the Ruthwell Cross, that at Bewcastle possesses a poem inscribed in runic script. The worn inscription suggests that the monument was a memorial to Alchfrith, son of Oswiu of Northumbria, and his wife Cyneburh (Cyniburug). It is one of the finest examples of early Christian Northumbrian art.

**bi disk:** a flat jade disk with a small hole in the center, made in ancient China for ceremonial purposes, possibly symbolizing heaven. Bi disks have also been described in ancient Chinese texts as a symbol of rank. Jade disks and disklike axes have been found in 4th and 3rd millennium BC graves at east-coast Neolithic sites such as Beiyinyangying. Polished stone disk segments are known still earlier at Banpo. [bi]

**bichrome ware:** pottery having a two-color design or decoration.

**biconical:** pertaining to a vessel when the sides make a sharp, inward change of direction, as if two truncated cones were placed base to base.

**biconical drilling:** a means of perforating beads or pendants for suspension. Accomplished by drilling in from both sides with a tapered drill resulting in an hourglass-shaped hole.

**biconical urn:** style of Early Bronze Age pot of northwestern Europe with a deep, largely plain, outwardly flared body. Above that is a sharp carination, decorated and sometimes with an applied cordon, and an inwardly angled neck with impressed cord designs. The rim is typically beveled and lightly ornamented.

**biconvex:** a blade shape having two worked faces.

**bier:** a movable wooden platform on which corpses were laid, sometimes together with grave goods, and eventually carried to a burial place.

**biface:** a type of prehistoric stone tool flaked on both faces or sides; the main tool of *Homo erectus*. The technique was typical of the hand-ax tradition of the Lower Paleolithic period and the Acheulian cultures. Bifaces may be oval, triangular, or almond-shaped in form and characterized by axial symmetry, even if the marks made by use are more plentiful on one face or on one edge. The cutting edge could be straight or jagged and the tool used as a pick, knife, scraper, or even weapon. Only in the most primitive tools was flaking done to one side only. [bifacial, coup-de-poing, hand ax]

**biface bevel:** a bevel that was formed by removing flakes from both faces of an edge.

**biface bevel flaking:** this flaking technique involved the removal of elongate, steep, pressure or percussion flakes just opposite each other from an edge to form a biface bevel and often biface serrations.

**biface serration flaking:** this flaking technique involved the removal of elongate, not so steep, pressure or percussion flakes just opposite each other from an edge to form biface serrations.

**biface thinning flake:** a flake that has been removed from a biface through percussion as part of the reduction process. These flakes typically were removed from an unfinished biface (or blank) in order to make it thinner.

**bifacial:** on both ventral and dorsal sides.

**bifacial blank:** a biface in the early stages of production displaying only percussion flaking and no evidence of pressure flaking. In many cases, blanks were traded and/or transported from their area of origin and subsequently used as bifacial cores from which flake blanks were detached for the production of dart or arrow points.

**bifacial core:** a core that has had flakes removed from multiple faces; may be mistaken for a large biface blank.

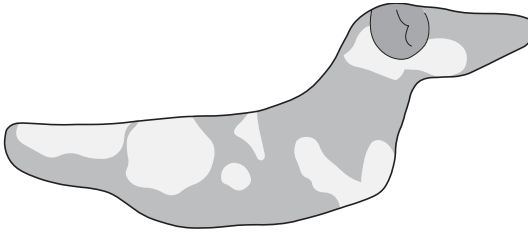
- bifacial flaking:** manufacture of a stone artifact by removing flakes from both faces.
- bifacial foliate:** a class of artifact comprised of leaf-shaped stone tools with complete or nearly complete flaking on both sides.
- bifacial retouch:** retouch flaking that occurs on both the ventral and dorsal sides of an edge.
- bifacial thinning flake:** flakes removed during the thinning or resharpening of bifaces. These flakes are relatively flat, have broad, shallow flake scars (produced by the detachment of previous thinning flakes from the dorsal face), and tend to exhibit a feathering out of lateral margins. The proximal end of the flake often retains the edge of the biface and, if the platform is retained, it often exhibits a low angle and evidence of crushing or grinding (i.e., platform preparation).
- bifacially worked:** pertaining to an artifact that has been flaked on both sides. [bifacial working (n.)]
- bifid razor:** type of tool, possibly a razor, of the Middle Bronze Age of Europe, with two ovate, sharp-edged lobes of thin metal attached to a central tang.
- bifurcate:** point base split into double lobes with indentation similar to notches on the sides. [bifurcated base]
- Big Horn Medicine Wheel:** a medicine wheel in the Big Horn Mountains of Wyoming that consists of a D-shaped stone cairn from which 28 individual stone spokes radiate. The outer circumference has six smaller cairns. The feature may be astronomically aligned.
- bilaterally barbed:** a projectile point or harpoon with barbs on both edges.
- bilaterally symmetrical:** the condition in which, when something is cut down the middle, the two halves formed are generally mirror images of each other.
- bill hook:** a tool used to cut or split wood.
- billet:** a soft hammer used to strike flakes from a stone core, often made of antler, bone, or wood. [baton, percussor]
- binder:** a substance, usually organic, added to a clay or glaze to increase its green strength.
- bipennis:** an ax with a double blade or edge, used as an agricultural implement, an adze, or a military weapon. It was used by the Amazons, Scythians, and Gauls. [bipenne]
- bipoint:** a bone or stone artifact pointed at both ends.
- bipolar percussion:** a type of percussion that involves the placement of raw material (usually small rounded or oval cobbles) on an anvil stone and striking it from the top. [bipolar flaking, bipolar technique]
- bipolar reduction:** producing lithic flakes and debris by placing a core on an anvil and striking it from above with a large hammer to shatter it.



**birch-bark manuscript:** early Russian letters and documents scratched onto thin pieces of birch bark, dating to the 11th to 15th centuries AD. They were first found in 1951 in Novgorod by A. Artsikhovski and form a very important source of information as no other documents earlier than the 13th century have survived because of frequent fires in the wooden cities of Old Russia. The manuscripts are quite well preserved from layers of organic materials. [birch-bark beresty]

**birdpoint:** a smaller arrowhead used by Native Americans to kill small game such as rabbit, waterfowl, and birds. [bird point]

**birdstone:** a class of prehistoric stone objects of undetermined purpose, usually resembling or shaped like a bird; carved bird effigies. These polished stone weights occurred in the cultures of the Archaic tradition (8000–1000 BC) and later cultures in the eastern woodlands of North America. They were probably attached to throwing sticks or atlatls to add weight and leverage. [bannerstone, bird-stone, boatstone]



Birdstone

**biscuit:** pots that have been given a preliminary firing to render them hard enough for further work such as decoration and glazing. The higher the temperature of the biscuit firing, the harder will be the pot, resulting in a reduced reaction between the glaze and body in the final firing. Also includes unglazed fired pottery, awaiting glazing, which is then glazed and refired in the glost firing. [bisque, bisque firing]

**bit, horse:** a metal mouthpiece attached to a bridle, used to control a horse. The domesticated horse was probably first controlled with a simple halter. The bit consists of a bit-mouth and adjacent parts to which the reins are attached. Bits with cheekpieces of antler did not appear in central Europe until after 1800 BC and they were later replaced by bronze bits. Bits without a cheek-piece, in two- or three-piece form, were introduced in the Iron Age.

**bivalve:** an aquatic mollusk that has a compressed body enclosed within two hinged shells, such as an oyster, mussel, or scallop, or any animal with two halves to its shell such as an ostracode or brachiopod.

**bivalve mold:** in metalworking, a form of mold with two halves pegged together and used for casting metal objects. The mold can be made of clay, metal, or stone. The mold is parted to release the cast object

once the metal has cooled. It is a reusable mold more complicated than an open mold.

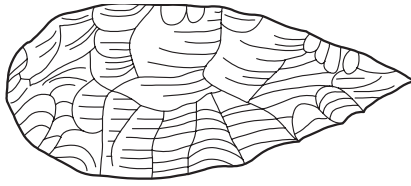
**Black-and-Red ware:** any Indian pottery with black rims and interior and red on the outside, due to firing in the inverted position, which was made beginning in the Iron Age. Characteristic forms include shallow dishes and deeper bowls. It first appeared on late sites of the Indus civilization and was a standard feature of the Banas culture. This ware has been found throughout much of the Indian peninsula with dates of the later 2nd and early 1st millennium BC. In the 1st millennium it became widespread in association with iron and megalithic monuments. In the Ganges Valley it post-dates ocher-colored pottery and generally precedes painted gray ware. [Black and Red ware]

**Black-burnished ware:** culinary vessel forms made in two different fabrics and widely imitated. One was black, gritty, and handmade from c. AD 120 to the late 4th century AD. A second was more gray and finer, with a silvery finish, and wheel-thrown in the Thames Estuary area c. AD 140 to the mid 3rd century AD. [black burnished ware]

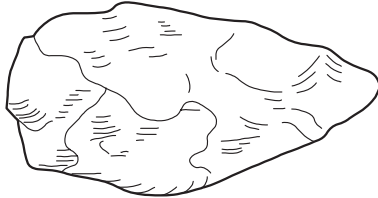
**black-figure:** a type of Greek pottery that originated in Corinth c. 700 BC and was popular until red-figure pottery, its inverse, began in c. 530 BC. This style consisted of pottery with one or more bands of human and animal figures silhouetted in black against the tan or red ground. The red color was probably taken when the pot was fired. The delineation of the figures was often heightened by the use of incised lines and the addition of white or purple coloring. The figures and ornamentation were drawn on the natural clay surface of a vase in glossy black pigment; the finishing details were incised into the black. The first significant use of the black-figure technique was on proto-Corinthian-style pottery developed in Corinth in the first half of the 7th century BC. The Corinthian painter's primary ornamental device was the animal frieze. The Athenians, who began to use the technique at the end of the 7th century BC, retained the Corinthian use of animal friezes for decoration until c. 550 BC, when the great Attic painters developed narrative scene decoration and perfected the black-figure style. There were also studios producing black-figure ware in Sparta and eastern Greece. [Black-figure ware; black-figured (adj.)]

**black-glazed:** a style of pottery decoration in which plain wares were given a black sheen, which continued well into the Hellenistic period – especially in Athens from the 6th to 2nd centuries BC. These wares were often made alongside figure-decorated pottery and, from the 5th century BC, the shapes were frequently of stamped decoration. In the 4th century BC, rouletting was also used. [black-glossed]

**blade:** a long, narrow, sharp-edged, thin flake of stone, used especially as a tool in prehistoric times. This flake was detached by striking from



Ovate



Blank

Blades

a prepared core, often with a hammer. Its length is usually at least twice the width. The blade may be a tool in itself, or may be the blank from which a two-edged knife, burin, or spokeshave was manufactured. This term, then, is used by archaeologists in several ways. (1) It can refer to a fragment of stone removed from a parent core. The blade is used to manufacture artifacts in what is known as the blade and core industry. (2) That portion of an artifact, usually a projectile point or a knife, beyond the base or tang. (3) In certain cultures, small artifacts are called microblades. It was a great technological advance when it was discovered that a knapper could make more than one tool from a chunk of stone. The Châtelperronian and Aurignacian were the earliest of the known blade cultures – associated with the arrival of modern humans. Industries in which many of the tools are made from blades became prominent at the start of the Upper Paleolithic period. A typical blade has parallel sides and regular scars running down its back parallel with the sides. A “backed blade” is a blade with one edge blunted by the removal of tiny flakes. Blades led to another invention – the handle. A handle made it easier and much safer to manipulate a sharp, two-edged blade. [blade tool]

**blade core:** a flint or stone core from which blades have been struck, typically conical or pyramidal in shape and producing distinctive debitage.

**blade tool:** a tool made from a single, thin, narrow flake detached from a core. The controlled flaking technique is characteristic of the Upper Paleolithic but it is also known from earlier cultures.

**bladelet:** shorter, narrower blade.

**blank:** a partly finished stone artifact that has been worked roughly into a shape but which must be further chipped to a suitable size and form to become a tool. This is an intermediate manufacturing stage in the production of stone tools, where the tools are given the rough shape at a quarry or workshop and often taken elsewhere for completion. Blanks were presumably made in quantity because they were easier to carry from place to place than heavy lumps of stone.

**Blattspitzen:** a category of stone artifact with complete or nearly complete flaking on both sides and points at one or both ends. They are found in some late Middle and early Upper Paleolithic industries of central and eastern Europe.

**block statue:** a type of sculpture introduced in the Middle Kingdom (2055–1650 BC), that represents the subject squatting on the ground with knees drawn up close to the body, under the chin. The arms and legs may be wholly contained within the simple cubic form, with the hands and feet protruding discretely. The 12th dynasty block statue of Sihathor in the British Museum is the earliest dated example. The block statue of Queen Hetepheres, in the Egyptian Museum at Cairo, is also one of the earliest examples of this type.

**bloom:** 1. Spongy mass of material made up of iron and slag, produced from the initial smelting of iron ore. The slag and impurities are mostly driven off in preliminary forging. To produce useful iron, bloom must be hammered at red heat to expel the stone and add a proportion of carbon to the metal. 2. A mass of iron after having undergone the first hammering or an ingot of iron or steel, or a pile of puddled bars, which has been passed through one set of “rolls,” made into a thick bar, and left for further rolling when required for use.

**blowpipe:** a long, hollow tube used to blow molten glass into shapes.

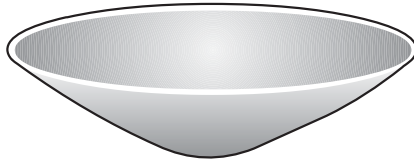
**Blue Willow pottery:** first made in England over 200 years ago, and said to be “America’s favorite patterned ware.” Willow ware is available in a wide range of patterns; the makers are most identifiable by marks, styles, and periods, running from 1780 onward.

**blunt:** a point that abruptly terminates part way up the blade with no true distal point for piercing. Typically the point is chipped in a mild excurvate or straight edge. Some feel that the point may have been used in hunting as a “stunning” weapon. However, most blunts show signs of being a conserved, former projectile, reworked into a hand-held or hafted scraper.

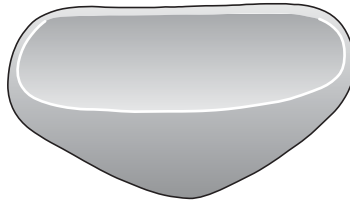
**boatmaking:** boatmaking and navigation have been important for thousands of years and there is evidence of dugout canoes from Mesolithic times onward, the earliest being at Perth and in Denmark. Neolithic people used skiffs as well as dugout canoes. Plank boats appeared in the Middle Bronze Age. In the Roman period, boats started being made

with nails. Sea-going vessels existed, but there is not much evidence except for skin boats, like the Irish curragh. Classical writers describe plank-built boats with sails of leather on the Atlantic before the Romans arrived. Full documentation begins only with the Vikings. The Americas have yielded two regional pre-conquest types of craft: the reed cabalitos of the Peruvian coast and Lake Titicaca, and the sea-going balsa rafts from the Gulf of Guayaquil.

**boatstone:** a boat-shaped stone atlatl – a throwing-stick weight – put on the shaft to give great propulsion to a thrown dart. Unlike the bannerstone, it was apparently lashed to the stick shaft. [bannerstone, birdstone]



Side



Boatstone

**bobbin:** an object on which thread or yarn is wound or hooked.

**bodkin:** 1. A sharp slender instrument for making holes or for other functions. It may be shaped like a dagger, stiletto, or hairpin. 2. A blunt needle with a large eye for drawing tape or ribbon through a loop or hem.

**body:** 1. The main part of a vessel that contains the volume (or sherds of it). 2. Clay or a mixture of clay and inclusions (temper) that is suitable for forming vessels or that has been fired into a vessel. [fabric, paste, ware]

**body plug:** an object used in the preparation of a body following death. It was used to plug the orifices of the body.

**body shape:** overall form of a ceramic object.

**body sherd:** any fragment of a ceramic vessel not identifiable as a rim sherd. [body shard]

**bolas stone:** weighted balls of stone, bone, ivory, or ceramic that are either grooved or pierced for fastening to rawhide thongs and used to hunt prey. The bolas, still found today among some of the peoples

of South America and among the Inuits, usually consists of two or more globular or pear-shaped stones attached to each other by long thongs. They are whirled and thrown at running game, with the thongs wrapping themselves around the limbs of the animal or bird on contact. Bolas stones have been found in many archaeological sites throughout the world, including Africa in Middle and Upper Acheulian strata. [bola, bola stone, bolas; bolases (pl.)]

**Bolling interstadial:** an interstadial of the Weichselian cold period, dated to between 13,000 and 12,000 bp.

**bolt:** an iron arrow or missile, especially stout and short with a blunt or thickened head, discharged from a crossbow or other engine. [quarrel]

**bombylos:** a Greek or Roman vase so-called from the gurgling noise that the liquid made when pouring out of the narrow neck. [bombyle]

**Bondi point:** a small, asymmetrically backed point, named for Bondi, Sydney, which is a component of the Australian Small Tool tradition. It is usually less than 5 cm (2 inches) long and is sometimes described as a backed blade. Some examples suggest that the points were set in wooden handles or shafts. It occurs on coastal and inland sites across Australia, usually south of the Tropic of Capricorn. The oldest examples come from southeast Australia, dating from about 3000 BC, and the most recent are 300–500 years old. The Bondi point was not being used by Aborigines when Europeans arrived.

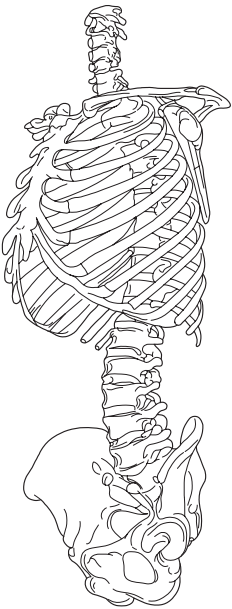
**bone:** connective tissues of the body, consisting of crystallite minerals and collagen. After death, the proteins slowly decompose and the remaining mineral is subject to solution in acid soil conditions. Bones are preserved on a wide variety of archaeological sites. From early prehistory, the bones, horns, or antlers of animals that people hunted or kept provided people with a vital source of raw material for constructing artifacts. There are many types of bone. There are a variety of relative age-determination techniques applicable to bone material, including measurements of the depletion of nitrogen (bone dating) and the accumulation of fluorine and uranium.

**Bone Age:** a loosely defined prehistoric period of human culture characterized by the use of implements made of bone and antler; not part of the Three Age System.

**bone china:** white porcelain containing the mineral residue of burnt bones.

**bone hammer:** a bone that is used as a hammer in the removal of flakes from a core in the manufacturing of stone tools.

**Bonneville:** a time in the late Pleistocene epoch about 30,000 years ago when a prehistoric lake formed covering an estimated 52,000 km<sup>2</sup> (20,000 square miles), over much of western Utah and parts of Nevada and Idaho in the US. These conditions existed during the interval of



the last major Pleistocene glaciation. Lake Bonneville shrank rapidly in size and, by 12,000 years ago, had permanently shrunk to a point where it had become smaller than Great Salt Lake.

**boomerang:** a curved wooden throwing stick with a biconvex or semi-oval cross-section, distributed widely over Australia except for Tasmania, and used for hunting and warfare. The boomerang had marked regional variations in design and decoration. Returning boomerangs are used in Australia as playthings, in tournament competition, and by hunters to imitate hawks for driving flocks of game birds into nets strung from trees. The returning boomerang was developed from the nonreturning types, which swerve in flight. Boomerangs excavated from peat deposits in Wylie Swamp, South Australia have been dated to c. 8000 BC. Boomerang-shaped, non-returning weapons were used by the ancient Egyptians, by Indians of California and Arizona, and in southern India for killing birds, rabbits, and other animals.

**Boreal:** a climatic subdivision of the Holocene epoch, following the Pre-Boreal and preceding the Atlantic climatic intervals. Radiocarbon dating shows the period beginning about 9500 years ago and ending about 7500 years ago. The Boreal was supposed to be warm and dry. In Europe, the Early Boreal was characterized by hazel–pine forest assemblages and lowering sea levels. In the Late Boreal, hazel–oak forest assemblages were dominant, but the seas were rising. In some areas, notably the North York moors, southern Pennines, and lowland heaths, Mesolithic man appears to have been responsible for temporary clearances by fire and initiated the growth of moor and heath vegetation.

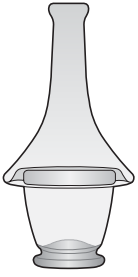
**bored stone:** a rounded stone of various sizes with a bored hole in the middle, found in central and southern Africa and dating back 40,000 years. Some were used as weights on digging sticks.

**borer:** a flint tool for piercing holes.

**boshanlu:** a Chinese incense burner (lu) with a lid designed to represent mountain peaks, such as Boshan, a mountain in Shangdong province. They are stemmed bowls of pottery or bronze with a perforated conical lid. Most examples date from the western Han period. One from the tomb of Liu sheng (dated 113 BC) at Mancheng is inlaid with gold.

**boss:** a stud on the center of a shield.

**bossed bone plaque:** objects of unknown function made from long animal bones and carved with a row of bosses – circular, square, or oval ornamental motifs. Examples from Lerna, Troy, and Altamira date to the late 3rd millennium BC. The finest have engraved decoration also. A series from Castelluccio, Sicily, with outliers in Italy and Malta, are curved in cross-section and are dated just before 2500 BC.



**bottle:** a container, typically made of glass or plastic and with a narrow neck, used for storing drinks or other liquids.

**bottle kiln:** a large kiln, wide at the bottom and narrow at the top like a bottle.

**Bouffiuux stoneware:** the Bouffiuux region has been producing ceramics for almost 500 years. Many artists contributed to the revival of the Bouffiuux genre in the first part of the 20th century when producing hand-thrown stoneware artworks, known today as the *grès d'art* of Bouffiuux.

**boulder clay:** a clayey deposit of an ice age that contains boulders; the clay of a glacial or drift period.

**boundary marker:** an indicator of the extent of an area of land.

**bout coupé:** in British archaeology, a well-made cordiform or subtriangular refined biface from northwest Europe. It may be a diagnostic Mousterian tool.

**bow:** an offensive weapon for shooting arrows or missiles and used in hunting and war. It generally consists of a strip of bendable wood or other material with a string stretched between its two ends. The arrow or missile is shot by the recoil after retraction of the string. The weapon was first used in the Upper Paleolithic by the Gravettians. Some Mesolithic examples have been preserved in peat bogs, but often all that remains is an arrowhead or wrist guard.

**bow and arrow:** weapon consisting of two parts. The bow is made of a strip of flexible material, such as wood, with a cord linking the two ends of the strip to form a tension from which is propelled the arrow. The arrow is a straight shaft with a sharp point on one end and usually with feathers attached to the other end.

**bow brooch:** any brooch with the pin sprung or hinged at one end and the catch-plate at the other end of a curved or flat bow. It can be a one- or two-piece construction.

**bowl:** a round, deep dish or basin.

**box:** a container with a flat base and sides and usually a lid.

**box flue:** a brick of four terra cotta tiles that were joined together to conduct the furnace-heated air of a Roman (hypocaust) heating system. The tiles were joined at the edges and open at the top and the bottom. The air was directed through them up the walls to escape at the eaves. The exposed faces of the box-flue tiles were often decorated in relief to provide a key for the wall plaster which normally covered them.

**box tile:** a baked clay tile shaped like a rectangular box, open at both ends, used for flues. [box flue tile]

**BP:** the abbreviation for “before present,” used especially in radiocarbon dating. The fixed reference date for before present has been established as AD 1950. Thus, 4250 BP would mean 4250 years prior to 1950, or 2300 BC. The year 1950 was the latest that the atmosphere was



sufficiently uncontaminated to act as a standard for radiocarbon dating. The lower case “bp” represents uncalibrated radiocarbon years; the capitals BP denote a calibrated radiocarbon date, or a date derived from some other dating method, such as potassium–argon, that does not need calibration.

**bracelet:** an ornamental band or chain worn on the wrist or arm.

**bracer:** a wristguard used in archery, fencing, and other sports.

**bracteate:** a coin, medal, dish, or ornament made of thin, beaten metal – usually gold or silver. These items were often disk-shaped, hollow on the underside and convex on the upper.

**brad:** a flat nail of the same thickness that tapers in width to a point.

**bradawl:** a small tool that pierces material, with a flat cutting edge.

**Bradshaw figures:** small, red, painted figures in scenes of the Kimberley region of Western Australia, named for Joseph Bradshaw who discovered them.

**branding iron:** a heated iron used to label, burn, or mark animals, slaves, criminals, etc.

**brass:** general name for alloys of copper with zinc or tin, with the proportions about 70–90% copper and 10–30% of the other base metal. It is possible that due to difficulties in introducing the zinc ore calamine into the melt, brass appeared later in use than bronze (copper and tin) and other copper alloys. Mosaic gold, pinchbeck, and prince’s metal are varieties of brass differing in the proportions of the ingredients. Corinthian brass is an alloy of gold, silver, and copper.

**brazing:** a method of joining one piece of metal to another by making both red hot so that the metal fuses.

**break:** evidence of accidental damage to a stone tool that resulted in the loss of an appreciable part of an artifact (usually the distal or proximal part) and altered its length, width, or shape.

**breastplate:** a piece of armor covering the chest.

**Breton arrowhead:** a type of barbed and tanged arrowhead, highly symmetrical in form, with slightly concave or convex sides and flared barbs and the tang the same length as the barbs. It is characteristic of the Early Bronze Age in northern France and southern Britain.

**brick:** an important building material of individual blocks of clay or mud, some with tempering of sand or straw. Bricks, which are not always rectangular, may be baked in a kiln to terra cotta or sun-dried; the latter are referred to as mud bricks or adobes. The chief building material throughout the Near East has always been mud brick. Bricks can be used as dating criteria, especially when they bear stamped inscriptions. Decorative glazed bricks first appeared in Assyrian times, as at Ishtar Gate in Babylon.

**brick bond:** 1. Style or pattern of the layout of bricks. 2. Mortar joint between bricks.

**brick-relief:** a technique of sculpture with subjects in bas-relief on a brick surface or wall.

**bridle:** headgear for a horse, usually consisting of a series of buckled straps and a mouthpiece by which the horse is controlled. A bridle bit is a metal mouthpiece used to control an animal, usually used on a horse.

**briquetage:** thick-walled, very coarse ceramic material used for making evaporation vessels used in saltmaking from the mid 2nd millennium BC through to medieval times in northern Europe. [VCP, very coarse pottery]

**Britannia metal:** a silvery alloy consisting of tin with about 5–15% antimony and usually some copper, lead, or zinc.

**broadsword:** a broad design of sword used for cutting and slashing.

**bronze:** an alloy of copper and tin that is harder than copper. Bronze was made before 3000 BC, though it was not used in tools and weapons for some time. Tin added to copper made casting easier and the edges of tools and weapons harder. The proportions of copper and tin varied widely (67–95% copper in surviving artifacts) and the addition of zinc, nickel, lead, arsenic, or antimony is also known. The main disadvantage was the comparative scarcity of tin. A higher percentage of tin produces potin or speculum. The Bronze Age of the Three Age System began in Eurasia when it replaced copper as the main material for tools and weapons. It was then replaced by the more common and efficient iron, but was still used for decorative purposes. Modern bronze also contains zinc and lead.

**Bronze Age:** second age of the Three Age System, beginning about 4000–3000 BC in the Middle East and about 2000–1500 BC in Europe. It followed the Stone Age and preceded the Iron Age and was defined by a shift from stone tools and weapons to the use of bronze. During this time civilization based on agriculture and urban life developed. Trading to obtain tin for making bronze led to the rapid diffusion of ideas and technological improvements. Bronze artifacts were valued highly and became part of many hoards. In the Americas, true bronze was used in northern Argentina before AD 1000 and its use spread to Peru and the Incas. Bronze was never as important in the New World as in the Old. The Bronze Age is often divided into three periods: Early Bronze Age (c. 4000–2000 BC), Middle Bronze Age (c. 2000–1600 BC), and Late Bronze Age (c. 1600–1200 BC) but the chronological limits and the terminology vary from region to region.

**bronze mirror:** any of the smooth-faced bronze disks of eastern Asia in the late 2nd millennium BC. These cast-decorated items became important to the Han dynasty elite in China. In Korea and Japan they were used for rituals or ceremonies.

**brooch:** an ornamental pin or piece of decorative metalwork attached by a pin, that was either a fastener or ornament; they are found from c. 1400 BC. Brooches developed from the Roman fibula, which was similar to a safety pin, and were first made at La Tène on Lake Neuchâtel, Switzerland. Their styles vary, especially in the twisting of the spring, and may be used to date other finds. There were long brooches, rosette or circular brooches, and penannular types.

**Brørup interstadial.:** an interstadial of the Weichselian cold period, radiocarbon dated to between 63,000 and 61,000 bp, but it may be earlier.

**brownware:** a brown-glazed earthenware; pottery that fires to a brown or reddish color.

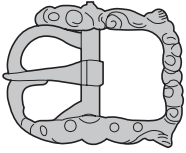
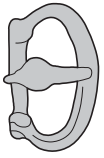
**brush:** a handheld device with bristles or hairs used for cleaning or painting.

**Bubalus period:** the earliest phase of rock art in northern Africa, between 12,000 and 8000 BC, in which large-scale carvings of animals appeared. These early engravings – in southern Oran, Algeria, and Libya – reflect a hunting economy based on the now-extinct giant buffalo *Homoioceras antiquus* or *Bubalus antiquus* (hence the name).

**bucchero:** a fine gray pottery, with a black or gray shiny surface, which was produced principally in Greek-speaking or Etruscan areas between the 8th and 5th centuries BC. Shapes and decoration styles varied greatly – incised, stamped, and applied techniques were employed. This earthenware pottery was common in pre-Roman Italy between the 7th and early 5th centuries BC. The shiny surface was produced by polishing and the color achieved by firing in an atmosphere charged with carbon monoxide instead of oxygen (“reducing firing”). The light, thin-walled bucchero sottile, considered the finest, was made in the 7th and early 6th centuries and the shapes were derived largely from Oriental models. In the 6th century the Greek influence changed the forms to alabastrums, amphorae, kraters, and kylikes with incised, modeled, or applied birds and animals in friezes or geometric schemes. Greek black pigment was used and human and animal figures were painted on the surface of the bucchero in black, red, and white. Techniques and workmanship declined from about the mid 6th century onward, when bucchero sottile was replaced by bucchero pasantè – a heavy, complex, thick-walled ware that was decorated with elaborate reliefs.

**bucket:** a cylindrical open container with a handle, used to carry liquids.

**bucket urn:** type of large Middle Bronze Age pot of the Deverel-Rimbury ceramic tradition of southern Britain c. 1500 BC through to 1200 BC. Bucket urns are plain with some applied cordons, have straight slightly sloping sides, wider at the top than the bottom. They were used on domestic sites for storage and cremations.



Buckles

**buckle:** a flat rectangular or oval frame with a hinged pin, used for joining the ends of a belt or strap.

**Buckley earthenware:** c. 1720–1775, North Wales. The body of this earthenware is quite coarse because of the combination of two different types of clay in the process. The ware is made of layers of pink-firing and yellow clays. The combination of the two clays served to make the poor clays more workable. The ware is decorated with a black lead glaze. The exterior fabric color on unglazed portions is purplish-red. The body exteriors are often heavily ribbed. When broken, the fabric interior exhibits the characteristic red and yellow layers.

**bucranium:** in Roman times, an ox skull that was carved in relief and was part of the decoration of a building.

**budares:** large ceramic griddles used for toasting manioc flour in Central and South America.

**Buddhagupta stone:** a Sanskrit language inscription of c. 5th century AD from western Malaysia, due to trade by Buddhists of Southeast Asia. Related inscriptions have been found in Borneo and Brunei.

**bulb of percussion:** in flintmaking, a swelling or bulb left on the surface of a blade or flake directly below the point of impact on the striking platform – that is, a swelling on a flake or blade at the point where it has been struck to detach it from a core. On the flake or blade struck off there is a rounded, slightly convex shape around this point called the bulb of percussion and on the core there is a corresponding concave bulb. The point and the bulb of percussion are rarely present if a flake has been struck off naturally, as by heat or frost. Thus the presence of a bulb of percussion makes it possible to distinguish human workmanship from natural breakage. [bulb, bulb of force]

**bulbar depression:** a depression left from the bulb of percussion when a blade or flake is struck from a core.

**bulbar scar:** irregularly shaped scar on the bulb of percussion of a struck flint flake. It marks the place where a small piece of flint is dislodged during fracture. The bulbar surface is the surface upon which the bulb of percussion occurs. This fracture pattern is evident by a bruised striking platform at the point of impact with shock waves radiating from it and, on the resultant flake, a bulb of percussion and bulbar scar. When these features are present, it is possible to distinguish human workmanship from natural breakage caused by heat or frost. [bulb scar, erailure]

**bulbar surface:** 1. Surface upon which the bulb of percussion occurs.  
2. Another term for the entire ventral surface of an artifact.

**bullae:** a hollow lump of clay made as an Etruscan ornamental pendant or in the Near East as a container for tokens representing goods traded. A bulla was round or oval and often was decorated with filigree or

granulation decorating on the edges or seal impressions. There was a removable loop from which the pendant was hung, which may also have acted as a stopper for the bulla if it contained a liquid, such as perfume. [bullae (pl.)]

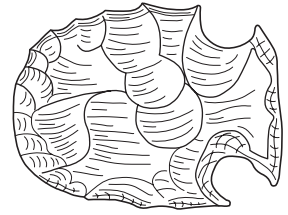
**bullet:** a projectile discharged from a weapon, usually a firearm.

**bunt:** a blunted projectile point intended to stun rather than to inflict a bleeding wound; sometimes difficult to distinguished from hafted scrapers.

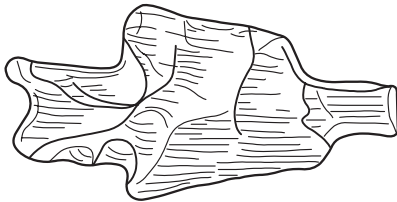
**Burial Mound period:** penultimate period of eastern North American prehistoric chronology, from 1000 BC to AD 700. Formulated in 1941 by J. A. Ford and Godon Willey, the total chronology, from early to late, is Paleoindian, Archaic, Burial Mound, and Temple Mound. The Burial Mound I period (1000–300 BC) covers the transition from Late Archaic to Early Woodland ways of life and is associated especially with the Adena culture. Burial Mound II (300 BC to AD 700) is associated especially with Middle and Late Woodland groups, especially the Hopewell.

**burial urn:** a vessel in which the cremated ashes of one or more individuals are placed.

**burin:** a specialized engraving tool with a chipped flint or stone shaft that was cut or ground diagonally downward to form a diamond-shaped point at the tip. The angle of the point affected the width and depth of the engraved lines. The shaft of the tool was fixed in a flat handle that could be held close to the working surface. A burin had a wide rounded end for bracing against the palm of the hand and the point was guided by the thumb and forefinger. A blade or flake could be formed into any one of about 20 varieties of the tool. In its most characteristic form, the working tip was a narrow transverse edge formed by the intersection of two flake scars produced by striking at an angle



Bunt



Burin

to the main axis of the blade. Sometimes one facet was made by simply snapping the blade, or by truncating it with a steep retouch. Burins were used to carve or engrave softer materials such as antler, bone, ivory, metal, or wood. This tool was characteristic of the Upper Paleolithic (especially Magdalenian) in the Old World and of some Early Lithic and Mesolithic cultures of the New World. [graver]

**burin adze:** a term sometimes used by Australian archaeologists for flake scrapers, hafted for woodworking, which are not Tula adzes. [flake scraper, non-tula adze]

**burin facet:** scar formed by the detachment of a burin spall.

**burin spall:** a small, relatively thick flake removed from a flake or blade using a snapped termination or previous burination scar as a platform.

**burnish:** a polish given to the surface of an artifact, either to improve its appearance and make it more valuable or to compact it (as with clay) to make it less porous. A pot is polished, often using a spatula of wood or bone, while it is still in a leathery “green” state, i.e., before firing. After firing the surface is extremely shiny. Often the whole outer surface of the pot is thus decorated, but in certain ceramic traditions there is “pattern burnishing” where the outside and, in the case of open bowls, the inside are decorated with burnished patterns in which some areas are left matte. In stroke burnish, the surface is completely polished, but the marks of the burnisher, a pebble or bone slip, remain distinct. On bronze it was done to improve the appearance; even mirrors could be produced in this way. A burnisher is a metal instrument used by engravers to soften lines or efface them. [burnishing]

**burnisher:** a tool used to polish the surface of an artifact.

**burnt flint:** flint that has been burnt. It is not necessarily worked.

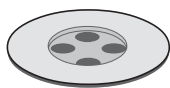
**butcher marks:** marks made on animal bone by stone tools during butchering. These marks are used to associate humans with animal remains for a relative date. The marks are classified according to form and function as cut marks, chop marks, and scrapes. [chop marks, cut marks, scrapes]

**butt beaker:** a tall beaker shaped like a butt or barrel, with a small, everted rim and body usually decorated with cordons, rouletting, latticing, etc. Dated mid 1st century BC through to 1st century AD in Gallo-Belgia and Britain.

**butter churn:** a vessel used to produce butter from milk through agitation.

**butteris:** a farrier’s tool for paring a horse’s hoof.

**button:** small, usually disklike, pieces of bone, metal, stone, or other solid material that have holes or a shank through which they are sewn on to



garments. Buttons are used to fasten or close a garment and are sometimes purely decorative. They are known from the Copper Age onwards in Europe, developing in the Mediterranean area and being spread along with beakers. The ancient Greeks and Etruscans fastened their tunics at the shoulders with buttons and loops. The presence of buttons implies a tailored garment as draped ones were better fastened with a pin or fibula.

**button and loop fastener:** a fastener made of a metal circle connected to a metal loop fixed to an object and used to fasten to another object by means of a button or a loop. The usage of these items is unclear, and could include use for animals or for dress.

# C

**caccabus:** a type of Greek or Roman pot or vessel for cooking any kind of food. It was made of bronze, silver, or earthenware, and had a variety of forms. The most common shape was like an egg with an opening at the top that was closed with a lid, while the vessel rested on a trivet (tripus).

**cache:** a collection of similar items and/or ecofacts that are deliberately hidden for future use. Caches are often discovered in burials or in caves and usually consist of ceremonial and ritual objects or emergency food supplies.

**cache blade:** quantities of points or blades found together in an underground depository or in a mound.

**cadus:** a large Greek or Roman earthenware jar, which was a wine jar but was also used as a measure for liquids. An ordinary cadus was about 0.9 m (3 feet) high and broad enough in the mouth to allow the contents to be baled out.

**caelatura:** from the Latin word meaning to emboss or engrave; a general term for working in metal by raised work or intaglio, such as engraving, carving, chasing, riveting, soldering, or smelting. Similar work on wood, ivory, marble, glass, or precious stones was called sculptura.

**Caeretan ware:** Archaic pottery of Etruria that was probably made at Cerveteri. It was black-figured style.

**Cahokia point:** a side-notched, triangular arrow point with straight sides to slightly concave basal edges. A few have slightly convex basal edges. There may be additional side notches on the blade, usually just above the primary side notches, or it may be serrated. Points with two or three notches are the most common. The Cahokia point was named by Edward G. Scully in 1951 for examples found at the Cahokia site



in St. Clair and Madison counties in Illinois. An early Mississippian point has been found dating in the AD 900–1300 range.

**caique:** a small wooden sailing vessel, brightly painted, and used around Greece and in the Aegean for trade.

**calabash:** hollow shell of a gourd or pumpkin or the fruit of the calabash tree, used as a storage or drinking vessel. Such a shell was used for household utensils, water bottles, kettles, musical instruments, etc. It is round or oval and hard enough to be used in boiling liquids over a fire.

**calamus:** a reed or cane used by early writers, especially as an implement for scribes working on clay. Calami were usually made from reeds in Mesopotamia, but also from wood, and the point was sharpened to form a triangle. The pressure of the calamus on the clay produced the cuneiform script. Pressing lightly or firmly made longer or shorter lines. [calami (pl.)]

**calcareous clay:** any clay composed of, or containing, or resembling calcium carbonate or calcite or chalk.

**calcareous concretion:** a rounded mass of mineral matter occurring in sandstone, clay, etc., often in concentric layers around a nucleus.

**calcite:** a white or colorless mineral consisting of calcium carbonate. [calcite varnish]

**calcite-gritted ware:** pottery with a fabric of crushed calcite (either shell or mineral grit) as a tempering agent, used especially for storage jars, cooking pots, and bowls.

**calculi:** in antiquity, small stones or pebbles used for calculation.

**caldron:** a large metal pot, used for cooking over an open fire.

**calendar round:** a ritually and historically important calendar used throughout Mesoamerica in which the solar calendar of 365 days ran in parallel with a sacred 260-day ritual calendar of named days. The calendar round is a 52-year cycle, since both calendars begin on the same day only once every 52 years. Coefficients for days and months were expressed by bar-and-dot numerals, a system that is first known in Monte Albán I and that became characteristic of the Classic Maya. The basic structure of the Mayan calendar is common to all calendars of Mesoamerica. To identify a date of the calendar round, the Maya designated the day by its numeral and name, and added the name of the current month, indicating the number of its days that had elapsed by prefixing one of the numerals from 0 through 19. A date written in this way will occur once in every calendar round, at intervals of 52 years. It is the meshing of the two Maya calendars, the Tzolkin and the Haab.

**Calendar Stone:** a 25-ton, 4 m (13-feet) wide carved monolith commissioned by the Emperor Axayacatl in 1479, which symbolizes the Aztec

universe. The populations of central Mexico believed that they were living in the fifth epoch of a series of worlds (or suns) marked by cyclical generation and destruction. The central figure of the stone is this fifth sun, Tonatuih. Surrounding this are four rectangular cartouches containing the dates and symbols for the gods Ehecatl, Texcatlipoca, Tlaloc, and Chilchihuitlicue who represent the four worlds previously destroyed and the dates of the previous holocausts – 4 Tiger, 4 Wind, 4 Rain, and 4 Water. The central panel contains the date 4 Ollin (movement) on which the Aztecs showed that they anticipated that their current world would be destroyed by an earthquake. In a series of increasingly larger concentric bands, symbols for the 20 days of the month, precious materials, and certain stars are represented. The outermost band depicts two massive serpents whose heads meet at the stone's base. The Calendar Stone is in the Museo Nacional de Antropología (National Museum of Anthropology) in Mexico City.

**calendrics:** the decipherment and study of calendars.

**caliche:** an encrustation or deposit of hard, calcareous cement made up of nitrates, sulfates, halides, and sand. It appears on the surface of materials such as bone, ceramic, or stone after they have been buried or exposed to moisture for an extended time. These layers of calcium carbonate (lime accumulation) are often present in semiarid or arid areas, either on top of or within the soil – as in the desert basins of southern Arizona. [caliché]

**calix:** a chalice or cup-shaped vase used as a drinking goblet. It had two handles and was mounted on a stand.

**callaïs:** a greenish decorative stone occasionally used for beads from the Late Neolithic to Early Bronze Age in western Europe.

**came:** a strip of lead holding small pieces of glass (quarries) in a window.

**cameo:** an engraving or carving in low relief on a stone.

**cameo glass:** a Roman artifact of layered, multicolored glass with the effect of a cameo cut from onyx. The Portland Vase in the British Museum is an important example.

**Campanian pottery:** a type of southern Italian pottery. Production seems to have started before the middle of the 4th century BC, perhaps under the influence of Sicilian pottery. There seem to have been three main centers of production: two at Capua and one at Cumae. Late in its production it seems to draw inspiration from Apulian pottery.

**campanulate bowl:** a bowl or other kind of vessel (pottery, metal, etc.) shaped like an inverted bell.

**Canaanite blade:** a type of extremely regular and large (25–50 mm (1–2 inches) wide and up to 25–30 cm (10–12 inches) long) flint blade produced by a specialized technique. The technology seems to have first appeared at the beginning of the 4th millennium BC in eastern

Anatolia and adjoining areas, and was then introduced to the southern Levant (Canaan) by 3500 BC; these blades were produced until 2000 BC.

**Canaanite amphora:** common transport vessel of the Late Bronze Age in the eastern Mediterranean. Canaanite amphoras average 76 cm (30 inches) in height and have a short, relatively narrow flaring mouth, a wide shoulder with two handles on it, and a tapering profile running down to a narrow pointed base. They were made in various centers in the eastern Mediterranean and were roughly contemporary with stirrup jars.

**candelabrum:** 1. A candlestick, often an ornamental one, or any kind of stand by which a light can be supported. 2. A chandelier. [candelabra (pl.)]

**candle:** a cylinder or block of wax or tallow with a central wick which is lit to produce light as it burns.

**candlestick:** a support or holder for one or more candles.

**canister:** a container filled with musket balls, metal fragments, nails, etc. Designed to kill or maim the enemy at a close range.

**canopic jar:** an ancient Egyptian funerary ritual in which four covered vessels of wood, stone, pottery, or faience were used to hold the organs removed during mummification. The embalmed liver, lungs, stomach, and intestines were placed in separate canopic jars. The jars or urns were then placed beside the mummy in the tomb, to be reunited in spirit, subject to the appropriate spells and rituals having been performed. The earliest canopic jars came into use during the Old Kingdom (c. 2575–2130 BC) and had plain lids. During the Middle Kingdom (c. 1938–1600 BC) the jars were decorated with sculpted human heads, probably depicting the deceased. Then, from the 19th dynasty until the end of the New Kingdom (1539–1075 BC), the heads represented the four sons of the god Horus (Duamutef, Qebehsenuf, Imset, Hapy). In the 20th dynasty (1190–1075 BC) the practice began of returning the embalmed viscera to the body. The term appears to refer to a Greek demigod, Canopus, venerated in the form of a jar with a human head. [canopea, canopic vase, canopic vessel]

**cantharus:** in Greek antiquity, a large, two-handled drinking cup. This type of pottery cup was made in Greek-speaking areas and in Etruria between the 8th and the 1st centuries BC and had a deep bowl, a foot, and pair of high vertical handles. It was often consecrated to personifications of Bacchus. [kantharos]

**Cape Coastal ware:** a Stone Age pottery style from the coast of southern Namibia to eastern Cape Province, South Africa, after c. 1600 BP. It is characterized by point-based pots.

**carbonization:** the burning or scorching of plants, seeds, grains, or other organic material in conditions of insufficient oxygen which results in their preservation. [carbonized, charring (adj.)]

- carboy:** a large bottle, generally protected by a basket or box, usually used for containing corrosive liquids, etc.
- carder:** a flat board with short spikes used to comb out the staple of wool to remove tangles before spinning. Usually used in pairs.
- Cardial ware:** an impressed ware of the Early Neolithic in the western Mediterranean (Sardinia, Corsica, Liguria, Provence, Spain). Soft clay was impressed with the serrated edge of the cardium (cockle) shell, from which it received its name. [cardial pottery]
- carding comb:** a comb used to comb fiber before spinning.
- carinated:** pertaining to a vessel having ridges. [carinate]
- carination:** a sharp break or angle in the curve of the profile of a container or vessel, which resulted in a projecting angle or arris. On ancient jars or pots, it appeared as a sharply angled shoulder dividing the neck from the body of the vessel. It has been considered to be a purely stylistic feature derived from metal prototypes, but it may also be that carinations may have had a practical function – for example, for retaining dregs from a liquid while pouring.
- carnelian:** a reddish-brown semiprecious stone used for beads, seal stones, and jewelry in antiquity. The Indus Valley civilization, Greeks, and Romans valued the stone. Engraved carnelians in rings and signets have offered information about the manners and customs of ancient Greeks and Romans. It is a translucent variety of the silica mineral chalcedony that owes its color to hematite (iron oxide). Carnelian is usually found in volcanic rocks, such as the Deccan Traps of western India, and is also found in Brazil, Australia, Africa, and the Nile Valley. [cornelian]
- carp's tongue sword:** a type of bronze sword used in the Late Bronze Age in western Europe – mainly in northwest France and southern England – in the early 1st millennium BC. It had a broad slashing blade and a long projecting point for thrusting and a flange hilt.
- Carrowkeel ware:** a type of later Neolithic pottery found in Ireland during the 3rd millennium BC. The fabric is generally thick, coarse, and heavily gritted and there are open round-bottomed bowls and hemispherical cups. Decoration is often all over the outer surface of the vessel and the rim, “stab and drag,” or impressed.
- cart:** a two-wheeled vehicle drawn by a draft animal, used throughout recorded history for the transportation of goods and people. The cart, usually drawn by a single animal, was used by the Greeks and the Assyrians by 1800 BC. However, such vehicles could have been used as early as 3500 BC as an extension of the invention of the wheel. Bronze Age finds in Heathery Burn included four nave-bands for a four-wheeled cart. La Tène two-wheeled chariots are found from the 3rd century BC.

**cartonnage:** an Egyptian mummy case made of layers of papyrus or linen soaked in gesso plaster and shaped around an embalmed body, much like papier mâché, and then decorated with paint or gilding when dry. The term also refers to the material thus used and for mummy masks, anthropoid coffins, and other funerary items made in the same manner. [cartonage]

**cartouche:** name given to the oval or oblong figures in Egyptian hieroglyphics that enclosed characters representing royal or divine names or titles. The term is also used for the amulets of similar design worn in ancient Egypt as a protection against the loss of one's name (i.e., one's identity). In architecture, the term refers to the ornamentation in scroll form, applied especially to elaborate frames around tablets or coats of arms. By extension, the word is applied to any oval shape or even to a decorative shield, whether scrolled or not. Detailed examples of cartouches show that the sign represents a length of knotted rope, looped so that it is never-ending; it thus symbolizes cyclical return. The French word *cartouche*, meaning "gun cartridge," was originally given to the royal frame by Napoleon's soldiers, because of its cartridge-like shape. [shenu]

**cartridge:** case containing the charge for a firearm.

**carve:** to cut into or shape (a hard material) in order to produce an object or design. [carving (adj.)]

**carved stone ball:** any roughly spherical or slightly lobate, artificially shaped, carved stones of the later Neolithic and found only in Scotland. The motifs are similar to those in megalithic art. Undecorated stone balls are found in other areas of the British Isles from around the 4th and 3rd millennia BC.

**carving:** a finishing or decorative technique that involves selective removal of material with a sharp tool in a pattern.

**casing nail:** a nail similar to a finishing nail but heavier and used for trim where strength and concealment are required.

**cask:** a strong wooden barrel.

**cast:** any molded object.

**castellation:** a pronounced vertical appendage on the rim of a vessel, much like that part of a castle wall.

**caster:** a small swiveled wheel (often one of a set) fixed to a leg (or the underside) of a piece of furniture.

**casting:** 1. Casting that consists of pouring molten metal into a mold, where it solidifies into the shape of the mold. The process was well established in the Bronze Age (beginning c. 3000 BC), when it was used to form bronze pieces. It is particularly valuable for the economical production of complex shapes, from mass-produced parts to one-of-a-kind items or even large machinery. Three principal techniques of

casting were successively developed in prehistoric Europe: one-piece stone molds for flat-faced objects; clay or stone piece molds that could be dismantled and reused; and one-off clay molds for complex shapes made in one piece around a wax or lead pattern (*cire perdue*). Every metal with a low enough melting point was exploited in early Europe, except iron and steel, and used for casting artifacts. 2. A process for forming a ceramic object by pouring a clay slip into a hollow, porous (usually plaster) mold and leaving it there long enough for a layer of clay to settle and thicken on the mold wall. The remaining slip is poured off, and the object is removed from the mold when it has dried. [slip casting, solid casting]

**casting flash:** a thin irregular ridge of metal on the outer face of a casting, from seepage of the molten metal into the joint between the separate components of the mold used in its manufacture. During the final cleaning and finishing of a cast object, the flash is usually knocked off and filed smooth. [casting jet, casting seam]

**casting jet:** a plug of metal which is knocked out after an artifact is cast and which fits exactly into the opening (aperture or gate) of a mold. When casting metal into a bivalve or composite mold, the aperture through which the metal is poured into the mold becomes filled up with molten metal, and this plug of metal cools and hardens with the object. When the finished artifact is removed from the mold, the casting jet is still attached; in most cases it is knocked off and the scar polished down, with the metal plug being melted down for reuse. In some cases, however, it may be left on, particularly on neck rings and bracelets. Examples are sometimes found in founder's hoards. [casting flash, casting seam]

**casting seam:** the place where a small amount of molten metal will run into the joint between the surfaces of the parts of the casting mold. In a bivalve or composite mold, this seepage results in a visible seam when the object is removed from the mold. It is usually filled and polished off; unfinished objects are often found with a visible seam or ridge. [casting flash, casting jet]

**casting-on technique:** a method used in a secondary stage of making metal objects for adding handles, legs, and hilts to complex artifacts. A clay mold is placed around part of an existing object and molten metal is then poured in and fuses onto the original object.

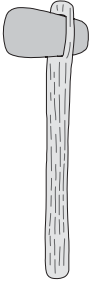
**Castor box:** a shallow vessel in color-coated ware with a lid and usually rouletted, c. Roman times in Britain.

**Castor ware:** a distinctive pottery named after a Roman settlement site on the north bank of the Nene in Northamptonshire. Castor ware is a slate-colored pottery that commonly had hunting scenes of dogs,

- boards, etc. on the outer surface, which were applied by squeezing paste from a bag or applying by brush. The E barbotine hunt cups were a highlight of the native Romano-British potter's craft. [Nene Valley ware]
- casual tool:** object used as a tool once or twice for a specific purpose and discarded with no purposeful modification.
- catafalque:** a decorated wooden platform upon which a sarcophagus was temporarily placed before burial. These ornate funereal structures were often mounted on a stage to support a coffin for a lying-in-state.
- catalog:** an inventory of archaeological data in which an artifact is labeled with a reference number and described in detail. The catalog number is the unique number assigned to each individual item – or group of items – in an archaeological collection. [catalogue]
- catalog number:** the unique number assigned to each individual item (or group of items) in an archaeological collection. [catalogue number]
- catch-plate:** curved metal plate that holds the pin of a brooch in place.
- categorization:** an aspect of the classification process that consists of creating groupings within a previously unclassified set of objects.
- catlinite:** red clay from the upper Missouri region, used by the Native Americans for their pipes.
- cauldron:** a large metal vessel for cooking, usually with a round base, heavy flange rim, and handles for suspending it over a fire. Examples date from the European Late Bronze Age, with especially important ones from Urartu (an ancient country of southwest Asia). In the Iron Age, they were sometimes made of silver. Cauldrons were usually made of sheet bronze riveted together and having two to four handles. Cauldrons were a sign of great wealth or power.
- cave art:** any paintings, engravings, or designs on cave walls; man's oldest surviving art, especially those by Paleolithic and Pleistocene people that are found in southwest France, northeast Spain, and elsewhere in Europe. Other sites have been discovered in Portugal, Italy, Greece, and the Ural mountains; the only known Russian site is Kapovo Cave. The subject matter of cave art is predominantly animals, especially mammoth, horse, ox, deer, and bison; human figures are relatively uncommon. There are also numerous signs and symbols. The artist used a range of reds, blacks, yellows, and browns derived from ochers and other naturally occurring mineral pigments (iron oxide and manganese dioxide). The purpose and meaning of cave art are still obscure. In France, the caves are mainly in the limestone of the Perigord and Pyrenean regions and the most famous are Altamira, Lascaux, Niaux, and Pech Merle. Occupational evidence is rarely found with the art.
- cavetto rim:** a rim, especially on black-burnished cooking pots, that curves outwards from the vessel to form a concave profile.

**cavetto zone:** a concave area of the face below a rim or on the shoulder of a ceramic vessel between carinations.

**Celadon ware:** a type of Chinese pottery with a pale green glaze – either porcelain or stoneware. It was the earliest tinted Chinese pottery, dating from the Sung dynasty of AD 960–1279. The main kilns were in Yao-chou in Shensi province, Lin-ju in Honan province, and Li-shui and Lung-ch'uan in Chekiang province. [celadon]



Celt

**celt:** a New Stone Age tool, usually a polished, ungrooved ax or adze head or blade that would be attached to a wooden shaft. The tool, often shaped like a chisel and made of stone or bronze, was probably used for felling trees or shaping wood. Great numbers of celts have been discovered in the British Isles and Denmark and were traded widely. Bronze Age tools of similar general design are also called celts.

**Celtic art:** an art style of the European Iron Age, c. 500 BC, developed presumably by Celtic peoples. It originated on the middle Rhine River, extending to the upper Danube and the Marne. Its finest specimens are from the British Isles in the 1st century BC and AD. It appears most commonly in bronzework or other metals, weapons and horse gear, eating and drinking vessels, personal ornaments, and monumental stone carvings. It seems likely that the craftsmen worked under the direct patronage of the chieftains. Techniques employed were decoration in relief, engraving, and inlay. Stylistically, Celtic art combines elements taken from the Classical world, from the Scythians to the east and from the local earlier Hallstatt Iron Age. The art developed into several styles in continental Europe (Early, Waldalgesheim, Plastic, and Sword styles) but came to an end with the Roman occupation. In Ireland, the art style returned after the Roman withdrawal. [La Tène art]

**Cenozoic:** the most recent geological era in the Earth's history, in which mammals came to dominate animal life. The Cenozoic runs from 66.4 million years ago to the present and began when Asia acquired its present appearance and mammals came to dominate animal life. The most important tectonic event in the Cenozoic history of Asia was its collision with India some 50 million years ago. This collision took place some 2100 km (1250 miles) farther south of the present location of the line of collision along the Indus–Brahmaputra suture behind the main range of the Himalayas. The Cenozoic includes the Tertiary and Quaternary periods.

**centripetal:** moving or tending to move toward a center.

**ceramic:** an artifact made of hard brittle material produced from nonmetallic minerals by firing at high temperatures; a solid made of compounds of metallic elements and inorganic nonmetallic elements: earthenwares, porcelains, stonewares, terra cottas, and other materials made of fired clay.



**ceramic analysis:** any of various techniques used to study artifacts made from fired clay to obtain archaeological data. Color is objectively described by reference to the Munsell soil color charts. Examination under the microscope may reveal the technique of manufacture and allow the identification of mineral grains in the tempering, which will identify the area of manufacture. Refiring experiments often show how the original baking was done.

**ceramic artifact:** any artifact made of fired clay, belonging to pottery, figurine, or other ceramic industries.

**ceramic ecology:** a framework for studying ceramics from the perspective of the manufacturing steps and use, analogous to the *Chaîne opératoire* in lithic analysis.

**ceramic petrology:** the study of the composition, texture, and structure of the minerals in the clay from which pottery is manufactured. The purpose of ceramic petrology is to locate the source of the clay from which the pot was made. Ceramic petrology involves either heavy mineral analysis or petrologic microscopy, both of which require samples to be removed from the pot. Neutron activation analysis is also used. Results from these studies have far-reaching consequences for the study of early economic systems. Not only has it been shown that pottery and its contents were transported over long distances in antiquity, but also that the specialized manufacture and marketing of pottery started as far back as the first agriculture in Europe.

**ceramics:** the art or process of making useful and ornamental articles from clay by shaping and then hardening them by firing at high temperatures. Ceramics are generally known as pottery, but the term also refers to the manufacture of any product from a nonmetallic mineral by firing at high temperatures. The exceptional porcelain and stonewares of China are very well known, from as early as the Yang-Shao Neolithic culture, c. 4500 BC. [pottery]

**ceramique oncteuse:** a type of medieval pottery of western Brittany, made from the 10th to 18th centuries. It is typically very soft and uses talc as the tempering material. This unusual pottery was a distinctive product of the Breton culture.

**ceremonial object:** any artifact associated with a ritual or ceremony or that functions only in a symbolic sense, as opposed to a tool or other practical device.

**cestrum:** a type of ivory graver used in encaustic painting on ivory, with one pointed end. [viriculum]

**chacmool:** a Mesoamerican life-sized sculpted stone figure representing a reclining human with the head turned to one side, knees drawn up, and hands holding a shallow receptacle flat on the stomach. This was a widespread art form in the Post-Classic period, especially at the Toltec

sites of Tula and Chichen Itza and at Aztec and Tarascan sites. It was located at the entranceway to temples and was probably a repository for offerings.

**chafing dish:** a cooking pot with an outer pan of hot water, used for keeping food warm.

**chain:** a series of connecting metal links.

**chain mail:** a type of protective body armor in the form of interlinked metal rings, worn by European knights and other military men throughout most of the medieval period. An early form of mail, made by sewing iron rings to fabric or leather, was worn in late Roman times and may have originated in Asia, where it was worn for many centuries. [mail]

**Chaîne opératoire:** a perspective for studying lithic technology that emphasizes the sequence of decisions and behaviors from raw material selection and acquisition, through manufacture, use, recycling, and discard.

**chalcedony:** a fine-grained hard stone, a variety of the silica mineral quartz. A form of chert, it is found in a variety of milky or grayish colors with distinctive parallel bands of contrasting color. In antiquity, chalcedony was the stone most used by the gem engraver for beads, seals, and sometimes as a substitute for flint. Agate, carnelian, jasper, and onyx are some of the varieties still cut and polished as ornamental stones.

**Chalchidian ware:** black-figured pottery found in Etruria and the Chalcidian colony of Rhegium (modern Reggio) in Italy. The style included lettering of the inscriptions as part of the decoration.

**Chalcolithic:** literally, the “Copper Stone Age,” a period between the Neolithic (Stone Age) and the Bronze Age, from 3000 to 2500 BC, in which both stone and copper tools were used. It was a transitional phase between Stone Age technology and the Bronze Age with its increase in trade and cultural exchanges. The term is much less widely used than other divisions and subdivisions of the Three Age System, partly because of the difficulty in distinguishing copper from bronze without chemical analysis, partly because many areas did not have a Chalcolithic period at all.

**chalice:** a stemmed cup used for holding the wine during communion.

**chamber pot:** a bowl kept in a bedroom and used as a toilet.

**chamberstick:** a single candle holder with a curved handle coming from the base.

**champlevé:** an enameling technique or an object made by the process; a form of inlay in which the pattern is cut out of the metal to be ornamented. The pattern was then filled with enamel frit and fused in an oven, or filled with polished stones or shells. Champlevé can be distinguished from the similar technique of cloisonné by a greater

irregularity in the width of the metal lines. It developed as a Celtic art in western Europe in the Roman period and was copied by the Anglo-Saxons. In the Rhine River valley and in Belgium's Meuse River valley, *champlevé* production flourished, especially during the late 11th and 12th centuries. It was often used in the decoration of the escutcheons on hanging bowls. [champ-levé, champleve enameling]

**Chancay:** in central Peru, a distinctive type of pottery made by the Chancay people between AD 1000 and 1500 (from the Late Intermediate Period). It is black-on-white with a parallel or checkered design, sometimes with biomorphic figures or painted in soft colors. The most common forms were tall, two-handled, egg-shaped collared jars; bowls and beakers with slightly bowed sides; and large figurines. The pottery is associated with large effigy figurines, dolls, and lacelike textiles. Chancay weaving was considered excellent.

**channel flake:** the long, thin blade of stone removed longitudinally from the base of a fluted Paleoindian projectile point by percussion or pressure from the center line of either face. The smooth depression it leaves behind is known as a flute or channel. [channel flaking (n.)]

**channeled:** the decoration of an artifact with grooves or broad incisions.

**channel-rimmed jar:** a type of cooking pot with an out-turned rim with one or more distinct grooves on it, mid to late 1st century in Roman times in Britain.

**chape:** the metal mounting, trim, or case of the upper end of a sword scabbard, protecting the tip.

**characteristic points:** points on the contours of a vessel silhouette or vertical section marking angles (corner points) or curvature (inflection points), used in one system of classifying vessel shapes.

**characterization:** the qualitative and quantitative description of the composition and structure of a material so as to evaluate its properties and uses.

**charcoal:** a porous black form of carbon obtained when wood is heated in the absence of air.

**charger:** a large flat dish or platter.

**chariot:** a light vehicle of war, usually carrying two people – a warrior and a driver. Examples have been found from the Uruk period in Mesopotamia, and the chariot was on the standard of Ur. It first appeared in the Near East in the 17th century BC, associated with the immigrant peoples who became the Hyksos, Kassites, and Hurri. Its arrival in Egypt can be fairly reliably dated to the Second Intermediate Period (1650–1550 BC). The Aryans carried it to India, and in China it formed the core of the Shang army. The Mycenaeans introduced it to Europe, where it spread widely and rapidly. It revolutionized warfare by allowing warriors to be transferred rapidly from one part of a battlefield to another. It was mainly for aristocrats, which

explains its popularity as a funeral offering. Burials of complete chariots with horses and charioteers have been excavated in Shang China (1200 BC), in Cyprus from the 7th century BC, and among the La Tène Celts. The earliest Celt chariot burials are in the Rhineland and eastern France with dates around 500 BC, and later burials are found in east Yorkshire and Europe as far east as Hungary, Bulgaria, and southern Russia. The chariot was replaced by the mounted warrior or knight when horses of sufficient strength had been bred in the late and post-Roman periods.

**charm:** a small ornament worn on a necklace or bracelet.

**chasing:** a technique for the decoration of metalwork by engraving on the outside of the raised surface. The metal is worked from the front by hammering with tools that raise, depress, or push aside the metal without removing any from the surface. Chasing is the opposite of embossing, or repoussé, in which the metal is worked from the back to give a higher relief. Strictly, chasing refers to line decoration applied to the face of repoussé work with a tracer, but the term is frequently used more generally to describe any hammered or punched decoration on metal.

**chasing tool:** a kind of punch used in metalworking to create repoussé-style ornamentation. [chaser]

**chatelaine:** a set of short chains attached to a woman's belt, used for carrying keys or other items.

**chattel art:** all portable decorated objects, especially those of Paleolithic date. [mobiliary art]

**Chavín culture:** Early Horizon communities living in the northern highlands and the northern and central sections of the coast of Peru in the period 900–250 BC with recognizable architectural styles (temples), iconography, and ceramic forms. The focus of the Chavín culture is the site of Chavín de Huantar, Peru.

**Cheddar point:** type of later Upper Paleolithic flint tool of the British Isles, named for Cheddar Gorge, Somerset, England. The point was made on a relatively narrow flint blade, and both ends were worked to make an elongated trapezoidal form with the long side of the blade left unworked and the shorter side blunted.

**Cheddar ware:** a regional type of late Saxon pottery (Saxo-Norman pottery) dating to the period AD 850–1150 manufactured in central Somerset, England.

**cheekpiece:** 1. Part of a horse bridle, a crescent section of brow tine from a deer's antler, perforated with a central hole or slot for the soft mouthpiece of rope or leather, with perforations above and below for a bifurcate rein. Found in the Early Bronze Age of the Carpathian Basin dating to the mid 2nd millennium BC. 2. A plate or rod of bone, bronze, leather,

or another metal that is attached to the lower rim of a helmet to protect the wearer's cheeks.

**cheese press:** a type of small, flat-bottomed ceramic dish with holes and concentric ridges on the bottom, sometimes with a flat matching lid.

**chekan:** a special kind of striking weapon for hand-to-hand combat. It was most widespread in southern Siberia and in Central Asia in the Scythian period. The chekan is a kind of battle ax with a thin sharp point, made of bronze. It was fixed onto a long wooden shaft which had a bronze butt at its lower end and was worn at the waist on a special belt. Chekans are quite often decorated with zoomorphic figures in the Scythian–Siberian animal style.

**Chelford:** an interstadial of the Devensian cold stage (the last glaciation), c. 61,000 bp according to radiocarbon dating – though it could be older.

**Chellean:** an outdated classification term used for the first stage of biface manufacture believed to precede the Acheulian, and named after the type site of Chelles in the Somme Valley, France. It is now generally accepted that Chellean implements should be classified as early Acheulian. The term Chello-Acheulian, once applied to African Earlier Stone Age biface assemblages, has also been replaced by the term Acheulian.

**Chelsea sword:** early type of bronze sword found in southern Britain, with a leaf-shaped blade, flat section, and hilt tang.

**chert:** a coarse type of siliceous (silica) rock, a form of quartz, used for the manufacture of stone tools where flint was not available. It is of poorer quality than flint, formed from ancient ocean sediments, and often has a semi-glassy finish. It is pinkish, white, brown, gray, or blue-gray in color. Flint, chert, and other siliceous rocks like obsidian are very hard, and produce a razor-sharp edge when properly flaked into tools. This crystalline form of the mineral silica is found as nodules in limestones. Varieties of chert are jasper, chalcedony, agate, flint, and novaculite. Chert and flint provided the main source of tools and weapons for Stone Age man.

**chest punch:** a purported device for removing flutes from Clovis and Folsom tools. [crutch]

**Chester-type ware:** a type of late Saxon pottery dating to c. AD 850–1150, made in northwest England.

**chevron:** a symbol of a series of connected W-shapes used to decorate pottery and metalwork.

**chevron flaking:** a V-shaped flaking pattern which extended beyond the distal tip along much or all of one or both faces of a blade.

**Chicoid:** one of the two ceramic series (the other is the Meillacoid) that seem to have developed out of the Ostinoid series. They originated

near the type site of Boca Chica, Dominican Republic, and then influenced much of the eastern Antilles. The Chicoid materials represent the ball game, Zemis, a variety of wood and stone carvings, and a strong Barrancoid influence is evident in the ceramics (modeled ornamentation and incision). The series first appears in c. AD 1000 and continued until European contact. [Boca Chica]

**Chien ware:** a dark brown or blackish glazed Chinese stoneware made for domestic use, mainly during the Sung dynasty (960–1279) and into the early 14th century. Within its limited palette, Chien ware has a range of variations. By careful control of the kiln temperatures, streaking and iridescent patches were formed on the glaze to make the “hare’s fur” and “oil spot” glazes, which were the most prized. Large deposits of kiln wastes have been found at Chien-yang and Chien-an in Fukien province. Tea bowls are by far the most common, though not the only, form of Chien ware that survive. Used by Ch’an (Zen) Buddhist monks, the highly esteemed tea bowls were carried back to Japan by Japanese monks who had visited China to study Buddhism. Until the late 16th century, Chien ware was the type of tea bowl preferred for the highly ritualized Japanese tea ceremony. [Chien Yao, Jian Yao, Temmoku ware, Tenmoku ware]

**china:** a vitrified/glassy and nonporous ceramic fired to a temperature of 1100–1200°C.

**china clay:** a fine, usually white, clay formed by the weathering of aluminous minerals (as feldspar); used in ceramics.

**Chindadn point:** a small teardrop-shaped bifacial point found in central Alaska and dating to c. 12,000–10,000 bp; they are diagnostic of the Nenana complex.

**Chiot pottery:** archaic pottery of the Greek island of Chios, though it may also have been made at Naucratis. The pots and chalices had a cream slip and glazed interior. Decoration on the exterior was of scenes with figures; inside were floral patterns.

**chip-carving:** a technique of decoration with the use of an ax, hatchet, mallet, and/or chisel, which probably originated in the Roman and Celtic world. The technique was adapted by Germanic woodcarvers to make animal ornaments and by metalsmiths of the Migration period. This excised decoration was done by cutting from the surface triangular and rectilinear small chips. The end result was a pattern of combined V-shaped incisions, with a glittering faceted appearance. It is found in woodwork and pottery, when it has to be done before the clay is fired. False relief is a special version of this technique. Examples are the Tassilo Chalice (Kremsmünster Abbey, Austria) and the Lindau Gospels book cover (Pierpont Morgan Library, New York City). [chip carving]

**chippable:** of a stone, capable of being worked to produce a tool or other such artifact. Chipped-stone artifacts are the class of lithic artifacts produced by fracturing flakes from a core. [chipped-stone]

**chipped-stone tool:** any tool produced by flaking or chipping of pieces from a stone core to produce an implement. [chipped artifact]

**chipping floor:** an area used for the manufacture or maintenance of flint or stone tools, recognized by work waste, broken or partly finished implements, and discarded raw material.

**chisel:** a long-bladed hand tool with a beveled cutting edge, struck with a hammer or mallet to cut or shape wood, stone, or metal.

**chisel-ended arrowhead:** a type of arrow tip of flint or stone, with a sharp, straight cutting edge at right angles to the axis of the arrow shaft, rather than a point.

**chocolate flint:** a variety of high-quality flint from the Holy Cross Mountains in central Poland, used by prehistoric peoples from the Mesolithic to the Early Bronze Age. It occurs in round flat nodules and in slabs no more than 10 mm (4 inches) thick. Chocolate flint is very homogeneous and has excellent flaking qualities. It was usually mined from shallow pits about 2.4 m (8 feet) deep. Four chocolate flint mines have been investigated at Tomaszow, Wierzbica-Zele, Polany, and Polany-Kolonie.

**choker:** a neck band or necklace worn tightly around the throat.

**chokkomon:** in Japanese archaeology, a design of shattered spirals engraved on artifacts of the Kofun period.

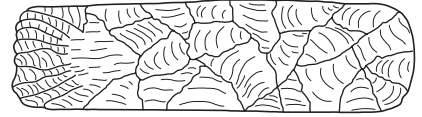
**chopper:** any large, simple stone or pebble tool with a single, transverse cutting edge. It was used for hacking, breaking, or chopping and was especially characteristic of Middle Pleistocene, pre-Acheulian industries of the Old World, such as Choukoutien, in the Clactonian in England, and at the earliest levels of Oldowan industries. This crude tool was made by striking a limited number of flakes from the edge of a cobble or fist-size rock to produce a coarse cutting edge. It persisted until the Neolithic. [chopping tool, slitter]

**chous:** a Greek or Roman measure of liquids, containing an eighth of a Roman amphora, or about 4 L (7 pints). It was also equal to 12 Greek cotyle. [congius]

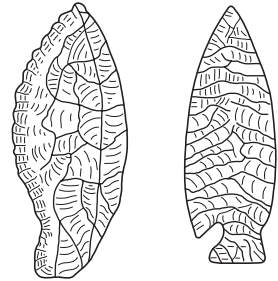
**chroma:** saturation, purity, or strength of color; in the Munsell color chart, chroma is the horizontal dimension, denoting the presence or absence of gray.

**chronological type:** a type defined by form that is a time-marker.

**chronology:** any method used to order time and to place events in the sequence in which they occurred; a sequential ordering that places cultural entities in temporal, and often spatial, distribution. It involves



Chisel



Chopper

the collection of dates or successive datings establishing the position in time of a series of phenomena such as the phases of a civilization or the events of the history of a state. A chronology is relative/floating when only the order of a succession of facts is known, but not their dates, and absolute when the dates are known. For periods or areas for which no textual evidence is available, relative chronologies have to be established and these are mostly based on pottery sequences and typology. Relative chronology is also based on the application of the principles of stratigraphy and cross-dating. The discovery of inscribed monuments and calendars associated with dated astronomical observations contributed to the development of an Egyptian chronology and it has served as a framework – through cross-dating – for all other Near East chronologies. Inscribed Egyptian objects found in Near Eastern contexts have allowed the latter to be dated. Absolute chronology is based on scientific methods such as radiocarbon dating, thermoluminescence dating, and archaeomagnetism. Dates are often calibrated with dendrochronological dates. For dates after 1500 BC, an absolute chronology is not likely to change by more than 10 years.

**chronometric date:** a date indicating that a measured value of time (years, centuries) has elapsed since a past event occurred.

**chronostratigraphic sequence:** a time scale in which the sequence of geologic time units and their corresponding time–rock divisions (chronostratigraphic units) are defined by standard and internationally agreed reference points within boundary stratotypes. [chronostratigraphic scale]

**chryselephantine statue:** a type of figurine sculpture made of ivory and gold. The flesh was of ivory and the drapery of gold. These were produced in ancient Egypt, Mesopotamia, and Crete, and in Greece from the 6th century BC. They were often colossal cult figures placed in the interiors of major temples, such as that of Minerva by Pheidias, which stood in the Acropolis at Athens and was 12 m (40 feet) high, and that of Zeus, 13.7 m (45 feet) high, also by Pheidias, in the temple of Olympia.

**chultun:** a bottle-shaped underground cistern found at some sites in the Maya lowlands. They were probably used for water or food storage.

**Chün ware:** a Chinese stoneware of the Northern Sung period (AD 960–1126) with a pale blue opalescent or translucent green glaze, made at the kilns near Lin-ju-hsien and at Kung-hsien in Honan province in China. Another well-known class has a red or flambé glaze and consists of flowerpots, bulb bowls, elegant shallow dishes, waterpots, and small boxes. [Jun]

**cinerarium:** a place for depositing the ashes of the dead after cremation; a niche in a tomb for holding an urn of ashes or a sarcophagus.



**cinerary urn:** a sepulchral vessel or urn used to preserve the ashes of the dead after cremation. [cinerary vessel]

**cire perdue:** a metalworking technique used to cast figurines and statues. A model of the object to be cast is made in wax – solid if the object is to be of solid metal, or made around a clay core if it is to be hollow. The wax model is covered with clay, and the whole is heated to allow the wax to melt and run off; this leaves a space into which molten metal is poured. After it has cooled the outside clay is knocked off, the inner core may be removed, and remaining is a metal version of the original wax model. The technique is common on every continent except Australia and dates from the 3rd millennium BC, having gone through few changes since then. Since the “mold” cannot be used again, each version of an object made using this technique is unique, and the process is more time consuming than making a complex mold and reusing it. However, more detail can be accomplished with the cire perdue process. [lost wax process]

**Cistercian ware:** a lead-glazed English earthenware of the 15th to 16th centuries. The earthenware is dark red with a black or brown metallic-appearing glaze and was called Cistercian because they were first excavated at the Cistercian abbeys of Yorkshire. The pottery forms were mainly drinking vessels, tall mugs, trumpet-shaped tygs (with two, four, or eight handles), and tankards. The majority of the ware is undecorated, but some examples are distinguished by horizontal ribbing or by white slip ornamentation consisting of roundels or rosettes. Potteries producing these wares were at Abergavenny (Monmouthshire), Tickford (Derbyshire), and Wrotham (Kent).

**cistern:** an artificial reservoir or receptacle, such as an underground tank, for holding water or another liquid. It was especially used for catching and storing rainwater.

**Clactonian:** an early flake-tool culture of Europe, dating from the early Mindel-Riss (Great interglacial) of the Pleistocene epoch, which occurred from 1,600,000 to 10,000 years ago. It was named after discoveries at Clacton-on-Sea, Essex, England. A kind of concave scraper, perhaps used to smooth and shape wooden spears, is typical of the Clactonian industry. Apart from the tip of a wooden spear, the artifacts consist of trimmed flint flakes and chipped pebbles, some of which can be classified as chopper tools. Hand axes were absent. The Clactonian seems, therefore, to have coexisted with the early Acheulian. Some believe that the two industries are quite distinct, while others maintain that both assemblages might have been made by the same people, and that the Clactonian could in theory be an Acheulian industry from which hand axes were absent because such tools were not needed for the jobs carried out at a particular site. Clactonian and

related industries are distributed throughout the north European plain, and Clactonian tools are similar in appearance to those produced in the Soan industry of Pakistan and in several sites in eastern and southern Africa. The Tayacian industry of France and Israel is believed to be a smaller edition of the Clactonian.

**clasp:** a device with interlocking parts for fastening; a buckle or brooch.

**class:** a general group of artifacts, like “hand axes,” which can be broken down into specific types, like “ovates,” etc.

**classic example:** a subjective term used to refer to a specific point specimen that represents the truest form of a particular point type or blade.

**classical, Classical:** a general term referring to the period of time when a culture or civilization reaches its highest point of complexity and achievement. In a broader sense, the term often describes the whole period of Greek and Roman antiquity with the following breakdown: Early Classical 500–450 BC, High Classical 450–400 BC, and Late Classical 400–323 BC. Specifically, the term describes, in New World chronology, the period between the Formative (Pre-Classic) and the Post-Classic, which was characterized by the emergence of city states. During the Classic stage, civilized life in pre-Columbian America reached its fullest flowering, with large temple centers, advanced art styles, writing, etc. It was originally coined for the Maya civilization, initially defined by the earliest and most recent long count dates found on Maya stelae, AD 300–900. A division between Early and Late Classic was arbitrarily set at AD 600, since in some areas, e.g., Teotihuacán, great civilizations had already collapsed; some scholars regard this date as marking the end of the Classic period. By extension, the word came to be used for other Mexican cultures with a similar level of excellence (Teotihuacán, Monte Albán, El Tajín). In these areas the cultural climax was roughly contemporary with that of the Maya, and the term Classic took on a chronological meaning as well. The full Maya artistic, architectural, and calendric-hieroglyphic traditions took place during the Early Classic. Tikal, Uaxactún, and Copán all attained their glory then. In the Late Classic, between AD 600 and 900, ceremonial centers in the Maya lowlands grew in number, as did the making of the inscribed, dated stelae and monuments. The breakdown of the Classic period civilizations began with the destruction of the city of Teotihuacán in about AD 700. Some date the Classic period to AD 300–900. [classic, Classic]

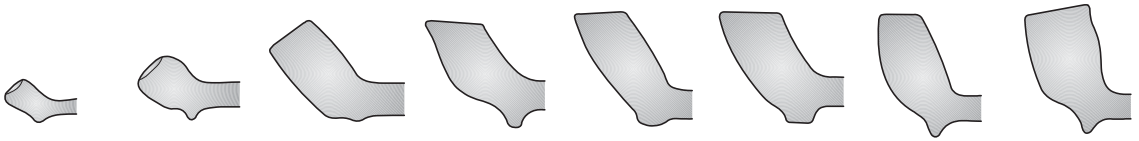
**classification:** the ordering of archaeological data that share certain attributes or characteristics into groups and classes; the divisions arrived at by such a process. Classification is the first step in the analysis of archaeological data – when particles or objects are sorted or categorized by established criteria, such as size, function, material, or color.

**clastic rock:** a rock composed of broken pieces of older rocks.

**claw beaker:** elaborate glass beakers dating from c. AD 500 onward in early Saxon graves and Frankish burials. Also called Rüsselbecher, the beakers have two superimposed rows of hollow, trunklike protrusions curving down to rejoin the wall of the vessel above a small button foot. In form they are similar to free-standing conical beakers, apart from the embellishment of a series of unusual clawlike protrusions. In many cases the glass is tinted brown, blue, or yellow. The beakers were probably made in Cologne or Trier, Germany. [elephant's trunk beaker, Rüsselbecher]

**clay:** soil particles of less than 0.005 mm in diameter, or rock composed mainly of clay particles. There are ceramic clays, clay shales, mudstones, glacial clays, deep-sea clays, and soils – which are plastic when wet and hard when dry. No other natural material has so wide an importance or such extended uses as does clay. The use of clay in pottery-making antedates recorded human history, and pottery remains provide a record of past civilizations. As building materials, bricks (baked and as adobe) have been used in construction since earliest times.

**clay pipe:** a clay tube with a small bowl at the end used for smoking tobacco.



**clay tablet:** the main writing material used by the scribes of early civilizations. Signs were impressed or inscribed on the soft clay, which was then dried in the sun. The ancient Sumerians, Babylonians, Assyrians, and Hittites wrote on tablets made from water-cleaned clay. A common form was a thin quadrilateral tile about 12.5 cm (5 inches) long which, while still wet, was inscribed by a stylus with cuneiform characters. By writing on the surface in small characters, a scribe could copy a substantial text on to a single tablet. For longer texts, several tablets were used and then linked by numbers or catchwords. Book production on clay tablets probably continued for 2000 years in Mesopotamia and Asia Minor. Either dried in the sun or baked in a kiln, clay tablets were almost indestructible. The latter process was used for texts of special value, legal codes, royal annals, and epics to ensure greater preservation. Buried for thousands of years in the mounds of forgotten cities, they have been removed intact or almost so in modern archaeological excavations. The number of clay tablets recovered is nearly half a million, but there are constantly new finds.



Clay tablet showing record of food supplies, from southern Iraq, c. 3000 BC

The largest surviving category consists of private commercial documents and government archives. When the Aramaic language and alphabet arose in the 6th century BC, the clay tablet book declined because clay was less suited than papyrus to the Aramaic characters.

**claymore:** a two-edged broadsword.

**cleavage:** property possessed by many minerals of breaking in a certain preferred direction along smooth plane surfaces; property possessed by certain rocks of breaking with relative ease along parallel planes or nearly parallel surfaces. Rock cleavage is designated as slaty, phyl-litic, schistose, and gneissic.

**cleavage surface:** a surface formed by a separation of the rock along a natural cleavage plane or crack, especially in quartz crystals, slate, and petrified wood. [cleavage plane]

**cleaver:** a heavy, large core or flake tool of the Paleolithic period, typically having a wide, straight cutting edge at one end, like a modern axhead. Technologically it is related to the hand ax, and is often found as a component of Acheulian (especially Upper Acheulian) hand-ax industries. The sharp transverse cutting edge was almost always notched by use but never sharpened. Along with bifacial tools, it was one of the main instruments of *Homo erectus*. It is found mainly in Africa, where much of the flake surface is left unretouched. The axlike knife was used from the Middle Pleistocene era to cut through animal bone and meat.

**clench nail:** a nail adapted so that the end of the nail can be turned over and driven back into the substance through which it has passed.

**clinker:** ash and partially fused residues from a coal-fired furnace or fire.

**clipped wing:** a barbed shoulder that has been fractured off or clipped.

**cloisonné:** a technique of decorative enameling in which different colors of a pattern are separated by thin strips of metal. It consists of soldering, to a metal surface, thin metal strips bent to the outline of a design and filling the resulting spaces, called “cloisons” (French for “partitions” or “cells”) with vitreous enamel paste. The object is fired, ground smooth, and polished. Sometimes metal wire is used in place of gold, brass, silver, or copper strips. It was used in Anglo-Saxon England and by Germanic metalsmiths to decorate polychrome jewelry and metalwork. The technique is somewhat similar to champlevé, but it allows more intricacy of design. Among the earliest examples of cloisonné are six Mycenaean rings of the 13th century BC. The great Western period of cloisonné enameling was from the 10th to 12th centuries, especially in the Byzantine empire. In China, cloisonné was widely made during the Ming (1368–1644) and Ch’ing (1644–1911/12) dynasties. In Japan, it was especially popular during the Tokugawa, or Edo (1603–1868), and Meiji (1868–1912) periods.

**closed finds:** groups of artifacts that are in original depositional context with each other; the artifacts recovered from a ceremonial offering, for instance.

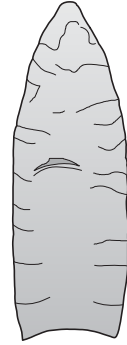
**closed vessel:** a vessel with an orifice that is narrow relative to the vessel's height. [restricted vessel]

**closestool:** a stool or chair containing a chamber pot.

**closure:** any item used to seal a glass container, including both glass and nonglass items such as metal and ceramic bottle caps.

**Clouded ware:** developed shortly after the introduction of creamware, in England c. 1750–1775. Thomas Astbury and Thomas Whieldon mixed ground flints into the clay which gave a white-saltglaze when high fired and a cream-colored ware when fired at lower temperatures. After preliminary firing, the ware could be dipped in a clear glaze. In about 1750, tea wares were colored under the glaze, which produced the ware known as Clouded ware. The colors used for this were purple, brown, yellow, green, and gray.

**Clovis point:** a distinctive, fluted, lanceolate (leaf-shaped) stone projectile point characteristic of the early Paleoindian period, c. 10,000–9000 BC, and often found in association with mammoth bones. It is named for Clovis, New Mexico, where it was first found. The concave-based projectile point has a longitudinal groove on each face running from the base to a point not more than halfway along the tool. The base of a Clovis point is concave and the edge of the base is usually blunted through grinding, probably to ensure that the thongs, attaching the point to the projectile, were not cut. It is assumed to have been a spear because of its size; the length of points varies from 7 to 12 cm (2–4 inches), and their widest width is 3–4 cm (1–1.5 inches). Clovis points and the artifacts associated with them (grouped together as the Llano complex) are among the earliest tools known from the New World and have been found over most of North America, with a few outliers as far south as Mexico and Panama. It is the earliest projectile point of the Big Game Hunting tradition of North America. From these points came the later, more sophisticated points, such as the Folsom. [Clovis projectile point, Clovis spear point]



Clovis point

**cluster:** a group of stylistically and chronologically similar artifacts for which adequate excavation data do not exist to allow for the classification as a phase.

**coarseware:** a classification of sandy, rough pottery including Castor ware, New Forest ware, and Rustic ware. [coarse pottery, coarse ware]

**coating:** adding a slip, wash, or glaze to the surface of a ceramic item.

**cob:** wet clay mixed with straw used in creating walls, ovens, and other structures.

**cobble:** a rounded stone worn smooth by the action of water and used as a core for a stone tool; thus “cobble tool.”

**cobble reduction technique:** a stone-working technique in which the craftsman works a chunk of stone to produce from it a number of potentially useful pieces.



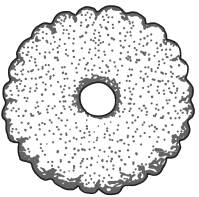
Cochise point  
(Paleo)

**Cochise point:** a type of projectile point from 4000 BC to perhaps 500 BC, indicating an increased interest in hunting, of the US southwest (Arizona). Currently the use of the Cochise culture concept is fairly uncommon.

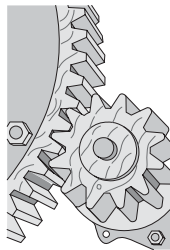
**codex:** any handwritten manuscript of the Scriptures, either Christian or in Mesoamerica before the Spanish conquest (from the Latin *caudex*, meaning “trunk of a tree”). In Mesoamerica, these documents were written and painted in hieroglyphic or pictographic characters on bark paper or animal skin and they contain information about pre-Columbian and post-conquest life. The surviving codices, of which there are four, were folded concertina-fashion, like a map. The information concerned astronomy, religious ceremonies, calendrics, genealogy, or simple accounting. The best surviving example is the Dresden Codex. A number were commissioned by the Spanish and some are copies of earlier works, including the Mayan Book of Chilam Balam, the Popol Vuh, and the Aztec tribute lists of the Mendoza Codex. Those written post-conquest sometimes resemble a book in format. The early Christian gospel books were produced in monasteries in the post-Roman era, including Codex Sinaiticus, Alexandrinus, and Vaticanus. [codices (pl.)]

**codpiece:** an appendage worn on the front of breeches.

**coffin:** any box or chest, usually rectangular or anthropoid in shape, in which a corpse or mummy is enclosed for burial. Clay, stone, metal, and wood are among the materials used. Primitive wooden coffins, formed from a tree trunk split down and hollowed out, are still in use among some aboriginal peoples. The term “sarcophagus” is used only for the stone outer container that encases one or more coffins. From the Latin *cophinus*, meaning “basket.” [sarcophagus]



Cogwheel



**cogwheel:** a wheel with a series of teeth on its outside which interlock with similar teeth on another cogwheel to receive or give motion.

**coil and paddle:** a method of pottery-making involving the use of rolled clay coils to build vessel walls, followed by the welding of the walls with a decorated wooden or ceramic paddle. Parallel breaks between the coils and impressed designs on pottery fragments are evidence of this technique.

**coil fracture:** a smooth-edged circumferential breakage characteristic of coiled vessels in which the coils were poorly bonded, resulting in planes of weakness.

**coil pot:** any ceramic vessel formed gradually by adding spirals of thin, sausage-like coils of clay, which are smoothed out afterwards to form the walls of the pot.

**coil-building:** a method of pottery-making in which a rope of clay is coiled around a flat base and continued up to form the walls of a pot. The layers of clay are pressed together, and the inside and outside smoothed off to remove the lines between the coils. Frequently this is not done completely, and the coils may still be visible. Pottery often breaks along the coil lines. [coil-built pottery, coiling]

**coiling:** 1. A method of basketry based on a spirally coiled foundation, especially that made with a vertical stitch or weft. A basket is said to be coiled when a long bundle of fibrous material is laid up, spiral fashion. Each coil is sewn by a slender splint to the coil below it. The basketmaker pierces the fiber bundle with an awl and passes the splint through the hole thus made. [coil basket, coiled basketry; coiled (adj.)] 2. In ceramics, a construction technique where the vessel is formed from the base up with long coils or wedges of clay that are shaped and joined together. Ropelike cylinders of the body are gradually added along the circumference of the vessel, starting at a disklike base, to build up the vessel's shape. [coil; coiled (adj.)]

**coin:** a piece of metal or, rarely, of some other material (such as leather or porcelain) certified by a mark or marks upon it as being of a specific value. Coinage is considered to be any standardized series of metal tokens, their specific weights representing specific values, and usually stamped with designs and inscriptions. Coins or coinlike objects were first issued by the Lydians of Anatolia in the late 7th century BC, made of the gold-silver alloy electrum. Their use was then adopted in the Far East, then around the Mediterranean, and has since spread throughout the world. Early coins were used for specialized, prestigious purposes and not for everyday exchange. The early Greek coins were also made of electrum, silver, or gold; the first Roman coins were produced in the early 3rd century BC and were also made of precious metals. Later in that century the first bronze coin was introduced. These material remains are self-dating, though they do not always date the materials they are found with as they may have been traded, handed down through generations, or displaced in the stratigraphy of a site.

**coin balance:** small lightweight scales used by merchants for checking the weight of coins offered in exchange. This was important because the value of a coin was in part determined by its metal content. Because precious metals such as gold and silver were used in making coins in order to retain their value, a good trade could be made by clipping off small amounts of metal from many coins to produce forged coins or other items.

- coin hoard:** a group of coins deliberately deposited together.
- coinage:** a standardized series of metal tokens, their specific weights representing particular values, and usually stamped with designs and inscriptions. They were used in many parts of the ancient world for everyday exchange. Greek coinage first appears in the Archaic deposit of the Artemision at Ephesus. Roman coinage was struck at Rome and various points throughout the empire.
- cold hammering:** a technique for making metal artifacts in which the metal is shaped by percussion without heating. Most metals, such as copper, bronze, gold, and silver, are soft enough to be worked while cold. Operations such as hammering and beating could be carried out without any heating to make the metal softer. These softer metals, however, cannot be cold worked indefinitely because the metal becomes brittle and eventually fractures. This can be counteracted by gentle heating called annealing. Annealing allows crystals within the metal to recrystallize and distribute the stress that has built up. Cold working can then go on until the metal becomes brittle again. Metallographic examination – the study of crystal structure – can give information about the cold working and annealing processes in the last stages of the making of an artifact. Pure gold is one of the few metals that can be cold worked indefinitely without annealing. [cold working]
- collar:** a ridge formed about the neck of a vessel; a raised, angular band, line, or strip.
- collared urn:** a type of urn used in the British Early Bronze Age, also called an overhanging rim urn. It has a developed rim which may be straight, convex, or slightly concave in profile. Decoration is normally on the rim or the upper half of the vessel. Collared urns often contained cremation burials, though some have been found in domestic contexts.
- collaring:** part of wheel-throwing a vessel that involves using both hands to apply inward pressure on the rotating body to narrow it and form a neck or closure.
- collateral flaking:** when flakes on a chipped stone artifact extend to the middle from both edges forming a medial ridge. The flakes are at right angles to the longitudinal axis, and are regular and uniform in size.
- colorant:** a chemical element that contributes color to a mixture. Unglazed, low-fired pottery is colored chiefly by carbon, iron, and manganese, whereas a broader range of colors occurs in glazes.
- color-coated ware:** a way of referring to many kinds of pottery in the Greek and Roman periods that were given an extra surface coating, usually slightly glossy and most often red. Research suggests that the coating was made from fine clay particles suspended in water with a peptizing agent added.



**colossus:** a gigantic statue or image of the human form, usually of a king but also of private individuals and gods. They are typically set up outside the gates or pylons of temples. The term was originally applied by Herodotus to those of Egypt. The most famous is the bronze statue of Apollo at Rhodes, one of the seven wonders of the world, reputed to have stood at the entrance to the harbor and claimed by Pliny to have been 27 m (90 feet) tall. [colossi, colossuses (pl.)]

**comb:** a toothed object of wood, bone, horn, metal, etc. with a number of uses – for hair dressing, carding wool, currying horses, compacting the weft in weaving, for decorating pottery, or as an ornament to keep the hair in place. As used for combing the hair, but not wearing, combs were found in Pompeian and Egyptian tombs and in early British, Roman, and Saxon barrows.

**combed ornament:** any pottery decorated by drawing a toothed instrument across the surface of the soft clay or colored slip. The pottery was often decorated by the application of two or more different-colored slips that were either brushed or combed to produce the effect of marbled paper, with a broad band of parallel incisions, often wavy. [combed ware]

**combing:** a finishing technique in ceramics manufacture whereby a tool with multiple teeth or prongs is dragged along the surface of the fabric to leave multiple, nearly parallel, incisions, either straight or wavy.

**commodity:** an object created for exchange and trade.

**common Brad:** a nail used for attaching parquet flooring to the subfloor and molding to walls and furniture.

**common nail:** general purpose, heavy-duty type of nail used in construction and rough work, with a large head that will not pull through.

**communion token:** metal token that served as a certificate of fitness for admission to the communion. They were used mainly in the Church of Scotland, where their place has been largely taken by printed cards on which the names of the communicants are written.

**comparative collection:** collections of identified bones or other artifacts used for comparison with archaeologically recovered remains.

**compartmented seal:** the typical, usually metal, seal of the Bronze Age in western Central Asia and northern Afghanistan. Most often round, the seal motifs were geometric or of objects in nature.

**complex:** a group of artifacts and traits that regularly appear together in two or more sites within a restricted area over a period of time and which are presumed to represent an archaeological culture. A complex could be a characteristic tool or type of pottery or it could be a pattern of buildings that occur together. A complex is a chronological subdivision of different artifact types and implies a culture, whereas an assemblage is merely a collection of contemporaneous specimens.

**complex shape:** a vessel shape that in silhouette is marked by two or more characteristic points of inflection, or changes in curvature, or by both corner and inflection points.

**component:** 1. A culturally homogeneous stratigraphic layer within a site that belongs to one culture and is interpreted as the remains of a single people during a relatively brief period of time. 2. Archaeological materials found in a single level of a single site – the manifestation of a given phase at a single site. At a particular site, there may be present several components, recognized by critical changes in the artifact assemblages. A number of similar and contemporary components make up a phase.

**composite bow:** an archer's bow made of more than one material – such as wood and fiberglass – to combine the properties of strength, durability, and power. In early times, a bow of wood was reinforced on one side by layers of animal sinew and on the other side by animal horn.

**composite mold:** a kind of mold for making metal objects that can have three or more pieces. It may be a simple bivalve mold with the addition of a third part – a plug which will form a socket in the artifact when it is removed.

**composite shape:** a vessel shape that in silhouette is marked by characteristic points of angles or corners and lacks inflection points.

**composite tool:** a tool formed of two or more joined parts, e.g., a composite toggling harpoon head.

**compound:** a substance comprising atoms of two or more elements, having relatively fixed composition and properties.

**compound tool:** any tool made of two or more different materials, such as a bone harpoon with stone points and barbs set in it, or a wooden arrow with a shaped stone point. Also, an artifact made of multiple parts. [composite tool]

**compression:** the stress of a crushing force applied to a material.

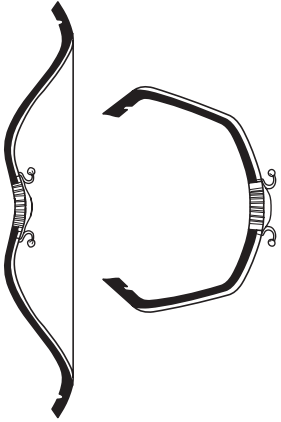
**compression rings:** the faint lines on the dorsal side of a flake, indicating the direction of force. [ripple marks]

**concave:** curving inward; having an outline or surface that curves inwards like the interior of a sphere.

**conchoidal flake:** a type of spall resulting from the fracture of fine-grained or glassy rocks. It is characterized by a bulb of percussion, striking platform remnant, and extremely sharp edges. There is a predictable fracture pattern that allows the manufacture of predetermined tools from these materials.

**conchoidal fracture:** a characteristic shell-like fracture pattern that occurs in siliceous rocks, such as obsidian, chert, and flint. The fracture has smooth, shell-like convexities and concavities. [conchoidal]

**cone:** small, elongated pyramid made of controlled mixtures of ceramic materials in a numbered sequence that softens and bends when heated



under specific conditions. When cones are placed in a kiln during firing, their bending provides an index of heat treatment and proper firing. [pyrometric cone]

**cone beaker:** a type of Anglo-Saxon glass drinking vessel of around the 5th to 7th centuries AD, in the shape of an elongated cone.

**cone mosaic:** a type of wall decoration used in the Uruk (VI–IV) and Jemdet Nasr periods of southern Mesopotamia. Stone or baked clay cones were stuck into the surface of building facades to produce a colored mosaic geometric pattern. Examples have been found in the Eanna section of Warka.

**cone of force:** a cone-shaped area on a stone core and its associated flake, which results when force is applied to separate the flake.

**configuration:** the arrangement of decorative motifs on a vessel so as to fill a spatial division and form the design.

**cong:** a tubular, jade object, circular on the inside and enclosed in a rectangular body, made in various sizes and used for ritual purposes in ancient China. Cong were described in ancient Chinese texts as symbols of rank and were used as ritual objects primarily in the Shang (18th to 12th century BC) and Zhou/Chou (1111–255 BC) dynasties. They have been found in graves, arranged with bidisks around the corpses of the elite. The cong is thought to have symbolized Earth or possibly to have been an astronomical instrument. [ts'ung]

**conical:** having the shape of a cone.

**conjoining:** the rejoining or fitting together of struck stone flakes to recreate the original core, or the refitting of waste flakes to finished or unfinished tools. The technique is used to study the dispersal of implements and debitage at ancient working sites, and to gain an understanding of the knapping process. [refitting]

**conoidal theory of flint fracture:** the theory that ideally a cone will be punched out of a piece of flint when it is struck with sufficient force.

**constituent analysis:** any technique used to reveal the composition of artifacts and other archaeological materials by examining their constituent parts. This type of analysis is useful in determining raw material sources for the reconstruction of ancient exchange systems.

**contact mold:** a mold used to produce a full-sized, or part of a full-sized, glass item.

**contact period:** the period in the history and culture of the Americas when the first impact of the Europeans was made. This is often dated to AD 1513 with the arrival of Ponce de Leon in Florida.

**contained remains:** all portable objects found in the strata of a site, whether organic or inorganic, natural or manmade.

**context:** the time and space setting of an artifact, feature, or culture. The context of a find is its position in a site, its relationship through

association with other artifacts, and its chronological position as revealed through stratigraphy. Certain features or artifacts may be normally associated with particular contexts, for example a pottery type may be found in the context of certain burials. If such an artifact is found out of context, it may suggest the previous presence of a burial, the robbery of a burial, or a place of manufacture of the pots that accompanied burials. An artifact's context usually consists of its immediate matrix (the material surrounding it, e.g., gravel, clay, or sand), its provenience (horizontal and vertical position within the matrix), and its association with other artifacts (occurrence together with other archeological remains, usually in the same matrix). The assessment of context includes study of what has happened to the find since it was buried in the ground.

**contracting:** in lithics, a term that refers to the width of a stem or point that is diminishing in outline.

**convex:** curving or bulging outward; having an outline or surface that curves outwards like the exterior of a sphere.

**cooking pot:** jars or bowls used for cooking, which is known from soot encrustation.

**cooking stone:** any stone heated for a long time or several times by being placed in water or stew in order to convey heat to the water or stew. Also, cooking balls may have been laid on top of red-hot coals and then meat laid on top of the balls to cook.

**coolamon:** an Australian aboriginal carrying dish made of wood or bark.

**copper:** a ductile, malleable metallic element used in many functional and decorative artifacts. It was one of the first metals to be exploited by people because, like gold, it can be found in the native form, pure and requiring no smelting. It is most frequently obtained from a variety of ores: carbonate (malachite), oxides, and sulfides. Shaping can be done by simple hammering, which also serves to harden the metal. "Pure" copper may contain up to 1% impurities and the concentrations of these impurities may indicate the source of the ore. Arsenical copper alloys (2–3% arsenic) have some advantages over pure copper in the ease of casting and in the hardness of a hammered edge. In the New World, cire perdue casting of copper is first recorded in the Paracas culture of Peru and by the European conquest; the technique was practiced from the southwest US to Argentina. Copper occurs fairly widely in the Old World, and was first used in western Asia before 8000 BC as a substitute for stone, though it did not come into common use until after 4000 BC. Metallurgy dawned in Egypt as copper was cast to shape in molds (c. 4000 BC), was reduced to metal from ores with fire and charcoal, and was intentionally alloyed with tin as bronze (c. 3500 BC). The earliest surviving examples from Egypt are small artifacts such

as beads and borers of the Badarian period, c. 5500–4000 BC. Great copper hoards occur in the Ganges-Yamuna alluvial plain and just south of the lower Ganges, and elsewhere in India and Pakistan.

**Copper Age:** an intermediate period between the Neolithic and Bronze Ages, characterized by the use of copper tools. According to the principles of the Three Age System, it should strictly mean the period when copper was the main material for man's basic tools and weapons. It is difficult to apply in this sense as copper at its first appearance was very scarce, and experimentation with alloying seems to have begun early on. The alternative names of Chalcolithic and Eneolithic imply the joint use of copper and stone. In many sequences, notably in Europe and Asia, there is a period between the Neolithic and Bronze Age, separated from each by breaks in the cultural development, within which copper was coming into use and Copper Age is the best term to use. In Asia, the age saw the origins of civilization, and in Europe the great folk movements of the Beaker and Corded ware cultures, and perhaps the introduction of the Indo-European languages. The period lasted for almost 1000 years in southeast Europe, from 3500 BC.

**copper hoard:** a hoard of copper artifacts, many of which occur in the Ganges-Yamuna doab (alluvial plain) and in the area south of the lower Ganges, the former occasionally associated with ochre-colored pottery. The hoards, dated broadly to the 2nd millennium BC, include flat axes, anthropomorphic axes, barbed harpoons, and sword blades. They have been cited as evidence of the Vedic arrival by some. Other copper hoards with different artifact typologies also occur elsewhere in India and Pakistan.

**coprolite:** fossilized or desiccated human or animal feces. The study of these remains can provide information about human or animal activity in that particular locale, such as diet and disease; the study of these remains is called coprology. Coprolites only survive in exceptional circumstances – arid, frozen, and occasionally waterlogged deposits. They can be reconstituted by the addition of chemicals like trisodium phosphate, and can then be analyzed for their plant and animal remains. This gives additional insight into what was being eaten at a site, since the evidence from pollen analysis, or flotation, only suggests what was being grown.

**Coptic period:** chronological phase in Egypt lasting from the end of the Roman period, c. AD 395, until the Islamic conquest, c. AD 641. It is also described as the “Christian” period and is roughly equivalent to the Byzantine period elsewhere in the Near East.

**coracle:** primitive, light, small bowl-shaped boat with a wattle frame of grasses, reeds, or saplings covered with hides. They were first known in the Iron Age and are still used in Wales and along coastal Ireland,

usually with a canvas and tar covering. The term also refers to an Old English boat of wickerwork covered with hides. Native Americans used the similar bullboat, covered with buffalo hides, on the Missouri River, and the corita, often sealed with bitumen, on the Colorado. [curragh]

**cord ornament:** pottery decoration produced by impressing a twisted cord into the surface of soft clay. Sometimes short individual motifs were produced by wrapping a cord around a stick (Peterborough ware), or part or the whole of a vessel was wrapped closely in cord (Corded ware and some varieties of beaker).

**cordage:** cords or ropes, especially the ropes in the rigging of a ship.

**cordate:** of or pertaining to a refined heart-shaped biface with a flat profile, characteristic of the Mousterian in western Europe.

**Corded ware:** a Late Neolithic pottery ware decorated with twisted cord ornament found over much of north and central Europe in the 2nd half of the 3rd millennium BC. The commonest shapes are the beaker and the globular amphora. The ware is always associated with early agriculture, the stone battle ax, and usually with single burial under a small barrow or kurgan. The ware may derive from Denmark, central Germany (Saxo-Thuringia), eastern Poland, or the Ukraine. The culture received its name from the characteristic pottery. Some groups also had metal artifacts. There is some evidence that Corded ware people had domesticated horses and wheeled vehicles, and they are sometimes interpreted as nomadic groups – possibly Indo-European speaking – who spread across northern Europe from the east. Closely related are the Globular amphora and Funnel beaker cultures.

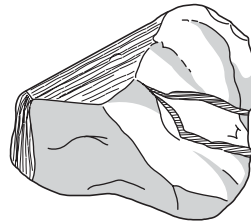
**Cordilleran:** the ice mass that covered the coastal mountains along the Pacific Ocean coast of North America from northern Washington state into southern Alaska. At its maximum extent, about 20,000 years ago, it connected with the Laurentide ice sheet to the east and with the Pacific Ocean to the west, and reached a thickness of some 3 km (1 mile). The Cordilleran geosyncline was a linear trough in the Earth's crust in which rocks of Late Precambrian to Mesozoic age (roughly 600 million to 66 million years ago) were deposited along the western coast of North America, from southern Alaska through western Canada and the United States, probably to western Mexico. The eastern boundary of the geosyncline extended from southeastern Alaska along the eastern edge of the northern Cordillera and northern Rocky Mountains of Canada and Montana, along the eastern edge of the Great Basin of Utah and Nevada, and into southeastern California and Mexico. The Old Cordilleran culture appeared in the Pacific Northwest about 9000 or 10,000 BC and persisted until about 5000 BC in some areas. Subsistence was based on hunting, fishing, and gathering. Simple willowleaf-shaped, bipointed projectile points are characteristic artifacts.

**cordon:** in ceramics, a strip of clay added around the outside surface of a pot before firing for decoration or handling. The cordon(s) may be decorated in some way, for example with fingertip or stick impressions. On wheel-turned pots, cordons may be created by pushing the clay out in a narrow ring from inside, achieving a similar effect. In metalworking, a cordon is formed in much the same way as for a wheel-turned pot, that is, by the repoussé technique.

**cordoned urn:** a type of Middle Bronze Age pottery in the northern parts of the British Isles during the 2nd millennium BC, generally tall straight-sided vessels with a flat base, slightly flaring body and a simple rim. The outer face is decorated with applied cordons ornamented with incised decoration.

**cord-ornamented pottery:** ceramic vessels whose outer faces are decorated with motifs created by pressing twisted cord into the soft clay surface before the pot is fired. Some have short individual motifs, or long pieces of cord are coiled around the pot and then pressed into the surface. [cord-marked pottery]

**core:** 1. A piece of stone used as a blank from which flakes or blades were removed by prehistoric toolmakers. Usually it was the by-product of toolmaking, but it may also have been shaped and modified to serve as an implement in its own right. An object, such as a hand ax, chopper, or scraper made in this way is a core tool. Cores were most often produced when hit by a pebble, antler, or bone hammer. [blank, nucleus] 2. A black or gray zone in the interior cross-section of a vessel wall, usually associated with incomplete removal of carbonaceous matter from the clay during relatively low-temperature firing; not to be confused with black coring at high temperatures, which results from trapped gases and may lead to bloating. [coring (n.)]



Parent



Preform

Core

**core borer:** a hollow tubelike instrument used to collect samples of soils, pollens, and other materials from below the surface. The cylinder of soil, etc., that is collected is called the core. The core is undisturbed and the sediment contacts, soil boundaries, and structures are intact and can be described accurately.

**core rejuvenation flake:** a roughly round and slightly wedge-shaped flake of flint with the remains of flake beds around the outside edge. These flakes are created to extend the life of a core that has become uneven or difficult to work. [core tablet]

**core tool:** a stone tool, such as a hand ax, chopper, or scraper, formed by chipping away flakes from a core. These tools, often large and relatively heavy, were characteristic of Paleolithic culture. They were made by using a pebble, antler, or bone hammer. [core-tool]

**core-formed glass:** a type of glass made by twisting melted glass around a core, often with different colors. This technique was used especially in the Classical and Hellenistic periods of the eastern Mediterranean.

**Corinthian pottery:** a widely distributed pottery made at Corinth and found throughout the Mediterranean, from the late 7th century BC until the mid 6th century BC. This important stage of vase painting included “naturalistic” designs of animals, maenads, and satyrs and the invention of the black-figure technique and some new shapes, such as the aryballos and alabastron. Proto-Corinthian pottery, most of which is miniature in size, was the first to be decorated in the black-figure painting technique – figure silhouettes drawn in black and filled in with incised details.

**cork:** a buoyant, light brown substance obtained from the outer layer of the bark of the cork oak.

**corn mummy:** a type of anthropomorphic funerary object made of soil mixed with grains of corn, which was usually wrapped up in linen bandages and had a face mask.



Corner notch

**corner notch:** a major projectile form that is described as a point that has had notches for hafting struck into the corners of the base; a flaking technique applied to accommodate hafting which involved the flaking of notches into the basal corners of a preform base. [corner-notched, corner-notched point]

**Cornish urn:** a Middle Bronze Age pottery vessel found in the south-west of Britain, dating to the 2nd millennium BC. They were often barrel-shaped with a highly decorated upper body and with strap handles. Decoration was in herringbone and lattice patterns. [Cornish handled urn]

**corrugated:** shaped into alternate ridges and grooves.

**corrugated fastener:** a fastener used in making light-duty miter joints, such as on screens and large picture frames.

**corrugation:** a technique of decorating pottery in which the individual coils are not smoothed on the outside, thus forming an overlapping surface. Corrugation improves a pot’s heat conductivity.

**cortex:** a tough covering or crust on an unmodified stone cobble or newly exposed flint nodule and tabular flint. It is formed by weathering and is usually discarded during the knapping process.

**cortical flake:** a flake with its dorsal aspect completely covered by cortex. [primary flake]

**cortical spall:** a flake struck from the surface of a pebble or nodule which retains the natural cortex on one face. A cortical spall tool is generally a relatively large, ovate cortical spall exhibiting retouch or use-wear on one or more edges.



- corundum:** extremely hard crystallized alumina, used as an abrasive.
- cosmetics:** the earliest cosmetics known to archaeologists were in use in Egypt in the 4th millennium BC, with evidence among funerary artifacts of eye makeup and scented unguents. Both Egyptian men and women used oils, perfumes, and eye paints. By the start of the Christian era, cosmetics were in wide use in the Roman Empire. [cosmetic (adj.)]
- costrel:** a type of medieval pottery flask, of which the majority were made of leather and have not survived. Merovingian and Carolingian pottery costrels tend to be roughly round in shape, with a slight neck for a stopper. The best known is the Zelzate Costrel, made in the Badorf-type industries of central Rhineland, which contained a Viking period hoard dating to AD 870.
- cotter pin:** a metal pin used to fasten two parts of a mechanism together or a split pin that is opened out after being passed through a hole.
- countersunk handle:** a rounded handle partly sunk into the side of a vessel.
- cowrie:** a variety of spiral shell from marine snails of the genus *Cypraea*, in which the opening is reduced to a slit running the length of one side. The humped, thick shell is beautifully colored (often speckled) and glossy; the apertural lips, which open into the first whorl in the shell, are rolled inward and may be fine-toothed. Its popularity in antiquity seems to depend on its use as a symbol of the female vulva. It was widely traded, larger species being imported into Europe from as far as the Red Sea. A cowrie-shaped amulet, known from predynastic Egypt, was called a cowroid. [cowrie shell, cowry]
- crackle porcelain:** a type of china with glaze that has been purposely crackled or covered with a network of fine crackles in the kiln. It is caused by the shrinking of the glaze as the vessel cools after firing and is often the only ornament on this exquisite ware. The Chinese made many variations of this porcelain, some rare and valuable. In some examples there is engraved decoration under the glaze. The low-fired Ju stoneware is distinguished by a seemingly soft, milky glaze of pale blue or grayish green with hair-thin crackle. A variant with strongly marked crackle became known as Ko ware as it was made by the elder brother (Ko) of the director of the Lung-ch'üan factory. [crackle, cracklin]
- craft specialization:** the making of crafts – pottery, jewelry, clothing, ornaments, stone tools, etc. – by specialists, that is people who do nothing but make that craft.
- Crambeck ware:** a type of pottery that was widely distributed across the north of England and North Wales in the second half of the 4th century AD, including cream-colored mortaria and parchment wares, imitation Samian forms, and gray kitchen wares.

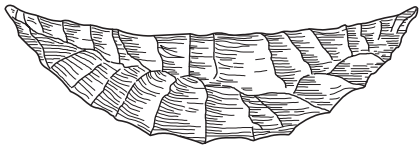
**crater:** a large, wide-mouthed, two-handled Greek or Roman bowl or vase, usually made of pottery or metal. It is characteristic of Greece in the Mycenaean and Classical periods. They were used to serve wine, mixed with water in varying proportions, into individual drinking cups, and handed out at banquets and sacrifices. The word is Greek for “mixing bowl.” There is a classification of four types: column crater, volute crater, calyx crater, and bell crater, which take their names from the characteristic shape either of the handle or of the body of the vase.

**crawling:** a defect in which the glaze separates from the body during drying or firing (as around a pre-firing crack), leaving unglazed areas.

**crazing:** a cross-hatched pattern of fractures, observable on the surface of a stone, as the result of excessive temperature exposure. In ceramic analysis, it is a situation in which differential shrinkage causes the surface of the vessel to crack while the remainder of the vessel wall remains undamaged.

**creamware:** earthenware having a cream-colored glaze. [cream-colored earthenware]

**creaser:** a flat-edged blade used in leatherworking.



Crescent

**crescent:** a crescent-shaped, bifacially flaked stone tool generally restricted to the Paleoindian period and almost always found in association with extinct Pleistocene lakes. They were possibly used for hunting large shorebirds. [Great Basin transverse point]

**cresset:** a metal basket, mounted on a pole, in which oil or pitch was burned for illumination.

**cresset lamp:** an open lamp which was filled with oil, then a wick floated on the oil.

**crest:** a distinctive device representing a family or corporate body, borne above the shield of a coat of arms (originally as worn on a helmet) or separately reproduced, e.g., on writing paper.

**crested blade:** a flint blade with negative impressions of removals on one side of the dorsal surface, creating a crest. These constitute part of a previously worked striking platform or result from preparing the flaked surface on a core before detaching the flakes or blades.

**Creswell point:** type of later Upper Paleolithic flint tool found in the British Isles made from a narrow flint blade, with one end worked to produce a slightly elongated trapezoidal form, with the long side of the blade left unworked, and the shorter side blunted.

**critical point:** the point in the drying of a clay article at which shrinkage water has been removed, shrinkage has largely ceased, and the piece is rigid and leather-hard. [critical moisture content]

**Cromerian:** an interglacial stage of northern Europe correlated with the Günz-Mindel interglacial, part of the series of interglacials recognized

in Britain: the Pastonian (oldest), Beestonian, and Cromerian. The Cromerian stage is a group of interglacial deposits of the Quaternary system that are stratified under Anglian glacial deposits and above an extensive sequence of earlier Quaternary deposits. The type site of the stage is at West Runton, Norfolk.

**crossbow:** a bow made with a crossbow parallel to the arrow and operated by a mechanical trigger release. It was likely invented by the Chinese in the late Zhou/Chou dynasty (c. 400 BC) for defending their cities. The best-preserved examples were found in Ch'u state. Chinese skill in bronze casting enabled them to make an accurate trigger of several interlocking parts increasing the weapon's effectiveness. Cast-bronze trigger mechanisms are commonly found in late Eastern Zhou/Chou burials along with inlaid bronze bow fittings and bronze arrow points. It was the most important weapon of the Middle Ages, with its earliest appearance in Europe in Italian cities during the 10th and 11th centuries.

**cross-dating:** dating of sites by objects of known age, or artifact association of known age.

**crossed retouch:** retouch that is so steep on a lithic edge that it forms almost a 90° angle, so it is barely visible from the dorsal or ventral sides.

**cross-hatching:** ornamentation formed by a criss-cross of diagonal lines, described as acute angled if the angle to the horizontal is more than 45° and obtuse angled if less than this. [lattice decoration]

**cross-section:** the area that would be exposed if an artifact was cut in half. In reference to a blade, it is the shape of the blade form if the blade were cut across the blade and perpendicular to the length of the blade. [see lateral section, transverse section]

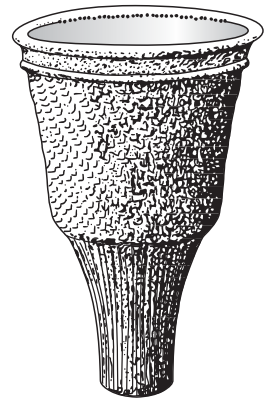
**crota:** an enclosed, round bell with a slit, sounded by a loose internal pellet.

**crown glass:** a traditional window glass made by spinning a bubble of molten glass on the end of a rod until it forms a flat disk.

**crucible:** a small, coarse pottery (or other refractory material) vessel used for holding molten metal during smelting, testing, or casting. It is usually easily recognizable from the effects of the high temperatures to which it has been subjected, as well as from its shape and thickness. Crucibles were probably so-named from the Latin word *crux*, meaning "cross" or "trial."

**cruciform brooch:** a bow-shaped brooch with a small headplate and long footplate with three knobs and the footplate shaped into an animal head with eyes and nostrils. Found in Jutland and Holstein from the late 4th century.

**cruse:** a small earthenware container used for liquids.



Crucible

**crutch-head pin:** a type of bronze dress fastener of a simple shaft with a short cross-piece set in the form of a T, dating to the 15th century BC in southern Britain.

**crystal:** a material with atoms distributed in an orderly array (lattice structure), having characteristic optical and physical properties.

**cuirass:** a piece of armor to protect the torso, both front and back, and often molded to the contours of the body. Originally made of thick leather, it was variously made of laminated linen, sheet bronze, or iron, or from scales of horn, hide, or metal. In Homeric and Hellenistic times, it was made of bronze. Cuirasses of leather as well as iron were worn by officers in the armies of the Roman Empire. Later made of steel, the cuirass was the forerunner to body armor worn to deflect bullets.

**cult statue:** the statue of a god or goddess, housed in a temple.

**cultural chronology:** the ordering of past material culture into a meaningful time sequence.

**Cumbrian club:** a term for a distinctive type of large polished stone ax of Middle Neolithic date made in northwest England. It has a broad-butted form, long, narrow proportions, and a distinct “waisting” of constriction towards the butt end. [Cumbrian-type stone ax]

**cuneiform:** earliest known wedgelike script from Meso-potamia (from Greek *cuneus*, meaning “wedge”).



Hymn to Ur-Nammu, cuneiform script on clay, c. 2060 BC

**cup:** a small bowl-shaped container for drinking from, typically with a handle.

**cup-and-ring mark:** the commonest form of rock carving in the British Isles, consisting of a cuplike depression surrounded by one or more concentric grooves. Cup-and-ring marks are found on standing stones, singular or in stone circles, and on the slabs of burial cists, as well on natural rock surfaces. In its classic form most cup-and-ring art belongs in the Bronze Age, but the motif occurs on passage graves, for example in the Clava tombs and on the capstones at Newgrange, where it may show links with similar rock carvings in northwest Spain. They are also found in Ireland and Scotland and can be dated to the Neolithic period of the 4th to 3rd millennium BC. [cup and ring mark, cup mark]

**Cupisnique:** a style of pottery of the north coast of Peru during the Early Horizon, and a local variant of Chavín culture. It is most often associated with graves and is characteristically a polished gray-black ware with globular bodies, stirrup spouts, and relief decoration. Early Cupisnique tends to be strongly modeled by plastic manipulation of the surface. In later phases, red and black banding, separated by incision and life modeling, especially stylized felines, appear. The style dates from 900–200 BC and gave rise to three other styles: Salinar, Gallinazo, and Vicus.

**cupule:** small cup-shaped marks deliberately put in a rock surface. [cup marks, dots, pits]

**curation:** deliberate attempts by prehistoric peoples to preserve key artifacts and structures for posterity. These artifacts were reused and transported so often that they are rarely deposited in contexts where their original locations of manufacture and use can be determined. [curated technology]

**currency bar:** a strip of iron about 4 cm (1.5 inches) wide and 30–90 cm (2–3 feet) long and pinched up at one end, which served as a unit of currency in Britain during the Late Iron Age, before the introduction of coins by the Belgae. The bars may have originated as sword blanks or roughouts. Their distribution was mainly in Dorset and the Cotswolds, with some in the Severn Basin.

**curvilinear:** contained by or consisting of a curved line or lines; these designs employ flowing, curvilinear forms.

**cushion stone:** a flat-faced smooth stone used as an anvil in metalworking, first found in northern Europe's Beaker graves.

**cut flooring nail:** a nail with a rectangular cross-section and a blunt tip, used to blind-nail flooring through the edges without splitting.

**cut mark:** any microscopic scratches on the surface of an animal bone, with distinctive V-shaped grooves. The marks indicate meat and muscle were removed from the bone using stone flakes.

**cutlass:** a flat, heavy, slightly curved blade.

**cutlery:** knives, forks, and spoons used for eating or serving food.

**cutting blade:** the piercing element of a composite projectile point or harpoon head. [end blade, endblade]

**cutting tool:** any tool used for cutting, gouging, shaving, piercing, scraping, and sawing.

**Cycladic:** concerning the Bronze Age of the Cyclades, Aegean Islands, equivalent to Helladic on the Greek mainland and Minoan in Crete. It is usually divided into three major divisions: Early (c. 3000–2000 BC), Middle (c. 2000–1550 BC), and Late (c. 1550–1050 BC). In the earlier Bronze Age, Cycladic culture seems to be largely independent, but in the late Middle Cycladic to early Late Cycladic, Minoan influence becomes important. After c. 1400 BC mainland (Mycenaean) influence replaces the Minoan and many islands were colonized by the Mycenaeans. Colin Renfrew has proposed an alternative Early Cycladic subdivision into Grotta-Pelos, Keros-Syros, and Phylakopi I – a culture sequence.

**cylinder hammer technique:** a stone-flaking technique using bone, antler, wood, or other relatively soft material as a hammer to remove small, flat flakes from a core during flint knapping. These flakes have a characteristically long, thin form with a diffuse bulb of percussion. [bar hammer technique, soft hammer technique]

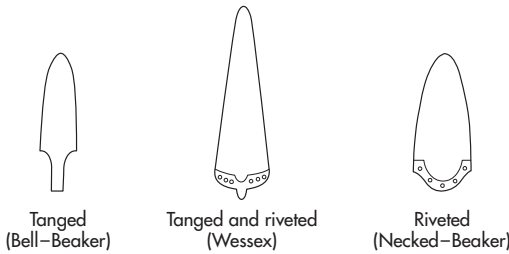
**cylinder seal:** a cylinder engraved with a design, scene, and/or inscription which was impressed onto the plastic clay when the cylinder seal was rolled over a clay tablet. This was the standard seal form of the Mesopotamian civilization, starting in the Uruk period. The incised stone cylinder was rolled over a soft surface so that the design appeared in relief. These seals were used to mark property and to legalize documents. Dating is based on changes in the design carved on the seal as well as the seal's size and proportion.

**cylindrical tripod vase:** a ceramic form popular in the Early Classic period in Mesoamerica and an important artifact of the Teotihuacán. It is cylindrical in shape and stands on three slab or cylindrical legs and frequently has a knobbed lid. [cylindrical vase]

**cymbium:** a small Greek boat-shaped drinking cup of metal or clay with two handles.

# D

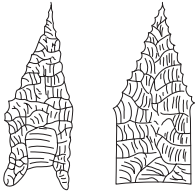
**dabber:** a tool used in etching to distribute the etching ground over a plate of metal in the first process of engraving and, in printing from copper plate engraving and woodcuts, to spread the ink.



**dagger:** a short stabbing knife which, in ancient and medieval times, was not very different from a short sword. From about 1300 the European dagger was differentiated from the sword. In earliest antiquity, it was made of flint, copper, bronze, iron, or bone. It is difficult to distinguish it from an inoffensive knife blade. Prehistoric daggers were made in flint by the Beaker Folk in the Neolithic–Early Bronze Age, about 1900 BC. Bronze daggers, tanged for a wooden hilt, were imported by Beaker Folk from western Europe between 1900 and 500 BC. The fully developed style of the Iron Age came to be in the 1st century BC. In copper it was ancestral to the rapier, sword, spear, and halberd.

**dagger ax:** a bronze Chinese weapon in use from the Shang dynasty (c. 1500 BC) to the Han dynasty (206 BC to AD 220). The earliest forms were broad and mounted at right angles to a wooden shaft through which the tang projected. Later forms had a slender blade which extended down the shaft at right angles to the main point to prevent it snapping. [ko]

**Dales ware:** coarse, shell-gritted, handmade cooking pots from the mid 2nd century AD onward around the Trent and Humber Rivers. The fabric is hard and coarse with a smooth but unpolished surface and gray, black, or brown in color.



Dalton

**Dalton:** a complex of the late Paleoindian and Archaic periods of the midwestern and eastern US, associated with the Dalton projectile point class. The point was varied due to reuse and resharpening. The Dalton sites indicate that hunting deer was important. Brand in northeast Arkansas and Stanfield-Worley Bluff in Alabama are the best known sites. [Dalton point, Dalton projectile point]

**damascening:** art of incrusting one metal on another, in the form of wire, which by undercutting and hammering is completely attached to the metal it ornaments. The process of etching slight ornaments on polished steel wares is also called damascening. Although related to pattern-welding, this technique used in the manufacture of sword blades probably developed independently. First, a high-carbon steel is produced by firing wrought iron and wood together in a sealed crucible; the resulting steel, or wootz, consists of light cementations in a darker matrix, and this, together with a series of complicated forging techniques at relatively low temperatures produced the delicate “watered silk” pattern with alternating high- and low-carbon areas. Damascene steel was very strong and highly elastic. [damaskeening]

**Danzantes:** stone slab, bas-relief carvings of Monte Alban, Mexico, dating to c. 100 BC to AD 100, that flank the earliest flat-topped slabs. They depict nude male figures, some with mutilated or elaborately emphasized sexual organs, in unnatural dancing or possible swimming poses. Certain elements of the iconography, such as thick lips and downturned mouths, indicate an Olmec origin. Associated hieroglyphs and calendar dates support this theory.

**dart:** a flaked projectile point hafted to a shaft that utilizes a throwing stick, atlatl, or blowgun. [dart point]

**data:** relevant observations made on objects that then serve as the basis for study and discussion; the four main classes of archaeological data are artifacts, features, structures, and food remains.

**daub:** clay which is smeared onto a structure of timber or wattle (interwoven twigs) as a finish to the surface. It is normally added to both faces of a wall and is used to keep out drafts and give a smooth finish. The material usually survives only when baked or fire-hardened, as would be the case if a structure burned down. It can usually be recognized by the impressions of the wattle to be found on its inner face. It was used by both Indians and European settlers in North America to construct houses.

**de facto refuse:** artifacts left behind when a settlement or activity area is abandoned.



**Dead Sea Scrolls:** ancient Hebrew manuscripts recovered from five cave sites in which they had been hidden at the northwest corner of the Dead Sea. They are believed to be the religious writings of the Essenes, a sect who in the 1st century BC and 1st century AD dwelt in a monastery at Khirbet Qumran. This material, first found in 1947, is extremely relevant to the origins of Christianity. The library included all the Old Testament texts as well as sectarian works. The scrolls, together with the excavations at Qumran, have provided much information about the beliefs and way of life of the Essenes. It is thought that the library was hidden in the cave in anticipation of the destruction of Khirbet Qumran by the Romans, which occurred in AD 67–73. The manuscripts of leather, papyrus, and copper are among the more important discoveries in the history of modern archaeology. Their recovery has enabled scholars to push back the date of the Hebrew Bible to no later than AD 70 and to reconstruct the history of Palestine from the 4th century BC to AD 135.

**death mask:** a cast of a person's face taken after death.

**debitage:** waste byproducts – chips or debris – resulting from the manufacture of stone tools, found in large quantities in a toolmaking area. Study of debitage can reveal a good deal about the techniques used by knappers. Certain waste flakes have a characteristic appearance and indicate the tools that were made or prepared at a site even when the tools themselves are absent.

**debitage analysis:** study of waste products resulting from tool manufacture to reconstruct stone technology.

**debris:** chips and chunks of lithic material removed from a core but that do not fit the criteria for a flake or blade – having no identifiable platform and not being able to distinguish between dorsal and ventral surfaces.

**decal:** a transferable decoration added to the surface of pottery beginning in the mid 19th century.

**decanter:** a stoppered glass container into which wine, brandy, etc., is decanted.

**decoration:** one or more of a series of modifications made on pottery for purposes that are mainly nonfunctional.

**deflocculate:** to disperse in fine particles, especially a fine clay suspension, so that particles repel each other and the substance becomes more fluid.

**delftware:** term for tin-glazed earthenware made in Britain from the 16th century, named after the Dutch town of Delft. The main centers for delftware were London, Bristol, Liverpool, and Glasgow, but the factories went out of business with the introduction of creamware.

**denarius:** a Roman silver coin, probably first struck in the late 3rd century BC. A wide range of designs were shown and under the republic they often bore an image of the moneymaker's ancestor.

**Denekamp interstadial:** a warm period during the middle pleniglacial phase of the last (Weichselian) glaciation (cold stage) in Europe. It is dated to around 28,000 BC (30,000 bp).

**denticulate:** 1. An artifact (flake or blade tool) with several small, tooth-like (dentate or serrated) notches on the working edge. 2. Toothed by retouch that forms a connecting series of three or more intersecting notches along the perimeter of a piece. [denticulated (adj.)]

**depas:** Homeric term that Schliemann used to describe the two-handled cups which he found in Early Bronze Age contexts at Troy. [depas amphikypellon]

**deposition:** any of the various processes by which artifacts move from active use to an archaeological context, such as loss, disposal, abandonment, burial, etc. It is the laying, placing, or throwing down of any material. In geology, it is the constructive process of accumulation into beds, veins, or irregular masses of any kind of loose, solid rock material by any kind of natural agent (wind, water, ice). The transformation of materials from a systemic to an archaeological context are directly responsible for the accumulation of archaeological sites and they constitute the dominant factor in forming the archaeological record. Deposition is the last stage of behavioral processes, in which artifacts are discarded.

**Derbyshire ware:** a type of British pottery c. mid 2nd century AD through to the 4th century AD with a hard and gritty surface containing silica particles with colors from gray and light-brown to red; mainly jars with a lid-seating on the rim.

**descriptive type:** a type based on the physical or external properties of an artifact.

**desert varnish:** a chemical, dark-colored crust or film of iron and manganese oxides (usually with some silica) that is deposited on exposed rocks, artifacts, and petroglyph surfaces. Of bacterial origin, this varnish becomes polished by wind abrasion and can be used in cation ratio dating; its organic matter can be analyzed by accelerator mass spectrometer radiocarbon dating.

**design:** any shapes, motifs, or symbols added as decoration on a ceramic object.

**design structure:** layout or arrangement of a design; the way the surface area to be decorated is conceptualized – whether subdivided or bounded – and the arrangement of elements and motifs within that layout.

**detritus:** debris or droppings created by detrition; matter produced by the wearing away of exposed surfaces, especially gravel, sand, clay, or other materials eroded and washed away by water.

**diachronic:** referring to two or more reference points in time, especially as they pertain to phenomena as they occur or change over a period of time; a chronological perspective. The term refers to actions or things,

as in the study of artifacts in a region as they change across sequential periods. [see synchronic]

**diadem:** a plain or decorated headband or crown of manmade or natural materials, usually as a badge of status or office.

**diagnostic:** an artifact or some other aspect of a site that is known to be associated with a particular time period. [diagnostic artifact]

**dice:** a small cube with faces bearing from one to six spots, used in games of chance. [die]

**die stamp:** an engraved stamp used to impress an image onto another object.

**digging stick:** a straight, often pointed, wooden tool for loosening or digging up the ground. It was used in food-gathering economies to turn up roots or burrowing animals, and in Neolithic communities for cultivation until displaced by the hoe and later (in the Old World) by the plow. It could be made more efficient by adding a perforated stone as a weight onto the shaft near the lower end.

**diggings:** excavated materials or the site that has been or is being excavated.

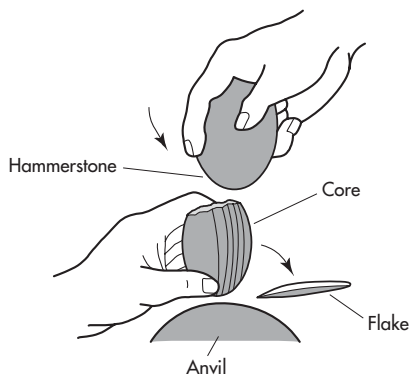
**ding:** a Chinese tripod bowl with solid legs. From the Neolithic it was made of ceramic and from the Shang period it occurred in bronze; there were also quadrapods. [ting]

**dinos:** a Greek round-bottomed cauldron that would be placed on a tripod or stand, probably used for mixing wine.

**diptych:** double-leaved tablets of metal, ivory, or wood, attached by strings or hinges. Diptychs are common in Christian archaeology, often as alterpieces or paintings composed of two leaves which close like a book.

**direct measurement:** measurement that can be compared with a standard scale, as on a ruler or Munsell chart.

**direct percussion:** a technique used in the manufacture of chipped-stone artifacts in which flakes are produced by striking a core with another



Method of direct percussion  
(Courtesy Stackpole Company, Harrisburg, Pennsylvania)

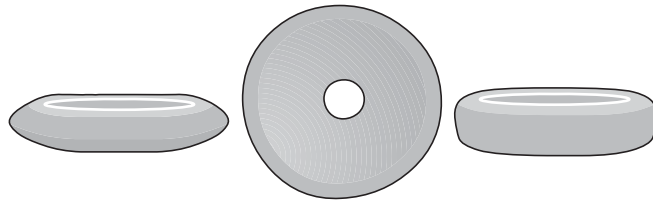
stone, a hammerstone, or by striking the core against a fixed stone or anvil in order to dislodge a flake. The method is less precise in its results than indirect percussion. [free-hand percussion]

**direct retouch:** retouch that occurs on an edge of a lithic flake, visible only in dorsal view.

**direction lines:** nested series of curved lines drawn in each flake scar to indicate, by their placement, the direction of the blow or pressure that produced that scar when the force detached a piece of the stone.

**dirk:** extra-long dagger, although not as long as a rapier.

**discoidal:** a stone artifact circular in shape and concave on both sides, usually of quartz, granite, flint, hematite, slate, or basalt. They range from 0.25 to 23 cm (1–9 inches) in diameter and from 0.5 to 9 kg (1–20 pounds) in weight. Some have a hole through the center and others have flanges around the edges. They seemed to have a ceremonial or ritual purpose or were used for mixing herbs or medicines. [disc, disk]



Discoidals

**discoidal knife:** a discoidal flint tool that often has a ground edge.

**discoidal nucleus technique:** a method of core knapping used during the Middle Paleolithic by which flaking was done until the core was too small to use. The Beaker People, in particular, made circular, oval, or oblong thin flakes of stone with this technique, which is very similar to the Levallois technique.

**dish:** a shallow, flat-bottomed container for cooking or serving food.

**disk-core method:** a technique in the making of stone tools in which a core is trimmed to a distinctive disk shape and flakes are then chipped off for tools.

**distaff:** a rod around which fiber is wound for spinning.

**distal:** located away from the point of origin or attachment or a central point. In anatomy, the part of a long bone (leg or arm) which is furthest from the body; the opposite end is the proximal end. [distal end]

**distribution:** simply, the spatial location of archaeological sites or artifacts. More specifically, it is a definition of the spatial location of artifacts, structures, or settlement types over a landscape. Analysis of the distribution of a particular artifact type may lead to conclusions

about the nature of the industry or culture which produced or used it. The distribution of objects is studied by the plotting of an artifact's find-places on a distribution map. This is the visual representation of the distribution of some archaeologically significant trait or traits. The relationship of the find-spot symbols to the natural environment may reveal something about communication networks, the economic sub-system, and cultural or technological entities. The distribution map should show the extent of a culture of which the traits are distinctive, outlying occurrences being explained by diffusion, especially if spread along natural routes. The origin of more localized traits may be defined. The overlaying of one trait on another may suggest association or sequence, while mutually exclusive distributions can imply contemporaneity. The emphasis is on individual parts of archaeological deposits rather than on the site as a unit. [distribution patterns, distributional archaeology]

**djed pillar:** in Egypt, a widely found amulet of roughly cruciform style with at least three crossbars. It seems to have been a fetish from prehistoric times and came to represent the abstract concept of stability. Like the ankh, it was commonly used in friezes and painted inside the base of coffins.

**document:** a piece of written or printed matter providing a record of events, agreements, ownership, or identification.

**dog-tooth ornament:** an ornament with a series of pyramidal flowers of four petals, c. 13th century AD Britain.

**dogu:** a type of clay figurine, most often depicting a pregnant female, made in Japan during the Jomon period, c. 5th to 4th millennium to c. 250 BC. The function of these figurines is unknown, but it is generally believed that they were some kind of fertility symbol and they are reminiscent of the rigidly frontal fertility figures produced by other prehistoric cultures. Archaeological evidence suggests they were aids in childbirth as well as fertility symbols. They are also found in simulated burials, indicating some kind of ceremonial function. Fired at a low temperature, they often have crumbly surfaces and many are painted red.

**dolium:** a large Greek or Roman coarse earthenware vessel with a wide mouth and spherical form. It was used to store wine and oil; later, smaller vessels were produced. [culeus]

**doll:** a small model of a human figure, used as a child's toy.

**dolmen:** 1. In antiquity (especially in France), a word for a megalithic tomb consisting of orthostats and capstone or for megalithic chamber tombs in general. This was usually a stone structure consisting of upright columns supporting a slab roof and known from Neolithic times. In English archaeological literature "dolmen" should be used

only for tombs whose original plan cannot be determined or for tombs of simple unspecialized types which do not fit into the passage grave or gallery grave categories; it is also used for relatively small, closed megalithic chambers, such as the *dysser* of Scandinavia. The name was probably derived from the Cornish *tolmen* ("stone table"). 2. The enclosure for burial in a jar of the Yayoi period in Japan consisting of a single large stone slab supported on a ring of stones. 3. A megalithic stone burial feature in western China and the coastal Yellow Sea area, dating to the 1st millennium BC, of which there are three forms – raised table, low table, and unsupported capstone.

**dolmen deity:** a symbol of mysterious personage or divinity who peers from megalithic and rock-cut tombs of western Europe. She is sometimes represented by nothing but a pair of eyes or eyebrows, the oculus motif. Breasts and necklaces are female attributes often given. The most detailed representation is on the French statue *Menhir*.

**domed scraper:** a scraper with a shape or structure resembling a dome.

**Domesday Book:** a survey of land ownership in England after the Norman Conquest. The Anglo-Saxon Chronicle describes how in 1085 it was decided to make a record of the number of hides in land existing in each English shire and to establish the amount and value of acreage and livestock possessed by individual landowners. The idea was to create a new rating system which would protect and enlarge the king's revenue. The resulting document – a two-volume survey of land ownership arranged under tenurial rather than territorial headings – is the great testament of feudal England. The Domesday Book is of fundamental importance to both historians and archaeologists of the late Saxon and early Norman periods, as it gives the names and sizes of villages, farms, manors, churches, and other properties that existed at the time as well as certain sales and transactions.

**dorsal:** on the side of a lithic flake or blade that would have been on the outside of the core (during striking) which shows cortex or scars from previous flake removals. [dorsal surface]

**dorsal ridge:** sharp ridge that marks the boundary between flake scars on the dorsal surface of a lithic flake. [arris]

**dotaku:** a type of bronze bell made in the Yayoi period of Japan that was cast from melted bronzes, some heavily decorated. They may have been used in agricultural fertility rituals.

**double ax:** a shaft-hole cutting tool that had two opposed (symmetrical) blades and was made of copper or bronze. With two cutting edges, it did not have to be sharpened as often as a single ax. The best-known examples are from Minoan Crete, where it was a practical tool and a cult symbol. The stone battle ax is occasionally found in this form. [double axe]

**downdraft kiln:** an installation for firing pottery with a firebox, in which the fuel burns beside the chamber in which the pots are fired, separated from it by a “bagwall” so that hot gas from the fire must rise over the bagwall and then pass down through the chamber before exiting through a chimney flue on the other side. It achieves high temperatures and better control over the atmosphere.

**drachma:** a Greek silver coin equivalent to six obols. In Athens, drachma were often decorated with Athena’s head and her owl.

**Drakenstein urn:** type of Middle/Late Bronze Age ceramic vessel found in the Low Countries. The pots were barrel-shaped with impressed cordon decoration on the upper part of the body and occasionally with zigzag decoration. The shape and decoration of these vessels suggest some contact with the Deverel-Rimbury wares of southern England.

**drawing:** a primary forming technique for producing pottery vessels, similar to pinching, whereby the body is pulled upward from the center of a ball of tempered clay with the thumb and fingers.

**drawknife:** a knife handled at both ends used to shave wood.

**drill:** a tool, usually of wood or bone, used to drill holes through or into other wood, stone, or bone artifacts.

**drinking horn:** a drinking vessel, usually curved in shape, fashioned out of animal tusk or horn and sometimes with bands of decoration.

**drinking tube:** a length of hollow bird-bone used in aboriginal ceremonial situations for drinking liquids.

**dross:** scum formed by oxidation at the surface of molten metals.

**drum:** a percussion instrument sounded by being struck with sticks or the hands, typically cylindrical, barrel-shaped, or bowl-shaped with a taut membrane over one or both ends.

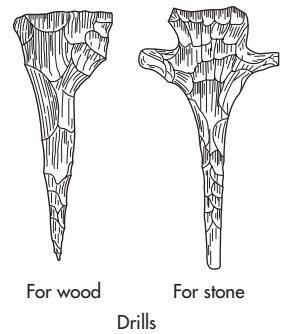
**Dryas:** a series of cold climatic phases in northwestern Europe, during a time when the North Atlantic was in almost full glacial condition. Dryas I was c. 16,000–14,000 bp, Dryas II (Older Dryas) was c. 12,300–11,800 bp, and Dryas III (Younger Dryas) was c. 11,000–10,000 bp. It is named after a tundra plant. The increasing temperature after the late Dryas period during the Pre-Boreal and the Boreal (c. 8000–5500 BC, according to radiocarbon dating) caused a remarkable change in late glacial flora and fauna.

**dugout canoe:** a simple canoe made from a single tree hollowed out by burning or chopping.

**dunting:** cracking that occurs in a fired ware as a result of thermal stresses; cracking that occurs if a ware is cooled too rapidly or that appears on refiring bisque ware through 400–600°C, with the expansion of quartz.

**duo-notch:** point with a double set of notches.

**duplex head nail:** a nail with an upper head projecting for removal, used for temporary work.



**dyad:** a pair of statues, often carved from the same block of material, either representing a man and his wife or depicting two versions of the same person. [pair-statue]

**Dynastic period:** a period of ancient Egypt's history tied to a framework of 30 dynasties (ruling houses) of kings, or pharaohs, who ruled from the time of the country's unification into a single kingdom in c. 3100 BC until its conquest by Alexander the Great in 332 BC. The two Predynastic kingdoms of Upper and Lower Egypt were united by the legendary king Menes, possibly to be identified with the historical King Narmer. The Dynastic period was followed by a Greek period when the country was ruled by the Ptolemys, descendants of Alexander the Great's general. The Ptolemaic period and Egypt's independence were brought to an end in 30 BC when Queen Cleopatra VII died and the country was absorbed into the Roman Empire. The political history, largely derived from written sources, has a detailed and, for the most part, precise chronology. From the 21st dynasty onwards, Egypt's cohesion broke, and from the 11th to 7th centuries BC Libyan, Asian, and Nubian contenders vied with Egyptians for control of the state. The divine ruler, the pharaoh, was ultimately responsible for the complex bureaucracy and was also the figurehead of the official religion, the personification of the sun god Ra, counterpart of Osiris, the god of the land of the dead. Because of their belief in the afterlife, the royal tombs of the pharaohs in particular reflect the great wealth and concentration of resources at the pharaoh's disposal. Much of our information about ancient Egyptian history comes from the records that were carefully maintained by the Egyptians themselves, notably by the priests who were regarded as the guardians of the state's accumulated wisdom.



# E

**ear:** pointed or rounded projections from the base or hafting area of certain projectile points.

**ear flare:** a large circular elaborate ear spool, flared like the bell of a trumpet, often made of jade. [ear-flare; eared (adj.)]

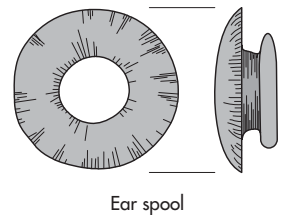
**ear spool:** an ornament worn in the ear lobe, sometimes of such weight that the ear might be stretched to the shoulder.

**Earlier Stone Age:** first stage of the Stone Age in sub-Saharan Africa, dating from more than 2.5 million years ago to c. 150,000 years ago. The earliest artifacts are representative of the Oldowan Industrial Complex, which was succeeded by the Acheulian Industrial Complex between c. 1.5 million and 150,000 years ago.

**Early Archaic percussion pressure flaking:** a type of flaking in which the preform was shaped by percussion flaking. The blade edges were ground to prepare a surface for the removal of elongate pressure flakes. The pressure flaking may have taken the form of alternate uniface bevel flaking, biface serration flaking, alternate biface bevel flaking, or irregular pressure flaking.

**Early Bronze Age:** a period in the Levant dating to c. 3200–1950 BC, just before Egypt's Archaic period. Increasing urbanization was shown by the building of walled towns.

**Early Dynastic period:** a chronological phase in southern Mesopotamia between c. 2900 and 2330 BC, ending with the founding of the dynasty of Akkad. It was also known as the Pre-Sargonid period. The Sumerian city states flourished under their separate dynastic rulers – Ur, Umma, Kish, and Lagash. The period is 3100–2450 BC on what is called the “high chronology” (the other being the “medium chronology”). The term itself is derived from the Sumerian “king list” which implies that Sumer was ruled by kings at this stage, although archaeological



evidence for the existence of kingship is meager before the middle of the period. Traditionally, it is divided by archaeologists into three subdivisions – ED I, II, and III – each of approximately 200 years' duration. The royal tombs of Ur belong to the ED III period. The Early Dynastic phase shows clear continuity from the preceding Jemdet Nasr, and represents a period of rapid political, cultural, and artistic development. Within the period, the pictographic writing of the earlier period developed into the standardized cuneiform script. This period represents the earliest conjunction of archaeological and written evidence for the history of southern Mesopotamia.

**Early Horizon:** a period during which the Chavín culture flourished in the central Andes of South America and was integrated into the northern highlands and coastal region of Peru, c. 900–1 BC (also said to be c. 1200–300 BC). It is one of a seven-period chronological construction used in Peruvian archaeology. It coincides with the duration of the Chavín style and its derivatives, such as Cupisnique. Following this, there was regional differentiation culminating in the complex cultures of the Early Intermediate Period.

**Early Intermediate Period:** a period of development of distinctive regional cultures in the central Andes of South America, c. AD 1–600 (also said to be c. AD 300–600). The period was characterized by nationalism, a full population, the first large-scale irrigation works in coastal valleys, interregional warfare, construction of forts, craft specialization, social class distinctions, and the rise of the first great Peruvian cities. Two of the better-known cultures are the Moche and Nasca civilizations. The Middle Horizon emerged from these expansions.

**Early Later Stone Age:** an informal designation for the microlithic late Pleistocene Stone Age industry of some sites in South Africa. One such site is Border Cave, characterized by small backed pieces, bone points, ostrich eggshell beads, and incised bone and wood.

**Early Lithic:** a term applied to the earliest stage in New World history, when man first appeared and started hunting and gathering. The period is characterized by large projectile points and percussion-chipped stone tools suitable for the slaughter and butchering of big game.

**early-stage biface:** a biface in the initial step of manufacture, usually with sinuous edges and simple surface topography.

**earthenware:** ceramics fired at temperatures high enough for vitrification to begin, usually 900–1200°C. It is glazed or unglazed nonvitreous ceramic material, usually low-fired, porous, and permeable.

**east Greek pottery:** a type of pottery produced during the Archaic period within the Greek islands and on the western coast of Turkey at Chios, Samos, Ephesus, Miletus, Clazomenae, and Rhodes.

**East Midlands burnished ware:** type of Roman pottery, gray–brown bowls and jars, dating to the 3rd and 4th centuries AD and found mainly in the northeast midlands of England.

**east Spanish rock art:** an art style of southeastern Spain, found on the walls of shallow rock shelters and probably of the Mesolithic period. The subjects are lively scenes from everyday life, with warriors, hunters, dancers, and animals. The style is unlike that of cave art, the figures being small and painted in solid colors with no attempt at light and shade.

**Eastgate point:** type of projectile c. AD 500 during the late Archaic stage in the Great Basin and western interior of North America.

**Ebbsfleet:** a small valley in southern England with an important series of loams and gravels spanning the last two glacial periods and intervening interglacial. Stone tools found have included Levallois flakes, but only a few hand axes and other tool types were found. The area has also given its name to a decorated pottery style of the Neolithic period. The first Jutes, Hengist and Horsa, landed at Ebbsfleet in the Isle of Thanet in AD 449.

**Ebbsfleet ware:** a family of elaborately decorated Neolithic ceramics found in southern and eastern parts of the British Isles. Dating to the period 3000–2000 BC, Peterborough wares were divided into three successive styles – Ebbsfleet, Mortlake, and Fengate – on the basis of their occurrence in the ditch fills at Windmill Hill. It is now recognized that these three groups overlap rather more than originally thought, and that they are best seen as part of the broad group of impressed wares found over much of northern Europe in the 3rd millennium BC. The decoration on Peterborough ware consists of pits, “maggot impressions” made by impressing tightly rolled cord, and the impressions made by pressing the ends of bird bones into the soft clay before firing. Some of the later vessels are the first in Britain to be made with flat bases. [Peterborough ware]

**ecofact:** nonartifactual remains found in archaeological sites, such as bones, plant pollen, and seeds.

**Eden point:** Eden points are known for their exceptionally well done, parallel pressure flaking and diamond cross-section. The people that made them were hunting large animals like bison. Eden points were first discovered in Yuma County, Colorado blow-outs during the 1930s but none were found *in situ* until the spring of 1940 when Harold J. Cook spent several days digging in a site discovered by O. M. Finley. The Eden point was named by H. M. Wormington after the town of Eden, Wyoming. The Eden type site was named the Finley site in honor of O. M. Finley who discovered it.

**edge:** outside limit of a stone tool; outside limit of an object, area, or surface.



Eden point  
(Paleo)

**edge angle:** angle of the cutting edge of a stone (or other material) tool.

The edge angle often indicates the purpose for which the tool was used.

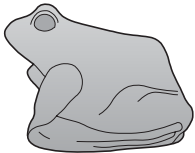
Edge-wear analysis is the microscopic examination of the working edges of tools. [edge-angle]

**edge damage:** result of use-wear on flint; damage showing where a tool was used.

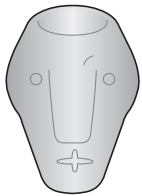
**edge-ground stone tool:** a tool classification of Pleistocene northern Australia and New Guinea and Southeast Asia that comprises hatchets, flakes, and other tools. Important sites include Nawamoy, Malangangerr, Arnhem Land, Cape York, and New Guinea Highlands. Edge-ground tools do not appear until the Late Holocene elsewhere in Australia; they are completely absent from Tasmania. In Southeast Asia, they comprise flaked stone tools which are sharpened by grinding or polishing the cutting edge only. They existed in the Bacsonian and Hoabhinian periods.

**edge-modified flake:** a flake with evidence of modification along one or more edges, whether by natural forces, human use, or bag wear.

**Eemian:** last interglacial of northern Europe, after the Saalian and before the Weichsel glaciation, from c. 125,000 to 115,000 BP. This group of Quaternary interglacial deposits are found right across Europe from the Netherlands to Russia and contain fossils that indicate warm conditions. In the Netherlands and northern Germany, the rising sea level caused the deposition of Eemian marine sediments. Evidence from bore holes indicates that the Eemian may represent two or even three interglacial stages. Levalloisian and Mousterian artifacts are found in Eemina deposits. The Riss-Würm in Alpine regions, the Sangamon in North America, and the Ipswichian in Britain are its equivalents.



**effigy:** an image or representation, usually depicting people or animals, often made of pottery or stone – such as a ceramic vessel. Such vessels were typical artifacts of the Mississippian period in North America, c. AD 75–1540. [effigy vessel]



Effigies

**effigy pipe:** small pipes carved in one piece from stone and then polished, representing birds, fish, and other animals, particularly from the Hopewell culture of the eastern woodlands of the United States during 300 BC to AD 200. In other areas and periods of the US, larger stone effigy pipes were carved in a variety of zoomorphic and human forms, such as the human effigy pipes of Adena Mound, Ohio.

**eggshell ware:** small, delicate beakers, bowls, or jars, usually in white or cream, but occasionally black. The name refers to the sides of the vessels, which are typically 2 mm or less thick. Imported to Britain in the 1st century AD and imitated locally. [eggshell glaze]

**electroplating:** a method of plating one metal with another by electrodeposition. The articles to be plated are made the cathode of an

electrolytic cell and a rod or bar of the plating metal is made the anode. Electroplating is used for covering metal with a decorative, more expensive, or corrosion-resistant layer of another metal.

**element:** smallest component of a design that is regarded as a single unit.

**Elers ware:** unglazed, smooth-surfaced, red stoneware attributed to David and John Elers.

**Elko point:** large, roughly triangular-shaped chipped stone points with concave, straight, or slightly concave bases either with corner notches or “ears” on the base. They are dated to 1300 BC to AD 700, the desert Archaic stage in Great Basin and western North America.

**elm decline:** a phase in the history of northern European vegetation recognized through pollen analysis and dated by radiocarbon as c. 4000 BC. It marked a sudden and marked decline in elm pollen in contrast to other tree pollens. In some areas it was accompanied by a drop in frost-sensitive species such as ivy and mistletoe, while in many others it coincided with the appearance of plants associated with human settlements (plantain and nettles). It is now attributed to disease from beetles causing Dutch elm disease, though other explanations for the decline include climatic change and human interference.

**elouera:** a backed flake with triangular sections, like orange segments, which have polish from worked wood along the straight edge. These artifacts are part of the Australian Small Tool tradition.

**Elster/Elsterian:** a north European Middle Pleistocene cold stage with at least one glacial advance. It began c. 450,000–400,000 BP and ended c. 300,000 BP with the Holsteinian interglacial. The British equivalent is the Anglian cold stage; the Alpine equivalent is the Mindel; and the North American equivalent is the Kansas.

**emblem glyph:** symbols standing for royal lineages and their domains in the Maya civilization; a Maya glyph identifying a place or polity. Each of the principal Maya cities had its own hieroglyph, which appears in inscriptions of all kinds. All such emblem glyphs share the same prefix, but the main element varies from one city to another. Many of these glyphs can now be linked to specific sites; others have still to be identified. They were first discovered in 1958.

**emblema:** a center panel with figure representations of people, animals, or scenes in relief in a Hellenistic or Roman mosaic. Emblemata were usually executed in opus vermiculatum, very fine work with tiny tesserae (stone, ceramic glass, or other hard cubes), and surrounded by floral or geometric designs in coarser mosaic work. Although some emblemata were large scenes with several figures, most were small and portable. They were also used to decorate the inside of bowls, attached by solder. The first known emblema dates from about 200 BC. [emblemata (pl.)]

**emblematic style:** stylistic variation that has a distinct symbolic referent, such as a logo.

**embossing:** raising of portions of a ceramic piece to form decorative or functional patterns.

**enamel:** a comparatively soft glass, a compound of flint or sand, red lead, and soda or potash. The materials are melted together, producing an almost clear glass, with a slightly bluish or greenish tinge (flux or frit). The degree of hardness of the flux depends on the proportions of the components in the mix. Enamels are called hard when the temperature required to fuse them is very high and it will not decompose as soft enamel would. Soft enamels require less heat to fire them and consequently are more convenient to use, but they do not wear as well. Enamel was first used in the Bronze and Iron Ages. It was often melted and united with gold, silver, copper, bronze, and other metals in a furnace. Enamel is colored white by oxide of tin, blue by oxide of cobalt, red by gold, and green by copper. Different kinds of enamel are: (1) inlaid or incusted; (2) transparent, showing designs on the metal under it; or (3) painted as a complete picture. The various techniques practiced by craftsmen in the past differ mainly in the methods employed in preparing the metal to receive the powdered enamel. Some of those methods are cloisonné, champlevé, encrusted enameling, and painted enamels.

**enameling:** process of applying enamel to something. [enamelling]

**encaustic:** an ancient method of painting, recorded by Pliny, of fixing pigments with heated wax. It was probably first practiced in Egypt about 3000 BC and is thought to have reached its peak in Classical Greece, although no examples from that period survive. Pigments, mixed with melted beeswax, were brushed onto stone or plaster, smoothed with a metal spatula, and then blended and driven into the wall with a heated iron. The surface was later polished with a cloth. It was particularly used for the Fayum mummy portraits of Roman Egypt. Leonardo da Vinci and others attempted unsuccessfully to revive the technique. North American Indians used an encaustic method whereby pigments mixed with hot animal fat were pressed into a design engraved on smoothed buffalo hide. From the Greek for "burnt in."

**encrusted urn:** a style of British pottery of the first half of the 2nd millennium BC, with a bucket-shaped profile and thick, coarse fabric and heavy decoration in horizontal and vertical bands around the upper body.

**end scraper:** a stone tool formed by chipping the end of a flake of stone which can then be used to scrape animal hides and wood. Its steeply angled (acute) working edge was used for flensing or softening hides and to dress skins. It appeared in Europe during the Upper Paleolithic period. It differed from side scrapers in that it had a rounded retouched

end and was often made on a blade. A side scraper had a retouched working edge along the long edge of the flake. [endscraper, grattoir]

**endblade:** a small blade tool, often bipped and used to tip bone and antler arrowheads. Triangular endblades were probably used to tip harpoon heads.

**Neolithic:** a period in the Near East and southeastern Europe when copper metallurgy was being adopted by Neolithic cultures, in the 4th and 3rd millennia BC. The period is called the Chalcolithic in the Near East and the Copper Age in other areas.

**engobe:** a slip coating applied to a ceramic body before glazing to impart a desired color or smooth texture to the surface. [slip]

**engrave:** to carve, cut, or etch into a material or surface.

**engraving:** a technique for decorating ceramics that involves cutting linear designs into the surface of an object. [incising]

**enumeration:** process of counting how many objects belong in each class of a nominal scale.

**envelope:** a hollow clay ball of spherical, ovoid, or oblong shape holding tokens and usually bearing seal impressions. Clay envelopes dating from 3500 BC have markings that correspond to the clay shapes inside. Moreover, these markings are more or less similar to the shapes drawn on clay tablets that date back to about 3100 BC. These markings are thought to constitute a logographic form of writing consisting of some 1200 different characters representing numerals, names, and such material objects as cloth and cow. Tokens placed in an envelope might have constituted a sort of bill of lading or a record of indebtedness. To serve as a reminder of the contents of the envelope, so that every reader would not need to break open the envelope to read the contents, corresponding shapes were impressed upon the envelope. But if the content was marked on the envelope, there was no need to put the tokens in an envelope at all; the envelope could be flattened into a convenient surface and the shapes impressed on it. Now that there was no need for the tokens at all, their message was simply inscribed into the clay. These shapes, drawn in the wet clay with a reed stylus or pointed stick, constituted the first writing.

**Eocene:** a major geological epoch of the Earth's history – the second division of the Tertiary period (Cenozoic era) that began about 57.8 million years ago and ended about 36.6 million years ago (mya). It follows the Paleocene epoch and precedes the Oligocene epoch. The Eocene is often divided into Early (57.8–52 mya), Middle (52–43.6 mya), and Late (43.6–36.6 mya) epochs. The name Eocene is derived from the Greek *eos* (“dawn”) and refers to the dawn of recent life. During the Eocene, all the major divisions, or orders, of modern mammals appeared.

**eolith:** any naturally shaped or broken stone, once considered to be the oldest artifacts of early man. They consist of crudely chipped flakes and cores from pre-Pleistocene or very early Pleistocene deposits. It is now accepted that eoliths were not made by humans but were chipped by natural agencies as far back as 500,000 years BC. Most eoliths were frost-split chunks with irregular chipping round the edge. Eolithic is a term sometimes used by archaeologists for the earliest stage of human culture before the Paleolithic, characterized by very primitive stone tools, especially of flint. It means “dawn of the Stone Age.” [dawn stone]

**Epicardial:** an Early Neolithic pottery style of c. 5300–4600 BC which was developed from the Cardial style in southern France. The decoration is incised.

**epichysis:** a Greek or Roman wine pot or vessel with a long neck and handle, used for pouring wine into cups.

**epigraphy:** the study of inscriptions.

**epiphysis:** articulating end of a long bone or vertebra; in an adult these ends are fused with the shaft or main part of the bone, but they occur as separate bony masses in the early years of life. For both human and animal bones therefore, the state of fusion of the epiphyses can be used to determine the age of the skeleton if it is under 20 years old (human) or 3–4 years (domestic animals). [epiphyses (pl.)]

**erraillure scar:** small flake scar on the dorsal side of a flake next to the platform. It is the result of the rebounding force during percussion flaking. [erraillure]

**Erbenheim sword:** heavy bronze, flange-hilted sword with a leaf-shaped blade, from the early urnfield traditions of central Europe.

**escutcheon:** small metal ornamental plate or badge forming an emblem or cover plate attached to a larger object or structure.

**etched carnelian bead:** beads with an etched decoration created with heat after a design in an alkali or metallic oxide paste has been painted. It was developed by the late Harappan period in southern Asia and continues to be used. [carnelian bead]

**etching:** art of engraving with acid on metal; also the print taken from the metal plate so engraved. In hard-ground etching the plate, usually of copper or zinc, is given a thin coating or ground of acid-resistant resin.

**Etruscan pottery:** pottery produced at various centers in Etruria, especially during the Archaic and Classical periods. Although plain wares were particularly common (Bucchero, Impasto), figure-decorated pottery was also produced (Caeretan ware, Pontic ware).

**everted rim:** a rim that turns sharply outwards and upwards from the shoulder of the vessel.

**ewer:** a large jug or pitcher with a wide mouth.



- excision:** removal by cutting; the act or procedure of removing by, or as if by, cutting out. [excised, excising (adj.)]
- excurvate:** a shape that bulges out in a graceful smooth convex curve; a term used to describe a convex blade edge or basal edge or stem.
- execration text:** curses written on clay figurines, statuettes, or pottery jars/vessels, listing the names of the enemies of Egypt – places, groups of people, or individuals regarded as hostile or evil. These texts were ritually smashed and then buried as part of a magical process of triumphing over the persons or places listed.
- expanded notch:** a notch type which is composed of two notches in close proximity that leave a nipple as a remnant. [double notch, “E” notch]
- expanding:** in lithics, referring to the width of a stem or point that is getting larger or wider.
- expedient tool:** any tool formed quickly and for immediate use, often made with a flake.
- extrinsic attribute:** any attribute of an object that is not inherent in the object – its context in time, space, function, society, and the psychological state in which the object was found, made, used, seen, or discarded.

# F

**fabatarium:** a large Roman earthenware vessel in which bean flour (puls fabacia) was served, boiled with water or broth and forming a kind of polenta.

**fabric:** material of which pottery is composed; the body of processed clay and temper additives in ceramics.

**fabricator:** a flint implement or piece of stone or bone used in the manufacture of other flint tools. Often rod-shaped and worn heavily on one end, it is used to chip flakes from a stone core.

**face:** broader area of a tool or projectile between the edges. This area could include the blade and hafting area.

**face urn:** a jar, often funerary, with a human face usually in appliqué on the shoulder; also flagons with faces molded on the neck.

**facing:** an ornamental coating.

**factorium:** a vessel containing exactly a factum, or quantity of grapes or olives to be placed under the press (torcular) in one making.

**faience:** 1. A name used for the medieval pottery of Faenza in northern Italy, one of the chief seats of the ceramics industry in the 16th century; it was an early type of majolica. 2. It is also used for the tin-glazed earthenware made in France, Germany, Spain, and Scandinavia as distinguished from Faenza majolica, and that made in the Netherlands and England, which is called delft. 3. Most accurately, it is the primitive form of glass developed in Mesopotamia in the 3rd millennium BC and then, almost as early, in Egypt; it is sometimes called Egyptian faience. It is a substance composed of a sand and clay mixture baked to a temperature at which the surface begins to fuse to a bluish or greenish glass. It was colored with copper salts to produce a blue-green finish and used especially for beads and figurines, particularly in the second millennium BC. Its main use in the Bronze Age was for beads,

seals, figurines, and similar small objects. The glazed material could be comprised of a base of either carved steatite (soapstone) or molded clay with a core of crushed quartz (or quartz and soda-lime) fired so that the surface fuses into a glassy coating. Examples occur also in Bronze Age contexts in Europe, including the Wessex culture.

**false relief:** a form of excised or impressed decoration on pottery in which two rows of inward pointing triangles are cut from, or impressed on, the pot surface. The zigzag running between them then appears to be in relief, though it is actually no higher than the surface of the pot.

**fardo:** in Peruvian archaeology, the package formed by a human mummy wrapped together with various funerary offerings (amulets, etc.), usually in several yards of material. Often a false head of wood or straw or a metal mask was fixed to the top of a fardo.

**Farnham pottery:** major Romano-British pottery industry based around Farnham in Surrey, England, producing a wide range of wares between the mid 1st century AD and the 4th century AD. Gray and cream-colored fabrics predominated. [Alice Holt ware]

**fastening:** a device that closes or secures something.

**feather termination:** a gradual thinning of a lithic flake at the distal end to an extremely sharp point or edge. [feather-edged flaking, feather fracture; feathered (adj.)]

**feathering:** an effect obtained by trailing a feather through wet slip decoration in pottery-making.

**feature:** a nonmovable/nonportable element of an archaeological site carries evidence of human activity. It is any separate archaeological unit that is not recorded as a structure, a layer, or an isolated artifact; a wall, hearth, storage pit, or burial area are examples of features.

**fecundity figure:** a type of offering bearer depicted on Egyptian temple walls which is mostly seen as a personification of geographic areas, the inundation, or abstract concepts. The male figures have heavy pendulous breasts and bulging stomachs, their fatness symbolizing the abundance they bring with them.

**Federmesser:** a small backed blade, about the size and shape of a penknife blade; these blades were the most distinctive artifacts of the Final Glacial peoples of the north European plain during the Allerød oscillation (c. 9850–8850 BC). Similar bladelets occurred in the related Creswellian culture of Britain and the blades are very similar to the Azilian point. They are backed blades tapering to a point, and were probably used as arrowheads. They tend to have curved or angled backs unlike the earlier Gravette points.

**feel:** in pottery, feel is described as harsh (feels abrasive to the finger), rough (irregularities can be felt), or smooth (no irregularities can be

felt); it can also be described as soapy or powdery, referring to a surface in its basic state.

**feldspar:** a crystalline mineral consisting of aluminum silicates and potassium, sodium, calcium, or barium.

**Fengate ware:** a family of elaborately decorated Neolithic ceramics found in southern and eastern parts of the British Isles. Dating to the period 3000–2000 BC, Isobel Smith divided Peterborough wares into three successive styles – Ebbsfleet, Mortlake, and Fengate – on the basis of their occurrence in the ditch fills at Windmill Hill. It is now recognized that these three groups overlap rather more than originally thought, and that they are best seen as part of the broad group of impressed wares found over much of northern Europe in the 3rd millennium BC. The decoration on Peterborough ware consists of pits, “maggot impressions” made by impressing tightly rolled cord, and the impressions made by pressing the ends of bird bones into the soft clay before firing. Some of the later vessels are the first in Britain to be made with flat bases. [Peterborough ware]

**fetish:** an inanimate object associated with a spiritual being or magical powers and worshipped by early peoples. A fetish differs from an idol in that it is worshipped in its own character, not as the image or symbol of a deity.

**fetter:** a shackle for the feet.

**fettle:** to trim rough edges, casting or mold marks, or other imperfections from dry or leather-hard ware before firing.

**fiber-tempered pottery:** any clay pottery to which grass or root fibers have been added as a tempering material. This ware is the earliest pottery in Caribbean South America and is the oldest pottery in the United States, making its appearance in Archaic shell mounds in Georgia and Florida before 2500 BC. [fiber tempering]

**fibula:** in antiquity, a clasp, buckle, or brooch of various designs, usually shaped like a modern safety pin. It was often used for fastening a draped garment such as a toga or cloak, and was made of bronze, gold, silver, ivory, etc. It consisted of a bow, pin, and catch. It is the Latin word for brooch, and is so-named for the outer of two bones of the lower leg or hindlimb, which together with the tibia resemble an ancient brooch. The earliest examples date to around 1300 BC. There are two main families of fibulae. In the south they were made in one piece, starting with the Peschiera or violin bow form in northern Italy and Mycenaean Greece. From this developed the arc fibula north of the Mediterranean and the harp and spectacle fibulae in the eastern Alps in the years around 1000 BC. From the Certosa form was derived the long series of La Tène Iron Age varieties. Even wider variation is found among the succeeding Roman fibulae, leading on to the final

forms in the Saxon and Migration periods. Around the same time, there was an apparently independent development in northern Europe of the two-piece variety. Fibula types include: violin bow, arc, elbowed, serpentine, dragon, harp, disk with “elastic bow,” leech, boat, two-piece fibula, spiral, La Tène I, and La Tène III. Fibula terms include: catchplate, pin, spring, bow, stilt, elongated catchplate, disk catchplate, and knobbed (Certosa) catchplate. Although primarily functional, fibulae were often also highly decorated items of personal adornment, sometimes inlaid with glass and precious stones. An enormous number of different types of fibulae were made and they can often be a useful guide to dating. [fibulae, fibulas (pl.)]

**ficron:** a long pointed, roughly worked biface with slightly concave sides and a detailed tip. It may have preceded the Micoquian biface.

**field specimen:** an artifact found during fieldwork. [FS]

**figurine:** a small carved or sculpted figure of a human or animal, usually of clay, stone, wood, or a metal. A figurine’s purpose is often religious, either as an object of worship itself or as a votive offering to a god. They were made in prehistoric Europe from the Upper Paleolithic onwards, though they became less common in the Bronze Age.

**Fikellura ware:** an Archaic east Greek black-figure pottery style. It has been found in the Fikellura cemetery on Rhodes; the source of the clay was Miletus.

**file:** a tool, usually metal, with roughened surfaces in the form of very small teeth.

**filigree:** a technique of decorating jewelry with gold, silver, or electrum soldered onto metalwork. It consists of creating a fine open metalwork pattern out of wire, which is soldered together and to the main body of the piece. The wire can be plain or decorative. For goldwork, the solder is normally a gold–copper alloy (82% gold, 18% copper), which has a lower melting point than pure gold. The word is derived from the Italian *filigrana* which is “filum” and “granum” or “granular network.” It was first developed in the Near East and was often used in combination with granulation. The technique had been mastered by the Early Dynastic Sumerian craftsmen of the 3rd millennium BC, and fine jewelry decorated in this way appears in the royal tombs of Ur. Anglo-Saxon and Germanic metalworkers greatly developed the technique. [filagree, filigraine]

**filler:** a powdered or ground substance added to a paint or sculpture material to give extra bulk or body. Fillers for resin also make the material opaque.

**Final Neolithic:** a transition phase where copper and bronze came into use, but stone was still the most important.

- find:** an act or instance of discovering archaeological remains, the remains discovered, or the location where this discovery occurs.
- find number:** a number assigned to any object found in stratified contexts, indicating the unit of stratification in which they were found.
- Fine Orange pottery:** a high-quality orange ware, often decorated with incised, molded, or black-painted patterns; a late Classic (and post-Classic) pottery type of the lowland Maya area of Mesoamerica. Found at sites under the influence of Teotihuacán, it comes from the Tabasco-Campeche region (Usumacinta drainage). [Fine Orange ware]
- fineware:** superior pottery with fine textured fabric, thin walls, possibly decorative, and usually tableware or for personal use.
- finial:** an ornament at the top of a gable, canopy, pinnacle, or similar on a building or structure, usually of stone or ceramic.
- finishing nail:** a nail used on trims and cabinetwork where nail heads must be concealed.
- finishing technique:** a method for altering the surface characteristics of vessels by displacing or impressing the surface material or by applying or removing material. [finish work]
- fire brick:** a brick made of clay that is difficult to fuse, used in boilers and fireplaces.
- fire hardening:** exposure of a wooden implement to fire in order to dry out the wood but not char it. The tool becomes harder and more useful.
- fire hearth:** a flat piece of wood upon which a stick (drill) is twisted vigorously to start a fire.
- fire mark:** a wall plate used by insurance companies to identify insured property.
- fire-affected:** of stone, showing the effects of having been heated, as in cooking. [fire-cracked]
- firebox:** combustion chamber of a kiln, typically beneath the ware chamber.
- fireclay:** a heat-resistant clay.
- firecloud:** a darkened area on a vessel's surface resulting from uneven firing and the deposit of carbon in the pores during firing, characteristic of firings in which fuel and vessels are in immediate proximity.
- fire-cracked rock:** rocks that have been cracked or broken by the heat of a fire. A common element in aboriginal campsite debris. [fire-broken rock]
- fired clay:** any clay to which heat is applied.
- fire-dog:** an instrument consisting of an iron bar held horizontally at one end by an upright support, used to ensure the proper burning of a fire. A pair of these were put at each side of the hearth or fireplace to support burning wood; the end of a log could rest on the crosspiece, which was supported by two uprights. Decorative iron

examples come from La Tène Iron Age contexts, mostly in graves. In a kitchen fireplace, the upright support might hold a rack in front for the spit to turn in. [andiron, fire dog]

**firestarter:** a wood tool having a base with drilled holes and a stick that is rubbed through the holes in the base to produce enough friction to give a spark. [firestarter kit]

**firing:** process of heating raw ceramics to a high temperature, driving all the water out of the paste and (depending on the composition of the paste and tempering) causing new chemical bonds to form within the paste.

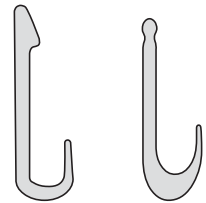
**First Intermediate Period:** chronological phase (c. 2130–1938 BC) between the Old Kingdom (2575–2130 BC) and the Middle Kingdom (1938–1600 BC), which appears to have been a time of relative political disunity and instability. The period includes the 9th dynasty (c. 2130–2080 BC), 10th dynasty (c. 2080–1970 BC), and 11th dynasty (c. 2081–1938 BC). (The period corresponds to Manetho's 7th to 10th dynasties and the early part of the 11th dynasty.) After the end of the 8th dynasty, the throne passed to kings from Heracleopolis, who made their native city the capital. Major themes of inscriptions of the period are the provision of food supplies for people in times of famine and the promotion of irrigation works. In the 10th dynasty, a period of generalized conflict focused on twin dynasties at Thebes and Heracleopolis. The 11th dynasty made Thebes its capital. In the First Intermediate Period, monuments were erected by a larger section of the population and, in the absence of central control, internal dissent and conflicts of authority became visible in public records. Non-royal individuals took over some of the privileges of royalty, notably identification with Osiris in the hereafter and the use of the Pyramid Texts. These were incorporated into a more extensive corpus inscribed on coffins – the Coffin Texts – and continued to be inscribed during the Middle Kingdom.

**fish hook:** artifact of two basic types: the bait hook and lure hook. Varied in form throughout the Pacific, they are made of bone, shell, tortoise shell, or wood. [fishhook]

**fish tail point:** a fluted and stemmed, fishlike stone tool of South America, dating to c. 11,000–8000 BC. The complex has some similarities to the Clovis of North America and is representative of the Paleoindian time in South America.

**fit:** dimensional adjustment of a glaze (or slip) to a clay body, specifically with reference to their respective thermal expansions and contractions and resultant stresses, which may cause flaws in the coating. [glaze fit]

**Five Dynasties period:** in Chinese history, the period of time between the fall of the T'ang dynasty (AD 907) and the founding of the Sung (Song) dynasty (AD 960), when five would-be dynasties followed one



Bone



Haliotis shell

Fishhooks

another in quick succession in north China. The era coincides with the Ten Kingdoms – the 10 regimes that dominated separate regions of south China – during the same period.

**flag:** a piece of fabric with a design, used as an emblem for military or naval purposes, signaling, decoration, display, propaganda, etc.

**flagon:** a large metal or pottery vessel with a handle and spout; used to hold alcoholic beverages (usually wine).

**flake:** a thin broad piece of stone detached from a larger mass for use as a tool; a piece of stone removed from a larger piece (core or nucleus) during knapping (percussion or pressure) and used in prehistoric times as a cutting instrument. Also, any casual cutting implement typically consisting of large pieces of debitage detached from a core, not “formed” tools. Flakes often served as blanks from which more complex artifacts – burins, scrapers, graters, arrowheads, etc. – could be made. Waste flakes (debitage) are those discarded during the manufacture of a tool. Flakes may be retouched to make a flake tool or used unmodified. The process leaves characteristic marks on both the core and flake which makes it comparatively easy to distinguish human workmanship from natural accident. [flake tool, flaked stone tool]

**flake blade:** an imprecisely defined, elongated, flaked stone artifact with dorsal ridges associated with sub-Saharan African Middle Stone Age collections. Unlike true blades, flake blades do not necessarily have parallel sides, nor are they necessarily at least twice as long as they are wide. They were usually end-struck-off cores, frequently tapering to a point to form artifacts termed convergent or pointed flake blades, and often with faceted platforms. Some examples were retouched to form knives or denticulate or notched tools. [flake-blade]

**flake scar:** a mark or trace on a stone showing the point of attachment of a flake that has been removed; the point where a flake has been chipped off in the making of a tool. [flake bed]

**flake scatter:** a quantity of stone flakes loosely discarded during tool-making, often found in a semicircle pattern where work was done.

**flaked stone:** any object made by one of the various percussion or pressure techniques of stone tool technology. Tools produced by the removal of flakes (or chips, commonly referred to as debitage) from the stone to create a sharp surface. Projectile points, bifaces, unifaces, and cores are common flaked stone artifact types. [chipped stone, flaked stone artifact]

**flaker:** any pressure-flaking tool, often made from bone or antler, used to detach flakes in stone material in knapping; an implement for flaking flint.

**flaking:** process of making stone tools by removing flakes from a larger mass, by percussion or pressure from another tool. Percussion flaking is done by striking the stone to be chipped with another stone or bone.



Pressure flaking is done by pressing a blunt-pointed tool of antler or bone against the edge to be worked. Flaking is feasible with materials that are glassy in nature and fracture evenly (such as obsidian or flint); it is not feasible with materials such as granite or sandstone which, in general, are ground.

**flaking tool:** a tool, such as an antler billet, or antler drift, that was used in removing flakes during the manufacture of a flaked-stone projectile, tool, blade, or artifact. [flaker]

**flan:** a metal disk before it is stamped to become a coin.

**Flandrian:** of or pertaining to the period since the retreat of the ice sheet and the rise of sea level at the end of the last glaciation in northwestern Europe. The Flandrian can be dated by radiocarbon and ranges from 10,000 bp (the end of the Devensian) up to the present day. These deposits represent the latest Quaternary interglacial stage, equivalent to the Holocene epoch. The Flandrian includes sediments similar to those of previous interglacials, and deposits on archaeological sites contain Mesolithic, Neolithic, Bronze Age, Iron Age, Roman, Dark Age, medieval, and more recent artifacts.

**flange:** transverse flattening of an edge – making a projecting flat rim, collar, or rib on an artifact. It was used to strengthen an object, to guide it, to keep it in place, or allow its attachment to another object. The external ledge of a pottery bowl is often termed this.

**flanged ax:** an Early to Middle Bronze Age style of flat copper or bronze ax that has the side edges of both faces bent out to form flanges that secure the haft in place and reduce the lateral movement of the haft when the ax is being used. [flanged axe, flanged axhead]

**flared:** having a gradual increase in width.

**flashing:** thin rough-edged projections on a casting made from a piece mold from which the cast metal has seeped or forced its way into seams, joins, or cracks in the mold. On the exterior of a cast these are generally sawn off and filed down.

**flask:** a narrow-mouthed jar without handles.

**flat axhead:** an axhead of Early Bronze Age date, made of copper or bronze, which is flat on both sides and generally lacks side flanges or other hafting aids. [flat axehead]

**flat flaking:** removal of thin flakes by striking the artifact at a small angle to the plane of the face.

**flat rimmed ware:** a type of Late Bronze Age pottery of the northern British Isles with a coarse fabric, generally dark color, and distinctive unornamented flat-topped rims.

**Flavian:** period of rule of the Roman emperors Vespasian (69–79 AD), Titus (79–81 AD), and Domitian (81–96 AD), who were members of the Flavia gens.

**Flemish black ware:** a type of later medieval pottery known from paintings of the Renaissance period. Some of the wares were well decorated but most Flemish wares were coarse black wares with pinched bases.

They emerged from a Roman tradition of pottery making in Flanders.

**flesh hook:** a many-pronged fork used in the sacrificial services or a type of implement found in Late Bronze Age and Iron Age contexts in Europe, often associated with bronze buckets and cauldrons.

**flesher:** a tool used for fleshing hides. In antiquity, it was often a long, broad-edged tool of bone, antler, or stone used to scrape or rub hides free of fat, sinew, hair, and other unwanted matter.

**fletching:** pieces of feather attached to the end of an arrow or dart to stabilize flight.

**flexible rule:** a tool used to draw curved lines or to outline the shape of an object so that its form can be drawn.

**flint:** a type of hard stone, often gray in color, found in rounded nodules and usually covered with a white incrustation; a microcrystalline or cryptocrystalline form of silica containing some water and very fine pores, added to clay as an inert filler or aggregate. A member of the chalcedony group of water-bearing silica minerals, it was found from early use to fracture conchoidally and was ideal for making stone tools with sharp edges. It is chemically a quartz, but has a different microcrystalline structure. It can therefore be flaked readily in any direction and so shaped to many useful forms. It occurs widely, and where available was the basic material for man's tools until the advent of metal; it is commonest "stone" of the Stone Age. The only types of stone preferred to it were obsidian and the tougher rocks used for ground tools in the Neolithic. The term is often used interchangeably with chert and also as a generic term denoting stone tools in the Old World. Nodules of flint occur commonly as seams in the upper and middle chalk of northwest Europe. During the Neolithic and Copper Age of Europe, flint workers recognized that flint from beds below ground were of superior quality to surface flint, especially for the manufacture of large tools such as axes. These beds were exploited by sinking shafts and then excavating galleries outwards. Flint mines are known from many areas of Europe and good examples occur in Poland (Krzemionki), Holland, Belgium (Spiennes), and England (Grimes Graves). [chert, firestone]

**Flint Creek flaking:** a characteristic flaking style of the Flint Creek culture which was accomplished by removing regular, deep, elongate, opposing pressure flakes from the blade edges. The application of this flaking style usually resulted in the formation of very fine biface serrations.

**flint knapping:** technique of striking flakes or blades from a large flint stone (core or nucleus) and the shaping of cores and flakes into tools. The most commonly used stone was flint (chert), a hard, brittle stone, commonly found as nodules in limestone areas, that breaks with a conchoidal fracture. Flint knapping began with the simple striking of one stone against another. Later methods include the use of antler and wooden strikers for both direct and indirect percussion, and bone and antler pressure-flaking tools. [flint-knapping, knapping]

**flint scatter:** collections of worked flint, stone, debitage, and associated raw material gathered up from the surface of plowed fields or disturbed ground.

**flintlock gun:** a gun fired by the use of a flintlock. A gunflint is held in the lock, which on pulling the trigger pushes back the pan cover creating sparks that set off the powder in the pan causing a flame to go through and set off the charge in the barrel.

**float:** 1. A cork or other buoyant object on a fishing line as an indicator of a fish biting; a cork supporting the edge of a fishing net. 2. The hollow or inflated part of an organ supporting a fish, etc., in the water. [fishing-line float, harpoon-line float]

**floating chronology:** a chronometrically dated chronology that is not yet tied in to calendar years. A floating chronology is a decipherable record of time that was terminated long ago. The most common floating chronologies occur in dendrochronology where climate affects the growth of rings, and sequences are local. Local sequences cannot always be tied to the master sequences established in certain areas from the present day back into prehistory, and therefore the local sequences will “float” until some link with a known historical date is found. Similarly, in magnetic dating many of the sequences will float until some independently dated sites can be entered on the curve. The term is also used in reference to varve chronologies.

**flocculation:** agglomeration or coming together of particles in a suspension, such as a slip, forming “flocs” and causing the suspension to thicken or settle.

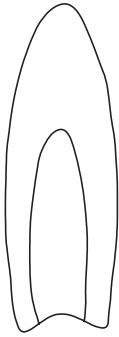
**flowerpot:** a small container, typically with sloping sides and made from plastic or earthenware, used for growing a plant.

**flue tile:** open-ended, box-shaped tile built into the thickness of the walls of a room heated by a hypocaust.

**flute:** a channel or groove running up a pillar or running up the center of a projectile point made of stone. In referring to projectile point artifacts, the mark is a distinctive longitudinal groove left on the point after removal of a channel flake. It is characteristic of Folsom and Clovis points. [fluting (n.)]

**flûte de Pan:** a type of suspension lug found on pottery of the Chassey, Cortaillod, and Lagozza cultures. Several vertical clay tubes, of a width suitable to take a suspension cord, are set side by side on the wall of the vessel. The lug resembles a pan pipe or a section of corrugated cardboard.

**fluted lanceolate projectile point:** a stemless point with rounded edges, a channel chipped into the spine, and no differently shaped projection at the base.



Fluted point

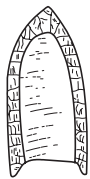
**fluted point:** a projectile point with a distinctive longitudinal groove left after the removal of a channel flake; a long, medial channel notched to the base of a flake. The channeled flake is removed from one or both faces by striking the specially prepared base sharply with a piece of wood or bone. The sharp ridges of the flutes were ground smooth near the base of the point, to prevent them from cutting the bindings when the point was inserted into a notched foreshaft. These points have extreme symmetry, careful flaking, and the removal of a long, parallel and shallow flake from one or both sides. Fluted points are characteristic of the Paleoindian peoples of North America such as the Clovis and Folsom projectile points. [fluted projectile point]

**flux:** material used to lower the melting temperatures of, or promote fusion between, metals or minerals – as in soldering, welding, and glassmaking; also a substance in a clay body, slip, or glaze that lowers the melting point of the mixture and promotes vitrification.

**folding:** a type of shaping in which the potter flares a rim outward or bends it inward and then rolls it down to double the rim's thickness or to create a complicated profile.

**foliate:** decorated with leaves or a leaf-like pattern.

**foliated point:** elliptical shaped points, thin in section and pointed at both ends; part of the Mousterian assemblages of central Europe.



Folsom point

**Folsom point:** a distinctive Paleoindian fluted projectile point with a single flute on each face and fine pressure flaking. Found in association in sites around Folsom, New Mexico from c. 9000–8000 BC (alternately 11,000–10,200 BP), they differ from Clovis points in the length of the flute, which extends over most of the point's side. Folsom points are smaller, with their widest dimension near the middle rather than towards the base; they are more concave base than Clovis points, and the edges of Folsom points were retouched. [Folsom projectile point]

**Fontbouïsse:** a Chalcolithic (Copper Age) settlement site in Gard, France, which has given its name to a style of pottery decorated with channeled decoration arranged usually in metopic or concentric semicircle patterns. Fontbouïsse ware is widespread in southern France, occurring in chamber tombs, village sites, burial caves, natural rock clefts, and small cremation cists. It is also the name of a cultural group known

for its dry-stone houses, megalithic tombs, and caves used for burials, and is associated with extensive flint mining and the first evidence of copper working in the area.

**food vessel:** a series of pottery vessels found in northern Britain, Scotland, and Ireland; used as the name of one of the two main cultures of the Bronze Age. The Food Vessel culture was a prototype derived from that of the Beaker folk and other Neolithic cultures. The Food Vessel culture people were hunters and farmers, raising sheep and growing corn. They also sold bronze and other metal goods made in Ireland. They buried food vessels with their dead (inhumation, in crouched positions, buried in cists under cairns or barrows). In the graves, too, are found crescent-shaped necklaces of jet and shale beads, and gold necklaces of the same shape (lunula) from Ireland. Then there are bronze halberds, axes, and daggers, earrings of gold and bronze, bone hairpins, and planoconvex flint knives. The culture is dated to 2000–1600 BC. [Food Vessel culture]

**foot:** an appendage attached along the circumference of a vessel's base to raise it above the surface on which the vessel rests; the base of a ceramic vessel, usually a ringlike projection formed by tooling or adding a coil.

**foot warmer:** any of various devices, such as a small stove, for keeping one's feet warm.

**footring:** a low pedestal-like ring formed on the base of a vessel to enable it to stand securely.

**foreshaft:** 1. The front part of something, as of a projectile point. [foreshaft] 2. A pointed stick, generally of hardwood or bone, mounted at the distal end of an arrow, dart, or spear and often tipped with flaked stone.

**forging:** in metalworking, the shaping of a piece of metal by heating to soften it, followed by hammering.

**fork:** an implement with two or more prongs used for lifting food to the mouth or holding it when cutting.

**form:** physical characteristics – size, shape, composition, arrangement – of any archaeological find or any component of a culture. Form is an essential part of attribute analysis. In archaeological research, the first objective is to describe and analyze the physical attributes of data to determine distributions in time and space, which leads to form classifications. For example, the shape of a pot or other tool directly reflects its function. [form analysis, form attribute, form type, formal difference, formal dimension]

**form attribute:** attribute based on the physical characteristics of an artifact, including overall shape, shape of parts, and measurable dimensions – leading to form classification.

**form type:** an artifact class based on form attributes.

**formal context:** affinity of an object to a general class of objects sharing general characteristics of form.

**Formative:** a cultural stage in North America when agriculture and village settlements were developed, accompanied by pottery, weaving, stone carving, and ceremonial objects and architecture. In the New World, especially Mesoamerica, it is also called the Pre-Classic period and preceded the Classic period. The period was also characterized by complex societies (chiefdoms) and long-distance trade networks. In Mesoamerica, it is divided into Early (2000–1000 BC), Middle (1000–300 BC), and Late (300 BC to AD 300). In Andean South America, the period is usually framed within the period 1800–1 BC, and includes the Initial Period and Early Horizon. It began with the introduction of ceramics, which occurred c. 7600 bp in Amazonia and c. 5200 bp in northwest Columbia.

**formula dating:** absolute dating using artifact attributes, especially applied to pipe stems and ceramics.

**Forum ware:** a distinctive green glazed pottery found in the 19th-century excavations of the forum in Rome. This ware has since been found on many sites close to Rome, and in settlements of all types in southern Etruria. Typically there are pitchers, often with incised wavy-line decoration around the body of the pot. The ware belongs to the late 6th or early 7th century, a phase of late Roman activity.

**fossil assemblage:** the part of a deposited assemblage that survives in a site or locality until discovery.

**fossil cuticles:** outermost layer of the skin of leaves or blades of grass, made of cutin – a very resistant, protective material that survives in the archaeological record often in feces. Cuticular analysis is useful to palynology in environmental reconstruction.

**fossil ivory:** ivory furnished by the tusks of mammoths preserved in great quantity in Siberian ice. It is the material of which nearly all ivory-turner's work in Russia is made. The ivory has not undergone any petrifying change like other fossils and it can be used for artifact manufacture as easily as tusks from living animals.

**fossiles directeurs:** classes of lithic artifacts associated with specific time periods and archaeological cultures of the European Paleolithic. [type fossils]

**foundation deposit:** a collection of objects buried within the walls or under the floors of a building to ensure the goodwill of the gods to the householder(s).

**founder's hoard:** a collection of Bronze Age metalwork deposited together – the tools, equipment, etc. of a bronzeworker, including

scrap metal, ingots, molds, punches, hammers, sets, gouges, anvil, and polishing stone.

**fracture mechanics:** characterization of crack growth (fatigue crack growth, sustained load fracture, and dynamic crack growth).

**fracture-based:** special chipping technique that knocked off long thin slivers of flint from point edges, usually done on the base bottom, and occasionally on the lower shoulders.

**fragment:** broken part of an artifact.

**frequency seriation:** a relative age determination technique in which artifacts or other archaeological data are chronologically ordered by ranking their relative frequencies of appearance. It is based on the idea that an artifact type first steadily grows in popularity and then steadily declines.

**fresco:** a method of painting on the plastered surface of a wall or ceiling before the plaster has dried so that the colors become incorporated in it. The term refers to any painting done on freshly laid wet plaster and left to dry with the plaster; the painting is part of the wall. It was usually executed with mineral and earth pigments upon a freshly laid ground of stucco. Lime was found in nearly all the colors of Pompeii, which is part of fresco.

**fretwork:** pottery technique in which the wall of the vessel is pierced through to make the decoration; used extensively with puzzle jugs from the 17th century.

**friability:** ability of something to be crumbled.

**frieze:** a decorative band or feature, such as a long band of relief sculpture decorating the upper stonework of a temple. It is the zone above the epistyle, decorated with triglyphs and metopes in Doric order architecture or sculpture or dentils in Ionic order architecture. This type of band of decoration on a wall or vessel may be painted or in bas-relief.

**frilling:** a crust decoration found on tazzae.

**frit:** vitreous compound from which soft porcelain is made; the fusible ceramic mixture used to make glazes and enamels for dinnerware and metallic surfaces. In the manufacture of glaze, the oxides are normally suspended in water for application but some compounds (e.g., potassium and sodium) are very water-soluble and if applied directly would be absorbed into the pot. Therefore, the raw materials are fused together under heat to form an insoluble glass known as frit. The frit is powdered, suspended in water, and applied to the pot.

**frying pan:** a term used to describe any shallow, circular vessel or bowl with a decorated base found in the Early Bronze Age of the Cyclades, especially the Cycladic Grotta-Pelos and Keros-Syros cultures. Made

of clay, the handle was split into two knoblike projections and the stamped or incised decoration often included spirals. The vessel's purpose is unknown, perhaps ritual but not for cooking. It has been suggested that when filled with water they were used as mirrors. The resemblance to a frying pan is superficial and certainly misleading.

**Fuchsberg:** a Neolithic pottery style of the Danish Early and Middle Neolithic, c. 3400 BC. It was characterized by rich, incised decoration and has been found at Sarup and Toftum.

**fulcrum:** in Roman antiquity, the curved raised end of a Roman banquet couch.

**Fulton turkey tail point:** a leaf-shaped, side-notched point – with notches chipped into each side of the base to form a stem below the main part of the point, generally 95–150 mm (3.75–6 inches) long.

**fumed:** of a vessel, having a dark surface, especially black-burnished ware which has been exposed to a reducing atmosphere during the later stages of manufacture.

**function:** purpose or use of a component within a culture. The second goal of archaeological research is the analysis of data and their relationships to determine function and thus reconstruct and create synchronic descriptions of ancient behavior. It is a model of culture that is keyed to the functions of its various components, which unite into a single system or structure.

**functional attribute:** any characteristic of an object that indicates its function, such as its form or a residue from an activity for which it was used.

**functional type:** a type based on cultural use or function rather than on outward form or chronological position.

**funeral urn:** receptacle in which the ashes are placed after cremation. [funeral pot]

**funerary cone:** Egyptian solid pottery cones, 10–30 cm (4–12 inches) in length, which were placed at the entrances to tombs, often with the name and titles of the deceased on the flat, circular end. Found mainly in the Theban area of Middle Kingdom to Late Period dates (2125–332 BC), these cones were originally inserted in the brick-built tomb facade or tomb pyramid to form horizontal rows. Most belong to the New Kingdom and the bulk of them to the 18th dynasty (1550–1295 BC).

**funerary monument:** in many cultures and civilizations the tomb was superseded by, or coexisted with, monuments or memorials to the dead. This foreshadowed a general revival of the Greek practice of erecting funerary monuments, rather than tombs, during the 16th century.

**funerary offering:** any items provided initially by mourners and later, magically, through inscriptions and pictures in the tomb. Funerary offer-



ings are essential for the well being of the “ka” in Egyptian tradition. Funerary offerings present rich documentary evidence of a culture.

**funnel beaker:** a vessel with a globular body and expanded neck, characteristic of the Early and Middle Neolithic culture of northern Europe. The funnel beaker is not directly related to the bell beaker of central and western Europe. The complex Funnel beaker culture represents the first agriculturists in Scandinavia and the north European plain, appearing from 3500 BC onwards. It is named after the characteristic pottery, which is often found in megalithic tombs in northern Germany. [funnelneck beaker, Funnel-necked beaker culture, TRB, trichterbecher]

**furrowing:** decoration made by drawing the fingers or a tool across the body of a vessel, resulting in either a series of horizontal grooves or groups of striations.

**fusible clay:** clay capable of being melted and fused.

**Fustát, al-:** capital of the Muslim province of Egypt during the Umayyad and ‘Abbasid caliphates, and under succeeding dynasties, until captured by the Fatimid Jawhar in AD 969. Founded in 641 by the Muslim conqueror of Egypt, ‘Amr ibn al-‘As, on the east bank of the Nile, south of modern Cairo, al-Fustát was the earliest Arab settlement in Egypt and site of the province’s first mosque, Jami’ ‘Amr. It was burnt to the ground in 1168, and was rebuilt by Saladin, who joined it with Cairo. Fustat ware is a style of pottery originating from al-Fustát. Characteristic qualities are the white glaze and pigments ranging from lemon to intense copper in color. Some pieces are incised and covered with transparent glaze. [al-Fostat]

# G

**gadroon:** a decorative pattern used in the ornamentation of gold and silver metalwork and pottery, consisting of an embossed tear shape. A gadroon is one of a set of convex curves or arcs joined at their ends to form this pattern, usually one of a series radiating from the base of a work.

**Gallinazo:** a pottery style and culture of the first phase of the Early Intermediate Period, flourishing c. 200 BC to AD 200 on the north central coast of Peru (Virú Valley). Together with the slightly earlier Salinar, the Gallinazo culture is seen as transitional from Chavín-associated groups, such as Cupisnique, to the rise of the Moche state. It is related to the contemporary Recuay style of the highlands. The best-known Gallinazo pottery is black-on-orange negative resist decorated ware. The type site appears to have been a ceremonial center with a nucleus of adobe mounds and walled courtyards. Residential apartment complexes are scattered over an area around the center; it was abandoned some time after the rise of Moche.

**Gallo-Belgic ware:** vessels imported from Gaul around late 1st century BC and early 1st century AD, usually in black or silver-gray (terra nigra), or white fabric coated with red slip (terra rubra), or a dense white or cream fabric. The vessels often have the name of the potter stamped on the inner surface of the base.

**gastrolith:** a stone or pebble ingested by a fish, reptile, or bird for the purpose of grinding food to aid digestion.

**gauge:** a graduated vessel or instrument for gauging or measuring the force or quantity of a fluctuating object, such as rainfall, tide, wind, etc.

**gauntlet:** armored covering to protect the hand and wrist.

**ge:** a dagger ax, the characteristic weapon of the Chinese Bronze Age during the Shang dynasty and then made from iron from the Zhou/Chou dynasty onwards. The dagger-shaped bronze blade, usu-

ally with a flat tang but occasionally with a shaft hole, was mounted perpendicular to the wooden shaft. The blade had a cross-piece parallel to the shaft to help hold it in place. Bronze Age blades and non-functional jade replicas of blades often appear as mortuary gifts in Shang tombs. The earliest ge yet known have come from Erlitou, c. mid 2nd millennium BC. In the Eastern Zhou/Chou period the ge was sometimes combined with a spear, the ge blade at right angles to the spearhead, to form a ji. The ji was in existence by the late 6th or early 5th century BC. They are chopping implements. [ko]

**gem point:** a projectile point made out of agate, jasper, or another colorful stone. [gempoint]

**gemstone:** a precious or semiprecious stone used in jewelry.

**geofact:** a naturally shaped stone that resembles an artifact.

**geoglyph:** any ground-constructed example of rock art, such as intaglios or rock alignments; straight lines, geometric shapes, and other representative designs found on the desert plain. Geoglyphs can be formed by piling up materials on the ground surface or by removing surface materials and most suggest a largely ceremonial function. [Nasca lines; Nazca lines]

**geometric, Geometric:** a style of decoration with repeated geometric motifs – circles, squares, triangles, lozenges, and running linear patterns – flourishing in Greece c. 900–700 BC. The term is also applied to such designs on wall painting or textiles. The style derived from the triangular, circular, meander, zigzags, rhomboids, and other linear decoration on Greek pottery of this period. In Classical Greek art history, the term is used specifically of the early phases of vase painting as, for example, Protogeometric (c. 1050–900 BC), Geometric (c. 900–750 BC), and Late Geometric (c. 750–700 BC). When the term is applied to the period of Greek history in which the decoration flourished, it is often extended to 1100–700 BC, after the fall of the Mycenaean civilization and marking the transition from the Bronze to Iron Age. The first phase, called Protogeometric, corresponds to the dark ages when Greek culture was inward looking and very poor. Its final phase, the Late Geometric, coincided with the resumption of relations with Asian cultures and the beginning of colonization of the northern, southern, and western shores of the Mediterranean.

**geometric pottery:** well-fired, stamp-impressed pottery characteristic of c. 2000 BC to AD 300 sites in south and southeastern China. The Geometric pottery cultures seem to have grown out of local Neolithic predecessors and characterize the protohistoric Wucheng, Hushu, and Maqiao cultures of the region.

**geometrics:** a general category of artifacts that includes lunates (crescent shaped), triangles (three sides), trapezes (four sides, two approximately parallel), and rectangles (four sides) – generally very small tools, usually

less than 2.5 cm (1 inch) long and with the shapes formed by backing and a sharp cutting edge.

**gesso:** material consisting of a layer of fine plaster to which gilding was often attached using an adhesive. It was a fluid, white coating composed of plaster of Paris, chalk, gypsum, or other whiting mixed with glue, applied to smooth surfaces such as wood panels, plaster, stone, or canvas to provide the ground for tempera and oil painting or for gilding and painting carved furniture and picture frames. In medieval and Renaissance tempera painting, the surface was covered first with a layer of gesso grosso (rough gesso) made with coarse, unslaked plaster, then with a series of layers of gesso sottile (finishing gesso) made with fine plaster slaked in water, which produced an opaque, white, reflective surface. [chalk, gypsum]

**gilding:** art of decorating with a thin layer of gold paint or gold leaf. The term includes the application of silver, palladium, aluminum, and copper alloys.

**gimlet:** a small tool for boring holes with a cross handle and a screw tip.

**girth beaker:** a vertical-sided beaker with horizontal bands of corrugations, cordons, or latticing of the mid 1st century AD, of Britain or Gallo-Belgic origin.

**girth groove:** in ceramics, a continuous horizontal groove around the belly of a vessel.

**gisant:** in sepulchral sculpture, an effigy representing the person in death; especially an effigy depicting the deceased in a state of advanced decomposition. It was popular in 15th- and 16th-century northern Europe. The gisant was often placed below a portrait, or orant, which represented the person praying or kneeling, as in life. It was a reminder of the transitory nature of life.

**glacial:** any of a number of cold climatic periods in which there was widespread ice and cold-climate flora and fauna.

**glaciation:** process by which land is covered by continental and Alpine glacier ice sheets or the period of time during which such covering occurred; several glaciations are required to make up an ice age (such as the Pleistocene). The land is subject to erosion and deposition by this process, which occurred repeatedly during the Quaternary; the process modifies landscapes and affects the level of ocean basins. These periods of colder weather are also called glacials, and the warmer periods between them interglacials. At the onset of colder weather, water is taken up into the ice sheets and glaciers, causing a drop in sea level. Landscapes once covered by ice can be recognized by the smooth rock surfaces and the U-shaped valleys formed by the ice sheets and glaciers and the rock rubble carried along in them. As the climate

warmed, the glaciers retreated, the ice melted, and the sea level rose. The ice also deposited various forms of boulder clays, and banks of debris at the sides and ends of glaciers, known as moraines. Beyond the limits of glaciers and ice sheets, extensive layers of outwash sands and gravels were deposited; where these deposits occur in lakes they are called varves. The periglacial zone around the margin of an ice sheet has permanently frozen subsoil, and is occupied by cold-loving plants and animals. Erosion was mainly brought about by solifluxion. The low temperatures and the constant freezing and thawing also affect the soil; these frost effects are called cryoturbation. Particularly characteristic are ice wedges, polygonal cracks in the ground frequently recognizable in air photographs. They are caused by the shrinking of the ground at low temperatures and the filling of the cracks with water, which subsequently expand on freezing to open the crack still further. The last 2 million years have been marked by a series of such glaciations. Broad correlations between the glaciation schemes in different parts of Europe and North America exist. Four ice ages have been figured; in Europe, the first glaciation was at a climax 550,000 years ago. This gradually gave way to the first interglacial (Gunz-Mindel) period lasting about 60,000 years in which warm conditions again prevailed. The second glaciation came along with its climax 450,000 years ago, and the second interglacial (Mindel-Riss) period followed, lasting 200,000 years. The third glacial (Riss) period climax 185,000 years ago was relieved by 60,000 years of interglacial warmth. The fourth (Wurm) and last ice age was at its height 72,000 years ago. The term has also commonly been used to describe the periods of generally cold climate that occurred at intervals during the Quaternary period. It is, however, now clear that ice sheets grew only during parts of these so-called "glacials" (e.g., the Devensian). For this reason, the term "cold stage" is preferable.

**glaive:** a weapon consisting of a blade fixed to a long handle.

**glass:** a hard, amorphous, inorganic, usually transparent, brittle substance made by fusing silicates, sometimes borates and phosphates, with certain basic oxides and then rapidly cooling to prevent crystallization. It was first developed from faience about 4000 years ago in the Near East, but was rarely used for anything larger than beads until Hellenistic and Roman times. Glass bottles in Egypt are represented on monuments of the 4th dynasty (at least 2000 BC). A vase of greenish glass found at Nineveh dates to 700 BC. Glass is in the windows at Pompeii and the Romans stained it, blew it, worked it on lathes, and engraved it. Natural glasses, such as obsidian, are rare, but cryptocrystalline materials, with fine crystal structures somewhat like glass, are relatively common (e.g., flint).



Glass bottle



Glass vase

**glass layer counting:** a dating technique for glass based on the idea that the layers present in the surface crust of ancient glass were added annually and that counting them would yield a chronometric date. Research showed different numbers of layers on different parts of the same piece, and for some pieces of known date, not enough layers to suggest annual growth. Therefore, an understanding of the processes that lead to the formation of the layers is necessary before the technique can be used with any confidence.

**Glastonbury ware:** a type of Middle Iron Age pottery made in south-west England, mainly globular bowls, jars, and shouldered bowls with incised decoration in curvilinear motifs.

**glaze:** a type of slip applied to pottery that produces an impermeable and glassy surface when fired at high temperatures. It is usually produced by coating pottery with powdered glass and reheating to a temperature where the glass begins to fuse. Glaze is a vitreous substance and, like glass, is made from silica; this substance only melts at a temperature higher than that which would melt the pot, so a flux must be added to make it useable. Silica is present in most pottery, so in these cases only the flux – an oxide of sodium, lead, or potassium – needs to be added, and a colorant if required, usually in the form of a frit crushed and suspended in water. The pot is then fired at a temperature suitable for melting the glaze (somewhere between 900 and 1200°C depending on the constituents), which runs into an even layer all over the pot. It was known in ancient Egypt where a mixture of fine sand, quartz, or crystal dust was used with an alkaline base (soda, potash). Glaze or *couverte* can be identified in the Persian faïences and Flemish stoneware. In the Hellenistic period, lead glaze was invented, in which lead monoxide replaced soda or potash. A large variety of glazes may be used, varying in color, texture, and suitability for different types of pottery. The extent, color, and finish of the glaze are described by archaeologists. The terms used for extent are: all-over, areas, zones, patches, streaks, runs, dribbles, or spots. The terms used for finish are: lustrous, glossy, dull, sparse, pitted, crazed, smooth, thick, or thin. [glazed (adj.)]

**Glevum ware:** burnished wares mainly in the form of bowls, jars, and tankards in a color range from creamy-buff to orange-red, made at various centers along the Severn. Kiln sites are known at Malvern and Shepton Mallet, Somerset. It was at one time known as Glevum ware, since it was first recognized at Gloucester, but is now known as Severn Valley ware. It is found all over the Severn Valley and small quantities reached the western part of Hadrian's Wall. [Severn Valley ware]

**globular amphora:** bulbous pots with a narrow neck and perforated lugs or small handles for suspension. Cord-impressed decoration is usual. A type of pottery vessel that has given its name to a Late Neolithic or Copper Age culture of the 3rd millennium BC through much of Germany, Poland, and western Russia. It appeared with the eastern wing of the European Funnel-necked beaker culture, differentiated from the western part. Some examples are undecorated, while others have incised, stamped, or cord-impressed ornament on the upper part of the vessel. There are individual burials in stone cists under barrows, accompanied by the globular amphora. The culture is closely linked to the TRB culture and may be a parallel development to the Single Grave/Corded ware group in Scandinavia of 2600–2200 BC.

**globular urn:** a type of Middle Bronze Age pottery in southern England, part of the Deverel-Rimbury tradition and characterized by a flat base, expanded body, and vertical neck. They are generally made from coarse fabrics and decoration is on the upper body and neck, typically incised or made with impressed cord. Some have lugs or applied decoration between the body and neck.

**gloss:** a type of surface treatment of pottery frequently mistaken for glazing. It involves the application of a slip to the surface, but the slip is made of very fine clay containing an unusually high proportion of the mineral illite, which results in a glossier, shinier surface than normal slip after firing.

**glossy:** flint with high surface sheen, usually denoting quality.

**glost:** glaze firing; the firing process in which a glazed ware is fired, usually having already been fired once (the biscuit firing) before application of the glaze. [glost fire]

**glyph:** a carved figure, character, or picture, incised, painted, or in relief as part of the picture writing known as hieroglyphics.

**glyptics:** the art of carving gems and hard stones. In the ancient East, the term also describes the engraving of seals. [glyptic arts, sigillography]

**Gnathian ware:** a pottery fabric of the Hellenistic period (4th to 3rd centuries BC) in southern Italy. Produced originally at Apulia, the pots are decorated with a black-glossed technique with simple designs in yellow and white. It is the western equivalent of West Slope ware. It is unlike other south Italian pottery and was widely exported.

**gold:** a chemical element; a dense, lustrous, yellow precious metal with several qualities that have made it exceptionally valuable throughout history. It is attractive in color and brightness, durable to the point of virtual indestructibility, highly malleable, and usually found in nature in a comparatively pure form. It was one of the first metals to be exploited by man. Early working was basically by hammering, to which

more complicated techniques like casting, soldering, granulation, and filigree were later added.

**gold-figured:** a Greek technique of decorating silver plate with gold foil, especially on cups, phiale, and kantharos. Detail is incised in the gold foil and the decoration is similar to the red-figured technique used particularly on Athenian pottery.

**gold-glass:** denoting a technique used to decorate Greek silver plate with gold foil. Some of the more important examples of the technique, which include cups, a phiale, and a kantharos, have been found at Duvanli and Semibratny with complex figured scenes like chariot races. Detail is incised in the gold foil. It is used particular on Athenian pottery.

**gorge:** a bipointed object of bone (or other material) which was tied to a fishing line and caught in the fish's mouth.

**gorget:** a flat artifact made of stone or another material and worn as an ornament over the chest. It may also have been a protective piece for the throat region. These ornamental collars were common in prehistoric southeast and midwest US.

**gorgoneion:** mask of the gorgon, the mythical monster whose glance could turn people to stone, which became a symbol to ward off evil. It was widely used on Athenian pottery and on Roman cineraria. It was on the center of the pediment of the temple of Artemis on Corfu.

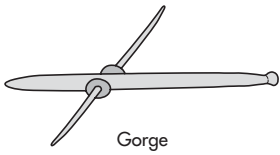
**gorytos:** a sheath, combining quiver and bowcase, which was characteristic of the Scythians in the 6th to 3rd centuries BC. Fancy ones, covered with golden plaques decorated with artistic relief scenes, are known from the Scythian Kurgans of the 4th century BC, such as Solokha and Chertomlyk. There is a depiction of a gorytos on the famous golden Scythian vase from the Kul'-oba kurgan.

**gouge:** a chisel with a concave blade, used in carpentry, sculpture, and surgery. It is a long, tapered, semicylindrical implement with a broad groove or hollow at the U-shaped, scooplike working end.

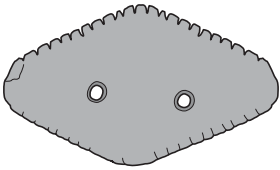
**graffiti:** unauthorized writing or drawings on a surface in a public place; writing applied to walls or other objects. Commercial graffiti were scratched or painted on the underside of Greek pottery. In the Roman colony at Corinth, the public inscriptions were in Latin and graffiti on pottery was in Greek – providing important information about the languages.

**grain:** direction or texture of fibers found in wood, leather, stone, or in a woven fabric.

**grain impression:** a cereal grain that has been incorporated by chance in an artifact, such as pottery, bricks, daub, etc. The impression left in the clay may be clear enough for identification to be possible and thus may provide useful evidence on the crops in cultivation at the



Gorge



Gorget



Gouge



time. On firing, or as a result of decomposition through time, the organic material is lost but its outline remains, often in great detail. Casts of these impressions are taken using latex rubber, and the original plant or animal may be identified. Before the widespread sieving and flotation of deposits began to yield large amounts of environmental evidence, these grain impressions were an important method of getting information on farming practices.

**granite:** a granular igneous rock composed essentially of the minerals quartz, orthoclase feldspar, and mica. It is the most common plutonic rock of the Earth's crust, formed by the cooling of magma at depth. Primarily gray in color, the crystalline rock is used mainly for building, paving, and tombstones.

**granulation:** a technique used in the decoration of jewelry by soldering it with grains of gold, electrum, or silver. Tiny spherical drops of metal were soldered on to a background, forming the required pattern and giving it a granular texture. The drops may have been made by heating a gold wire until a drop formed, or by melting gold and slowly pouring it into cold water. As for filigree, the solder was normally a gold-copper alloy with a lower melting point than gold. First used as early as the 3rd millennium BC, it was widely known in western Asia and Egypt. The ancient Greeks perfected the technique, but by the 5th century BC granulation had been largely replaced by filigree in Greek work. The art of granulation probably reached its peak with the Etruscans between the 7th and 6th centuries BC, in the elaborately granulated and embossed earrings, pronged shoulder clasps for clothes, and beads found in Etruscan tombs. Granulation was particularly important in India and Persia after contact with the Roman Empire.

**grape cup:** a type of miniature cup or accessory vessel of Early Bronze Age graves in southern England, with a narrow base and mouth, and expanded bulbous body covered in small applied balls of clay that look like a small bunch of grapes.

**graphite painting:** a surface treatment for pottery involving the application of powdered graphite before firing. As in hematite coating, the mineral may have been applied by mixing with a slip and applied as "paint." The resulting surface is silvery-gray and shiny.

**grappling iron:** a device with hooks or claws attached to a rope and used for dragging or grasping.

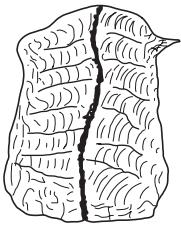
**grass-marked pottery:** pottery either marked or tempered with grass. In western Britain there are examples of pottery covered with "grass" impressions from Ulster, the Hebrides, and Cornwall, especially around the 5th to 6th centuries AD. The term also refers to crude hand-made ware made in various parts of Frisia in the Migration period and in certain parts of southern England in the early Saxon period in

which ferns and other organic material was used as tempering. [grass-tempered pottery, grass-tempered ware]

**grattoir:** a flaked stone scraping tool, usually flint, in which the working edge is at the end of the blade or flake and lies across its long axis. It is characteristic of the Upper Paleolithic and was probably used to work wood and clean hides; from the French *gratter* for “scratch” or “scrape.” [end scraper]

**grave goods:** valuables deposited with a corpse in a grave; the artifacts associated with a burial or cremation, usually meant to be helpful in the afterlife (such as jewelry, weapons, or food). They may also represent personal possessions or offerings to the dead person’s spirit. [grave-goods]

**Graveney Boat:** a well-preserved Anglo-Saxon timber boat found in 1970 in the Graveney marshes in Kent, England. It is the only vessel of this period from the British Isles which has left more than an impression in the soil. Radiocarbon and dendrochronology have effectively dated it to the late 9th century AD. The well-constructed Graveney Boat was a cross-Channel cargo; it has been restored and is in the National Maritime Museum in Greenwich, England.



Graver

**graver:** a stone tool manufactured from a flake by chipping (pressure flaking) it on two edges at one end so as to leave a sharp point. Gravers were used to cut or score soft materials such as bone, shell, wood, and antler; perhaps also for punching leather and other purposes. The term also refers to a type of metalworking tool that comprises a number of subtypes, though all are handheld, hard, and sharp and are used to cut or engrave metal. Such a graver has a metal shaft that is cut or ground diagonally downward to form a diamond-shaped point at the tip. The angle of the point affects the width and depth of the engraved lines; the point is guided by thumb and forefinger. [burin]

**gravestone:** a stone placed over or at the head or foot of a grave, or at the entrance to a tomb.

**Gravettian:** an Upper Paleolithic industry named after the site La Gravette in the Dordogne of southwest France and characterized by well-developed blade tools of flint and female figurines of ivory. This advanced industry succeeded the Aurignacian and preceded the Solutrean, c. 28,000–20,000 BP. In France it is known as the Upper Périgordian (Périgordian IV) and the Gravettian appears to have developed in central Europe, expanding to the east and west. The small, pointed blades with straight blunted backs are called Gravette points. Most of the French sites are caves, but related industries, known as Eastern Gravettian, are possibly distributed through the loess lands of central Europe and Russia at the camp sites of mammoth hunters; other sites are in Spain, Belgium, Czechoslovakia, and Italy. The Gravettians

invented the bow and arrow, blunted-back knives of flint, and tanged arrowheads. They are famous, too, for their cave paintings. Other artifacts include bone or ivory spears and, in eastern Europe, numerous other bone tools incised with an elaborate geometric pattern.

**grayware:** 1. A usually undecorated ware of gray body. [greyware]  
2. The typical household and ceremonial ceramic ware of Monte Albán and the Valley of Oaxaca, Mexico, made from a fine gray paste in the middle Pre-Classic period. Grayware occurs throughout Monte Albán's occupation, with some variations in shape and ornamentation. In the latter periods in the Oaxaca sequence, after the collapse of Monte Albán, Mixtec grayware was distributed through the valley. The Zapotecs' merge with the Mixtecs is suggested by the correlation between the distribution of the Mixtec ceramics in Zapotec households, c. AD 1250–1521. [greyware]

**Great interglacial:** a major division of the Pleistocene epoch, the warm interval between the Mindel and the Riss glaciations c. 400,000–200,000 years ago.

**Great Tombs period:** a period in Japanese history, in the 4th to 7th century AD, known for round tombs covered by a mound with a square platform off to the side, making a keyhole shape. Towards the end of the period, tombs were very large and surrounded by a moat, and earthenware figures and models (Haniwa) were placed in a series of concentric rings around the tomb. Inside was a chamber of stone slabs, probably adopted from the cist tomb of northeast Asia. Burial goods included bronze mirrors, Chinese-type swords, magatama (fine polished stone ornaments), and Sue ware pottery.

**Greater Peten:** a major architectural style of the Classic Maya lowlands, especially the use of polychrome painted stucco on wall surfaces.

**greave:** a piece of armor to protect the lower leg, especially the shin.

**green:** formed but unfired ceramic articles or their properties – as used in the terms greenware, green strength, etc.

**greenstone:** a loosely applied term for a variety of metamorphosed basic igneous rocks of a green color: serpentine, olivine, jade, jadeite, nephrite, chloromelanite, etc. The general term is useful, though, since ancient people used these materials interchangeably, mainly for high quality or ceremonial polished stone axes, figures, and other objects. Jade was particularly popular in China and Middle America, and was considered to have magical properties. Greenstone was important in southeastern Australia and in New Zealand. The green color comes from the minerals chlorite, hornblende, or epidote.

**greenware:** unfired pottery. [greenware state]

**griddle:** a flat ceramic plate used in the final stage of detoxifying manioc. After grating and pulping, thin disks of manioc are baked on the

griddle into a kind of unleavened bread. Although there are other methods of preparation, use of the griddle is especially common in northeastern South American contexts, where the artifact signifies agricultural practice.

**Grimston ware:** a type of Early and Middle Neolithic pottery of north-east England, characterized by fine fabrics, good-quality finish, and round-bottomed forms with a carinated profile. [Lyles Hill ware]

**grinder:** a tool, machine, etc. used for grinding something.

**grinding:** point base of a blade with the sharp edges ground off and smoothed.

**grinding stone:** any lithic (stone) artifact used to process plants for food, medicines, cosmetics, or pigments. The grinding was done on a flat or concave surface. [mano]

**grindstone:** a revolving stone used to sharpen or polish by grinding.

**grit tempering:** addition of small pieces of rock or sand to the paste used in creating a ceramic object.

**grog:** fragments of old or wasted pottery or firebricks that are ground up and added to clay as filler material to help reduce plasticity. Grog is used in the manufacture of refractory products (e.g., crucibles) to reduce shrinkage in drying and firing. [filler]

**grog tempering:** addition of small pieces of crushed ceramic to the paste used in creating a ceramic object.

**groma:** a Roman surveying instrument that traced right angles. It was made of a horizontal wooden cross pivoted at the middle and supported from above; from the end of each of the four arms hung a plumb bob. By sighting along each pair of plumb bob cords in turn, the right angle could be established. The device could be adjusted to a precise right angle by observing the same angle after turning the device approximately 90°. By shifting one of the cords to take up half the error, a perfect right angle would result. It was used for laying out the grid patterns of towns and forts, for road construction, and for centuriation.

**groove-and-splinter technique:** an economical method of working bone, ivory, or antler developed during the Upper Paleolithic. Two deep, parallel grooves were cut in the raw material and the splinter between them was snapped free to produce a blank for subsequent reworking.

**grooved:** having one or more long narrow hollow spaces cut into a surface, such as an ax.

**grooved decoration:** pottery decoration in which broad lines are drawn on the firm but unbaked pot surface. No clay is removed, as it is in excised decoration, nor is the surface itself broken, as with incised decoration. [grooving]

**Grooved ware:** a pottery style of the British Late Neolithic, widely distributed c. 2750–1850 BC. The characteristic vessel is flat based with straight vertical or outward sloping walls. It was formerly known as Rinyo-Clacton after two widely separated findspots (Clacton in Essex and Rinyo in the Orkney Islands). Throughout eastern and southern England, where it is particularly frequent on henge sites (Stonehenge and Durrington Walls), it is decorated with shallow grooving or sometimes with applied cordons. A Scottish group, where appliqué cordons were much used in addition, is represented in Orkney at sites like Rinyo and Skara Brae. It is also found in settlement sites and in chambered tombs. [Rinyo-Clacton]

**ground stone tool:** a class of lithic (stone) artifacts produced by abrasion – grinding or pecking – and formed into a tool or vessel. Granite, pumice, and steatite fall into this class. Manos, metates, mortars, and pestles are common ground stone artifacts. Ground stone tools used to crush, pound, grind, or otherwise process materials are also commonly referred to as milling implements. [ground stone, ground-stone artifact, groundstone, polished tool]

**grouping:** bringing together real or imaginary objects and separating them from other groups of objects rather than on assignment to predefined classes.

**guardapua:** pointed wooden implement, possibly used in ritual blood-letting.

**gui:** 1. In Chinese religion, a troublesome spirit that roams the world, causing misfortune, illness, and death. They were believed to be the spirits of individuals who were not buried properly or whose families neglected to make proper memorial offerings. 2. A Chinese Neolithic tripod pottery pitcher, first made with solid legs and then acquiring bulbous hollow-shaped legs, and an early Chinese bronze ritual bowl with handles. The latter often bore writing as well as complex designs. The bronze gui was known in the Shang period but was especially common in the Western Zhou/Chou period. These items were used in protective rituals as talismans devised to ward gui away from the family abode. [kuei]

**guide flake:** any small flakes taken from the bases of fluted points prior to the removal of channel flakes and intended to guide the direction and width of the flute. [guided flakes]

**guilloche:** a decorative chain pattern, often looking like regularly interlaced ribbons, reproduced on a plane surface. It has often decorated tableware.

**guisarme:** a long-handled weapon that has a long blade in line with the shaft, sharpened on both sides and ending in a point.

- gun:** a weapon incorporating a metal tube from which bullets or shells are propelled by explosive force.
- gun flint:** a square blade-segment of flint used to ignite the powder charge of a flintlock gun; a piece of this stone, especially as flaked or ground in ancient times to form a tool or weapon; a piece of flint used with steel to produce an igniting spark. [gunflint]
- gun lock:** a mechanism by which the charge of a gun is exploded. [gunlock]
- Gundestrup:** find spot of a great silver cauldron of the late pre-Roman Iron Age in a bog in northern Jutland, Denmark, that was clearly a votive offering. On the 12 plaques which decorate both the inside and outside of the bowl are scenes from Celtic mythology. The cauldron was probably manufactured in Romania or Bulgaria or possibly Thrace during the 1st or 2nd centuries BC.
- Gundlingen sword:** a type of bronze sword of the Hallstatt C period in central Europe with a long, leaf-shaped blade, broad shallow butt, and pommel tang.
- Günz glaciation:** first major Alpine glacial advance and first major Pleistocene glaciation (ice age), which started c. 590,000 years ago and lasted until the end of the Mindel glaciation. The Günz preceded the Günz-Mindel interglacial and followed the Donau-Günz interglacial, both periods of relatively moderate climatic conditions. The Günz is correlated with the Baventian stage of marine deposits of Great Britain and the Menapian glacial stage of northern Europe. It is broadly equivalent to the Nebraskan glacial stage of North America.
- Günz-Mindel:** a major division of Pleistocene time and deposits in the Alpine region of Europe and one of the divisions of the geological system that recognizes the number of Pleistocene glaciations. The Günz-Mindel interglacial preceded the Mindel glacial stage and followed the Günz glacial stage and was a time of relatively moderate climatic conditions between two periods of glacial advance. The Günz-Mindel interglacial is correlated with the Cromerian interglacial of northern Europe and the series of interglacials recognized in Britain: the Pastonian (oldest), Beestonian, and Cromerian. The Günz-Mindel interglacial is also broadly equivalent to the Aftonian interglacial of North America.
- gutturium:** a narrow-necked Roman water jug or pitcher. It was an elegant vessel, used by slaves for pouring water over the hands of guests before and after a meal.
- guttus:** a narrow-necked Roman cruet or oil flask, by which liquids could be poured out drop by drop; used in sacrifices.
- gypsum:** a common white or colorless mineral (hydrated calcium sulphate) used to make cements and plasters (especially plaster of Paris).

# H

**hacha:** a thin-bladed ax thought to have had a ceremonial function for the Maya, with a possible connection to the ball game, tlachtli.

**hacksilver:** fragments of ornaments and ingots in Viking silver hoards, having been deliberately cut up in order to be weighed out for the purpose of making payments, before the use of coins as money.

**Hadra ware:** a kind of Hellenistic pottery first found in the Hadra cemetery at Alexandria. It was a burial container inscribed with the name of the deceased and often the date painted or incised on the shoulder.

**haft:** handle of a compound weapon or a tool – such as an adze, awl, ax, or knife. [haft element; hafted (adj.)]

**hafting:** manner in which a projectile point or other stone tool is attached to a handle or shaft.

**hairpin:** a usually U-shaped pin for fastening the hair.

**Haji:** an unglazed Japanese earthenware, developed in the Tumulus/Kofun period of the 4th century AD, derived from the Yayoi tradition and influenced by Sue ware shapes in the 5th century. Early Haji pottery is characterized by the appearance of ceremonial vessels that are homogenous throughout a wide area, along with domestic vessels made in local styles. After the wheelmade, kiln-fired Sue pottery was introduced in the 5th century, only domestic vessels were made in Hajii ware, and from the 8th century onwards Hajii pottery, too, was made on the potter's wheel. A rust-red earthenware, Haji ware is baked in oxidizing fires. Shapes unknown to the Yayoi culture appeared in Haji ware, however, such as small, globular jars and wide-rimmed pots. Although the surfaces of Haji pieces are finely finished, both their form and firing lack the refinement of Yayoi pottery. [haji]

**Halaf:** a large tell site on the Khabur River in northeastern Syria near the Turkish border, which is the type site of an important stage of

north Mesopotamian development, roughly from the 6th millennium BC to the beginning of the 5th millennium (5050–4300 BC). The distinctive pottery, known as Halaf ware, was exceptionally fine – a thin hard ware in a wide range of competent and attractive shapes bearing brilliant carpet-like designs painted in black, red, and white on the buff surface. Simple steatite stamp seals were coming into use, which imply the development of personal property. In the villages, the typical dwelling was a round house with a vaulted dome (tholos), constructed of mud brick, sometimes on stone foundations. The Halaf culture was succeeded in northern Mesopotamia by the Ubaid culture. It was the seat of an Aramaean kingdom and then a provincial capital of the Neoassyrian Empire. In 808 BC, Adad-nirari III of Assyria sacked the city and reduced the surrounding district to a province of the Assyrian Empire. The Assyrian archives provide valuable details of the administrative affairs of the time. It was the Old Testament “Gozan” to which the Israelites were deported in 722 BC after the capture of Samaria. [Guzana, Halafian, Tell Halaf]

**halberd:** a weapon with a pointed or V-shaped blade mounted at right angles to its haft (handle), yet with its flat surface in the same plane as the shaft, and used with a chopping motion. In bronze it was popular in the European Early Bronze Age (mainly in Ireland and central Europe) and appears again in the Chinese Bronze Age.

**halberd pendant:** small hanging ornament of metal or stone modeled in the shape of a halberd blade.

**Halfan:** a type of prepared core with preparatory work like that of a Levallois core with the exception of a diagnostic series of parallel bladelet removals from the distal end on the face of the core. The final phase is struck from the proximal end and displays remnants of the parallel bladelet scars at the distal end. [Halfa]

**haliotis:** genus of abalone used to make beads and ornaments.

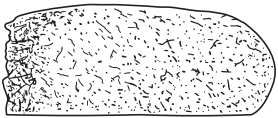
**hammer:** a hand tool with a heavy rigid head and a handle; used to deliver an impulsive force by striking.

**hammer-dressed:** having the surface (of a stone) roughly shaped or faced with a hammer. [hammering (n.)]

**hammerhead mortarium:** a mortarium with a rim and flange that form a single unit, shaped like the head of a hammer, with the center meeting the body of the vessel at right angles.

**hammerstone:** a hard stone used as a hammer during the knapping of flint and other stone, for processing food, breaking up shells or bones, etc.

**hand ax:** a large bifacially worked core tool, normally oval, pointed, or pear-shaped, and one of the most typical stone tools of the Lower Paleolithic. It is the diagnostic implement of certain Lower Paleolithic industries (Abbevillian, Chellean, Acheulian), and one variety of the



Hammerstone



Mousterian. In spite of the name it was not an ax at all and probably served as an all-purpose tool. The oldest and crudest hand axes have been found in Africa; the finer, Acheulian tools are known from most of Africa, Europe, southwest Asia, and India. It was used for chopping, chipping, flaking, cutting, digging, and scraping. Hand axes first appear between 1 and 2 million years ago and they were common in assemblages for about a million years. [biface, hand axe, hand-ax, handaxe]

**hand maul:** a carefully manufactured unhafted stone hammer.

**hand stencil:** an impression of a hand produced by spraying thick paint (often made from white clay or red or yellow ocher) through a blow-pipe around the edges of a hand placed against a rock surface. Many hand stencils are found in caves.

**handle:** an appendage attached to the exterior (sometimes interior) wall of a vessel's body, neck, or rim, that facilitates the manipulation or suspension of the vessel or is a decorative feature.

**handstone:** a handheld milling stone used to process materials on a metate. [mano]

**hanging bowls:** thin bronze, shallow bowls found in Anglo-Saxon graves up until the 7th century, an important part of a Celtic metal-working tradition which has its origins in the Roman and pre-Roman Iron Age. They have three equally spaced suspension rings, fixed to the bowl by escutcheons usually decorated with colored enamel and millefiori.

**haniwa:** unglazed earthenware funerary sculptures or cylinders of the Kofun period (4th to 7th centuries AD) in Japan. They were erected on, around, or inside mounded tomb surfaces and often had representations of horses, animals, birds, humans, and houses. They are considered to have developed out of the tall stands for the late Yayoi ritual vessels of the 3rd century.

**hard hammer technique:** use of a hammerstone to remove flakes during knapping. Hard hammer flakes are short and deep with a prominent bulb of percussion. [hard hammer percussion]

**Hardaway point:** a bifacially worked, chipped stone projectile point with a triangular outline, slightly hollow base, and a side notch towards the base on either side. It may be a variation of the Dalton tradition c. 8500–7000 BC.

**hardness:** property of being rigid and resistant to pressure, not easily scratched, and measured on the Mohs scale. In pottery, hardness is judged as soft (can be scratched with a fingernail), hard (cannot be scratched with a fingernail), or very hard (cannot be scratched with a knife); for archaeology, pottery hardness is most commonly measured by the Mohs scale.

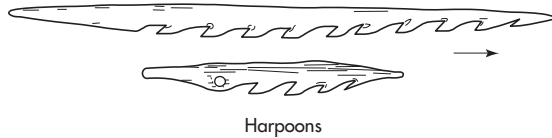


Hardaway point  
(Paleo)

**hard-paste:** denoting true porcelain made of fusible and infusible materials (usually kaolin and china stone) fired at a high temperature. Developed in early medieval China, it was not made in Europe until the early 18th century. [true porcelain]

**harness:** arrangement of straps used to control an animal and/or to attach the animal to a vehicle.

**harpoon:** a spear-like missile with a detachable head, often consisting of a pointed shaft with backward-pointing barbs. It was often loosely hafted so that it would separate from its shaft after the point had struck its target. The appearance of this weapon is associated in particular with the Magdalenian culture, was particularly popular during the Upper Paleolithic and Mesolithic, and was used for hunting or fishing. An attached line was used to retrieve the catch. Some anthropologists refer to all barbed bone or antler points as harpoons.



Harpoons

**harpoon head:** arming tip of a harpoon. They are generally classifiable into two main forms – toggling and barbed – each of which may be composite or single piece, and may or may not carry additional cutting blades or side blades. They always have line-guards or other means of line attachment. [harpoon point]

**harrow:** a frame set with teeth used to drag over plowed fields to break down the earth clods, etc.

**hasp:** a hinged or looped clasp that fits over a staple and is secured by a pin, bolt, or padlock.

**hasta:** a spear or shaft used for thrusting, or as a missile for hurling from the hand, or as a bolt from an engine. The shaft of the spear is called the hastile.

**hatchet:** a small, handled ax.

**heat treating:** process of baking a flint or chert nodule at a high temperature (175–260°C) for 30–50 hours in order to increase the workability of the stone; an aboriginal process by which the flaking properties of a rock were improved by controlled heating in a fire. [heat treatment]

**heddle loom:** a specialized loom that lifts some of the warp (lengthwise) threads so that the weft (crosswise) threads can be passed through the warp easily and quickly. The heddles are short lengths of wire or flat steel strips used to deflect the warp to either side of the main sheet of fabric. Originally heddles were movable rods, but later cords,

wires, or steel bands were used. They are supported by the loom's harness, and each has an eyelet through which the warp threads pass. The heddle is considered to be the most important single advance in the evolution of looms in general. [heald loom]

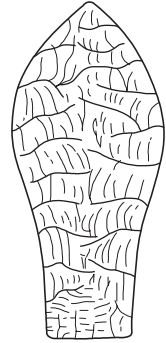
**hei tiki:** a Maori neck pendant, often of greenstone, in the shape of a human.

**Hell Gap:** a Plano tradition complex of the Paleoindian period from c. 11,200 to 8000 BC (the complex dates to c. 10,000–9500 BP) and centered on a well-preserved, deeply stratified site in eastern Wyoming. Hell Gap is also the name of a projectile point type of the Plano tradition, which is bifacially worked with a broad pointed top set on a straight-sided trapezoidal body. The base is narrow and straight. Experiments show that these points were probably spearheads and fully capable of penetrating the hide and ribcage of large beasts such as bison. [Hell Gap point]

**Helladic:** Bronze Age culture of central and southern mainland Greece, with three main divisions: Early (c. 3000–2000 BC), Middle (c. 2000–1550 BC), and Late (c. 1550–1050 BC). It is equivalent to Cycladic in the Cyclades and Minoan in Crete; late Helladic is equated with the period of the Mycenaean civilization. Each of the three periods is subdivided into three phases designated by Roman numerals.

**Hellenistic period:** period of the widest Greek influence, the era between the death of Alexander the Great (323 BC) and the rise of the Roman Empire (27/30 BC), when a single, uniform civilization, based on Greek traditions, prevailed all over the ancient world, from India in the east, to Spain in the west. During these three centuries, Greek culture crossed many political frontiers and spread through many cities founded at that time, especially the new capitals of Alexandria, Antioch, and Pergamum. A common civilization became established throughout the known world for the first time, one which integrated the cultural heritage of each region and subsequently left a deep impression on the institutions, thought, religions, and art of the Roman, Parthian, and Kushan Empires. The Hellenistic cultural influence continued to be a powerful force in the Roman and Parthian Empires during the early centuries AD.

**helmet:** protective headgear that goes back almost as far as evidence for warfare. The basic function was to protect the head, face, and sometimes the neck from the cutting blows of swords, spears, arrows, and other weapons. The Assyrians and Persians had helmets of leather and iron, and the Greeks created bronze helmets, some of which covered the entire head, with only a narrow opening in the front for vision and breathing. The Romans developed several forms of helmets, including the round legionary's helmet and the special gladiator's



Hell Gap point  
(Paleo)

helmet, with a broad brim and pierced visor, giving exceptional protection to the head, face, and neck. The troops on the Royal Standard of Ur wore leather helmets. The Blue Crown worn by the pharaoh in the New Kingdom of Egypt was a war helmet. One type covered with boars' tusks was current among the Mycenaeans. More obviously for parade than war are the bronze examples from the European Late Bronze Age and Iron Age. Among the Villanovans the cinerary urn was often covered with the helmet of the dead warrior. Several fine examples from Britain are decorated with Celtic art. The New World has yielded helmets made of gold and of wood encrusted with turquoise mosaic. The term "helm" was applied by both Saxons and Normans, in the 11th century, to a conical steel cap with a noseguard, the common headpiece of the day. Helmet is a diminutive of helm.

**hematite:** a heavy, deep red iron oxide commonly used by the Indians as decorative body paint and for pictographs. Steel-gray crystals and coarse-grained varieties are known as specular iron ore; thin scaly types are called micaceous hematite. Much hematite occurs in a soft, fine-grained, earthy form called red ocher or ruddle. Red ocher is used as a paint pigment; a purified form, rouge, is used to polish plate glass. The most important deposits of hematite are sedimentary in origin and the largest deposit is in the Lake Superior district in North America. [bloodstone, haematite, red hematite, red iron ore, red ocher, rhombohedral iron ore]

**hematite coating:** a surface treatment for pottery involving the application of powdered hematite iron ore before firing. Hematite may have been mixed with a slip and then applied, or painted on as a suspension in water. When fired the surface normally appears red, although under reduced firing conditions it may turn black. [haematite coating]

**Hembury ware:** a type of plain Early and Middle Neolithic pottery found in southwestern England in the 4th millennium BC, characterized by round-bottomed vessels with straight sides or S-profiled bodies.

**Hemigkofen sword:** a type of bronze sword with a leaf-shaped blade and flanged hilt found in central Europe during the Hallstatt A period and traded to other parts of northern Europe.

**Hengelo interstadial:** a continental Middle Pleniglacial interstadial of the Weichselian cold stage, starting around 39,000 BP. It occurred during the final glaciation between the Moershoofd and Denekamp interstadials.

**herm:** a statue in the form of a square stone pillar topped by a bust or head, especially of Hermes.

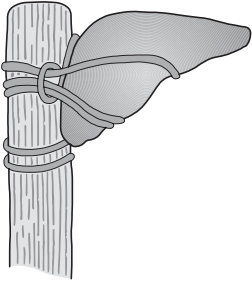
**Hertzian cone of force:** the cone shape in which the energy of a projectile impact in high-silica-content stone radiates through the structure of the stone. [Hertzian cone]

**hide:** dressed skin of an animal (especially a large animal).

- hide scraper:** a tool made out of bone or stone used for removing the flesh from an animal hide.
- hieroglyphic:** ancient writing form with pictographic or ideographic symbols – used in Egypt, Mesopotamia, etc.
- hinge:** a joint that holds two parts together so that one can swing relative to the other; a natural joint that performs a similar function, for example that of a bivalve shell.
- hinge fracture:** a feature of a struck flint flake that occurs either through an error in striking technique or because of the conchoidal nature of a particular piece of flint. Instead of coming to a sharp, thin end, the struck flake ends in a rounded, smooth, turned-out edge.
- hinge termination:** a fracture at the distal end of a lithic flake somewhat like a step termination, but more curvilinear in cross-section, indicating that the shockwave of flake removal curved outwards from the core, toward the distal side of the flake. [hinged (adj.)]
- hippo sandal:** a type of iron shoe for draft animals during Roman times in Britain, for protection of their hooves and to aid in wet conditions.
- Hispano-Moresque pottery:** a tin-glazed, lustrous, highly decorated earthenware made by Moorish potters in Spain in the late medieval period, chiefly at Málaga in the 15th century, and in the region of Manises, near Valencia, in the 16th century. The pottery tends to be plates and jugs with bold, semiabstract designs painted on a creamy background and with a gold luster finish. These wares were much in demand throughout Europe and, judging from finds in northern Europe, they were widely traded. The tin glaze was applied over a design usually traced in cobalt blue; after the first firing, the luster, a metallic pigment, was applied by brush over the tin glaze, and the piece was fired again. Imitation of this pottery in Italy led to the development of Italian majolica ware.
- historic period:** any period of the past that can be studied from its written documents.
- hoard:** any collection of objects buried at one time; a deliberate deposit of complete and/or broken objects buried in the ground for subsequent recovery or as a symbolic act. A hoard often includes valuables or prized possessions. Many hoards represent the personal property of individuals, buried for safety at a time of threat and not recovered. Hoards are a useful source of evidence for archaeologists, because they provide considerable quantities of material and, except in the case of some votive hoards, that material represents a true association. Various classes are distinguished according to their method of accumulation. A merchant's hoard will contain new objects ready for sale. A founder's hoard by contrast will contain obsolete, worn out, or mis-cast objects, and frequently cake metal as well – all of it awaiting melting down and recasting. A votive hoard is rather different in that

the objects were deposited, possibly over a long period of time, in temples or caves, buried, or thrown into water as religious offerings, with no intention of recovery. A hoard of loot is self-explanatory. Bronze Age hoards provide much of the evidence for the period.

**hobnail:** a metal stud hammered into the sole of footwear to provide grip. [hob nail]



Hoe

**hoe:** one of the oldest tools of agriculture, a digging implement consisting of a blade set at right angles to a long handle (haft). Early hoes had stone or wooden blades. Examples made from antler go back to the Mesolithic. Most early hoes were used by the farming peoples of the Neolithic. Hoes succeeded the digging stick and gave rise to the plow. The digging stick, the precursor of most agricultural hand tools, was simply a sharpened branch sometimes weighted with a stone. [mattock]

**Hofheim-type flagon:** a single or double-handled flagon with a cylindrical neck and outcurved rim, triangular in section, c. mid 1st century AD, from Hofheim, Germany.

**hog-backed grave cover:** type of stones used to cover graves during the 10th century AD in northern England and southern Scotland – rectangular blocks with flat bottoms and pitched tops usually decorated with interlaced designs.

**hokei shukobo:** burial precincts of the Yayoi and Kofun periods of Japan. There are coffin and pit burials of adults and jar burials of children.

**holdfast:** a metal fastener used to hold a tile or stone against a spacer and driven into a wall, thus forming a flue between the wall and the tile or stone; also used to hold timber together.

**hollow ware:** cups, jugs, bowls, etc. and serving dishes and accessories, especially of silver, that are hollow or concave; hollow articles of cookware or crockery.

**hollow scraper:** a blade or flake tool with a notch in the side or the end showing signs of being worked.

**Holocene:** present geological epoch, which began some 10,000 (bp) years ago (8300 BC). It falls within the Quaternary period (one of the four main divisions of the Earth's history) and followed the Pleistocene Ice Age. The Holocene is marked by rising temperatures throughout the world and the retreat of the ice sheets. During this epoch, agriculture became the most common human subsistence practice. During the Holocene, *Homo sapiens* diversified his tool technology, organized his habitat more efficiently, and adapted his way of life. The Holocene stage/series includes all deposits younger than the top of either the Wisconsinian stage of the Pleistocene series in North America or the Würm/Weichsel in Europe.

**Holstein:** north European Middle Pleistocene warm phase occurring between the Elsterian and Saalian cold stages, c. 300,000–200,000 BP. These deposits are stratified above the Elster glacial deposits

and are overlain by the Saale glacial deposits. The Alpine equivalent is the Mindel-Riss and the North American equivalent is the Yarmouth. In Britain, it was the Hoxnian.

**Holt ware:** a pottery made at Holt, Denbighshire, England in the late 1st and early 2nd centuries AD of light-red and buff fabric.

**hook and eye:** a small metal hook and loop used together as a fastener on a garment.

**Hopewell point:** distinctive broad-bladed points of an agricultural sub-culture of the Woodland stage, with complex settling in Ohio and Illinois, around 100 BC and lasting to AD 500.

**hopper mortar:** a mortar whose sides are formed by a bottomless basket attached to the stone.

**horizon:** 1. Any artifact, art style, or other cultural trait that has extensive geographic distribution but a limited time span. The term in anthropology refers to the spread of certain levels of cultural development. The main meaning, however, refers to a phase, characterized by a particular artifact or artistic style that is introduced to a wide area and which may cross cultural boundaries. Provided that these "horizon markers" were diffused rapidly and remained in use for only a short time, the local regional cultures in which they occur will be roughly contemporary. A horizon can also be defined as a primarily spatial continuity represented by one or more cultural traits whose nature and mode of occurrence permit the assumption of a broad and rapid spread. In the Andes, the sequence of the horizons was: Preceramic, Early Horizon, Early Intermediate, Middle Horizon, Late Intermediate, and Late Horizon. In Mesoamerica, the sequence was: Formative, Classic, and Post-Classic. [horizon style] 2. In geology, horizons are the layers of natural features in a region; in soil science, a horizon is a layer formed in a soil profile by soil-forming processes.

**horizontal loom:** a structure for weaving fabric made of a frame set horizontally across vertical supports. The warp threads are tied across the frame from front to back so that they can be wound out as weaving proceeds. The warp is usually arranged so that alternate threads can be raised and lowered, thus allowing the weaver to pass a shuttle containing the weft thread from side to side across the warp.

**horizontal-transverse flaking:** a unique flaking style where horizontal parallel flakes are removed that extend from one edge of the blade, across to the other edge.

**horn:** one of a pair of bony processes that grow from the head of many hoofed mammals. They are usually permanent hollow sheaths of keratin present in both sexes of cattle and their relatives. Antlers are also horns.

**horns of consecration:** a religious symbol of the Minoans, especially at the palace of Knossos, etc., made of alabaster or other stone and based on the horns of a sacrificed bull. [sacral horns]

- horse bit:** a metal mouthpiece on a bridle, used to control a horse.
- horsehoof core:** a steep-edged, often large, domed core with flat-based striking platforms, heavily step-flanked around their margins. Both very large and smaller varieties are found commonly on Pleistocene sites in most areas of Australia and on some mid-Holocene sites; they are considered characteristic of the Australian Core Tool and Scraper tradition. They were chopping tools mainly used in woodworking. The step-flaking could have resulted from repeated striking to remove flakes.
- horseshoe:** a covering for the base of a horse's foot consisting of a narrow band of iron in the form of an extended circular arc.
- hourglass perforation:** a type of perforation found in many prehistoric stone artifacts in which holes are drilled from opposite sides of the artifact. The perforation tends to be biconical or hourglass in form. [hour-glass perforation]
- household cluster:** a term used to describe a set of features associated with one house structure. Components would include a house, a few storage pits, some graves, a rubbish area, perhaps an oven or hearth, and activity areas. It is an arbitrary archaeological unit defining artifact patterns reflecting the activities that take place around a house and assumed to belong to one household. [household unit]
- Hoxnian:** an interglacial stage of Great Britain that is correlated with the Needian interglacial of the Netherlands, the Holstein interglacial of northern Europe, the Mindel-Riss interglacial of Classical Alpine Europe, and is also considered to be approximately contemporaneous with the Yarmouth interglacial of North America. It is named after the site of Hoxne where deposits are older than the extreme range of radiocarbon dating (70,000 bp). Some Hoxnian deposits are stratified above Anglian glacial deposits, others below Wolstonian glacial deposits. Acheulian and Clactonian artifacts are found in Hoxnian deposits. In addition, parts of hominid skulls have been found in Hoxnian gravels at Swanscombe.
- huaca:** a South American term for places that the Inca believed to be sacred and to have magical powers. Derived from the Quechua word for shrine, a huaca can be a rock or cave or even an amulet.
- Huai style:** a type of bronze decoration used in the 6th to 3rd centuries BC by the Eastern Zhou/Chou. Cast in relief, the decoration was a dense array of hooks and curls. The style is found by and named for the Huai River. In its early manifestations, the Huai style might be viewed as a Yangzi region counterpart to the Liyu designs of north China. The most outstanding Huai-style designs, including extraordinary examples from Sui Xian, belong to the 5th century. This term is sometimes used for a period style applicable to the whole of China for the years around 650–200 BC.



- huang:** a flat, semicircular or arc-shaped jade pendant known from Neolithic sites in China and made throughout the Bronze Age.
- Huang-tao ware:** a type of Chinese stoneware made in the T'ang dynasty (618–907 AD) in the Honan province. It is glazed in black or brown and splashed with an opalescent bluish or gray contrasting glaze.
- hue:** first quality of a color corresponding to its perception as visible light as red, blue, green, etc. In Munsell nomenclature, hue refers to different pages or sheets corresponding to the radii of the color cylinder model.
- Humbolt series point:** bifacially worked chipped stone points of lanceolate outline, hollow base, and no side notches, manufactured in the Archaic stage of the Great Plains and western North America in the period c. 3000 BC to AD 700.
- hunt cup:** a style of Roman color-coated beaker with a decorative hunting scene in barbotine.
- Huntcliff ware:** a variety of calcite-gritted pottery made in east Yorkshire from the 1st century AD through to the 4th century AD. It is black or dark brown and handmade.
- hydration rim:** a surface layer on obsidian artifacts that can be measured as a dating technique.
- hydria:** a form of Greek water pot; a large jar or pitcher for carrying water with two or three handles. The body was bulbous, the neck round. It was wider and usually lower than the amphora and it had a well-defined foot and neck. There were two horizontal loop handles on the body for carrying and one vertical handle from the rim to the shoulder for pouring.
- hydroceramic:** designating porous, unglazed pottery in which liquids were cooled or filtered. [hydro-ceramic]
- hygroscopic:** ability or tendency of a material to take up moisture readily from the surrounding air or other most materials.
- Hypsithermal:** a Holocene climatic optimum in the eastern woodlands of North America, equivalent to the Altithermal segment of the Holocene epoch (the Holocene runs from 10,000 years ago to the present), dated on the basis of pollen studies. The Hypsithermal climatic interval began about 9000 years ago and ended about 2500 years ago. It has been divided into smaller units beginning with the Boreal. The Hypsithermal follows the Pre-Boreal and precedes the Sub-Atlantic intervals. It was a time of comparatively warm climatic conditions which resulted in the elimination of many cooler plant and animal refuges and the extinction of some species. In many parts of the world, pine forests gave way to forests dominated by oak during the Hypsithermal. Mesolithic and Neolithic cultures are contemporaneous with Hypsithermal events in both the New and Old Worlds.

# I

**ice age:** a period of intense cold and the expansion of glaciers, resulting in a lower sea level. Such periods of large-scale glaciation may last several million years and drastically reshape surface features of entire continents. In the past, there were many ice ages; the earliest known took place during Precambrian time dating back more than 570 million years. The most recent periods of widespread glaciation occurred during the Pleistocene epoch (1,600,000–10,000 years ago). A lesser, recent glacial stage called the Little Ice Age began in the 16th century and advanced and receded intermittently over three centuries. Its maximum development was reached about 1750, at which time glaciers were more widespread on Earth than at any time since the principal Quaternary ice ages. The idea of an ice age in the geological sequence is usually credited to Jean Louis Agassiz, a Swiss naturalist, who suggested it c. 1837. Agassiz conceived a worldwide cold period when areas as far apart as North America and Germany had been glaciated.

**icon:** a single image created as a focal point of religious veneration, especially a painted or carved, portable object of the eastern Orthodox faith, which spread through the Christian world from the mid 6th century AD onwards, though little survives from before the 10th century. They are a central component of the material culture of the Orthodox church.

**ideofact:** archaeological material resulting from past human ideological activities; any object whose function is to express or symbolize the beliefs of a people rather than to serve practical or social needs.

**ideofunction:** use of an object for ideological purposes; for example, the wearing of a special garment as part of a religious ceremony. [ideofunctional (adj.)]

**ideotechnic:** properties of an artifact that definitively reflect the mental, cognitive component of culture.

**igneous rock:** a rock that originated as molten magma from beneath the Earth's surface and subsequently came to the surface as an extrusion, or remained below ground as an intrusion. The nature of the rock depends in part on the rate at which it cooled; as intrusions of magma slowly solidify, enough time elapses for large crystals to form whereas extrusions cool quickly, leaving little time for crystal growth. Thus, a coarse-grained, intrusive igneous rock has a fine-grained, extrusive counterpart – granite is coarse rhyolite and gabbro is coarse basalt. Igneous rocks are also classified as acid or basic, according to whether their silica content is high (e.g., granite) or low (e.g., basalt).

**Illinoian:** a glacial stage of the Quaternary in North America, followed by the Sangamon interglacial and following the Yarmouth. The Illinoian ice sheet covered a small area of southeastern and extreme eastern Iowa, and in so doing it diverted the Mississippi River and created a valley along its western front that can still be seen. It consists mainly of tills, the products of large ice sheets, and has been split up into three substages: the Liman, Monican, and Jubilean. It is unclear how many cold stages the Illinoian deposits represent, but it may be more than one. The Illinoian glacial stage ended with a cool, moist period that gradually became drier and then warmer. The Illinoian has never been dated satisfactorily but it is roughly contemporary with the Riss and Saale glacial periods.

**illite:** a group of clay minerals having a three-layer, nonexpanding structure similar to that of well-crystallized micas.

**imbrex:** a Latin term used to describe a semicylindrical tile used to cover the flanges of two adjoining tegulae; a roof-ridge tile, semicircular in cross-section.

**imbrication:** covering with a design in which one element covers a part of another (as with tiles or shingles). [imbrix]

**impact fracture:** a breakage of the distal tip of a projectile which is characterized by a missing portion of the tip and an elongate fracture scar extending along one face of the blade. It usually occurred during impact when a point was thrown or shot.

**impasto:** 1. A type of early pottery of Etruria, made from unrefined clay and fired to a dark brown or black, especially during the Villanovan period. Some pieces were biconical urns and hut models and were used for cremations. 2. A paint that is applied to a canvas or panel in quantities that make it stand out from the surface. It was used frequently to mimic the broken-textured quality of highlights – i.e., the surfaces of objects that are struck by an intense light.

**Impressed ware:** earliest Neolithic pottery of the Mediterranean area, with decoration impressed into the clay by sticks, combs, fingernails, or seashells, from before 6000 BC to around 4000 BC (though until later in North Africa). The pottery itself was characterized as having simple, round-bottomed shapes. The serrated edge of the cardium shell was particularly popular in the western area, giving the alternative name of Cardial ware. Before c. 5000 BC the ware is found mainly in caves or rock shelters or shell midden sites, where it was associated with hunting-gathering and the breeding of sheep. Around 5000 BC, crop cultivation was introduced and large settled villages sprang up. Other types of pottery are found alongside Impressed ware at this stage, including fine red-painted ware in Italy, Stentinello ware in Sicily, and Ghar Dalam ware in Malta, which represent specialized versions of Impressed ware. The pottery style may have originated in Asia Minor or even Yugoslavia (Starcevo culture).

**impressing:** a type of pottery decoration produced by pressing something into the surface of the clay when still soft. Stamped decoration is a special form of this, in which a stick or bone is previously carved to give the impression its design. Intermediate in form are the impressions of natural objects like bird bones or serrated seashells. There are a number of cultures that made pottery with impressed designs. [impressed decoration, impressed finger-tipping, impression; impressed (adj.)]

**in situ:** in the normal or natural or original position or place – describing an artifact encountered during excavation or survey. From the Latin for “in its original place.”

**incense burner:** any container, often of bronze or pottery and fitted with a perforated lid, in which incense is burnt. The burning of incense as part of ritual life was a widespread practice in Mesoamerica, from as early as the Pre-Classic period, as well as in Europe and the East. In Mesoamerica there is considerable variety in form, from the simple small candelero (Teotihuacan) to the highly elaborate incensarios of Palenque and Mayapan. Copal, the Maya word for pine resin, was widely traded as incense; it appears in the Aztec tribute lists in the Codex Mendoza. In China during the Han dynasty (206 BC to AD 220), a type of vessel known as a hill censer was used. Incense burners of the Ming dynasty (1368–1644) were made in two basic forms: a square vessel on four feet, fitted with two handles and a pierced lid, and a circular tripod vessel, also fitted with a perforated lid.

**incense cup:** a small subsidiary vessel found with Middle Bronze Age burials and placed beside food vessels or urns in southern England. It is found with the skeleton or cinerary urn in the barrows of the Wessex culture, c. 1700 BC. The name is an archaeological label only, arising from the holes some of these vessels have through their walls, as their use is actually unknown. [pygmy vessel]

**incise:** to make a cut or cuts in a surface; to cut (a mark or decoration) into a surface. [incised (adj.)]

**incised slate:** a flat, unshaped stone tablet containing motifs inscribed by a human hand.

**incising:** a technique for decorating ceramics that involves cutting linear designs into the surface of an object. [engraving]

**incision:** a finishing technique in ceramics manufacture whereby a narrow tool cuts into the surface, displacing material to either side and drags along to deposit more material toward the end of a linear or curvilinear trough or valley. [incised decoration; incised (adj.)]

**inclusion:** material added to clay to provide strength and improve the firing process. Inclusions can be very fine, fine, medium, coarse, or very coarse. The main inclusion types are: organic, flint, grog, shell, ironstone, limestone, mica, sand (quartz/quartzite), volcanic/igneous, or unknown. [temper]

**incrusting:** impressing of material into the surface of a ceramic object.

**incurvate:** a term to describe an outline or shape that is indented or convex; it is a form of the basal edge or stem base outline.

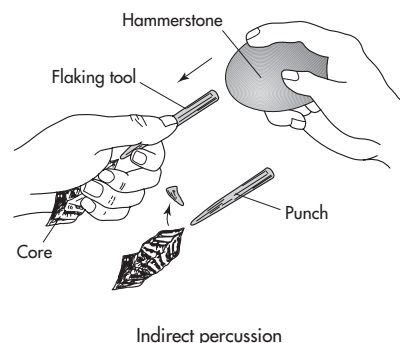
**indented:** pertaining to the sides of a vessel that have been pushed in a regular sequence to form oval concavities. [dimpled, folded, thumb-indented]

**index fossil:** a fossil with widespread geographic range but which is restricted in time to a brief existence. In archaeology, it is a theory that proposes that strata containing similar fossil assemblages will tend to be of similar age. This concept enables archaeologists to characterize and date strata within archaeological sites using diagnostic artifact forms, making an animal species the basis for dating by faunal association. Artifacts that share the attributes of index fossils are useful in the cross-dating and correlation of deposits that contain them and in the construction of chronologies. [index fossil concept, index species]

**indigenous remains:** artifacts or ecofacts that were created only shortly before the deposit in which they were found. [indigenous finds]

**indirect percussion:** a technique of stone-tool manufacture in which flakes are removed from a flint core in a way that causes less wasteful shatter of the material than direct percussion. The hammer or hammerstone does not strike the flint but rather a wood, antler, or bone punch, usually with a prepared edge, so that the manufacture of flakes is more controlled. [indirect flaking]

**industry:** 1. A frequently repeated assemblage of a particular material or function, e.g., flake industry, flint industry. Such an assemblage of artifacts including the same types so consistently suggests that it is the product of a single society. 2. A large grouping of artifacts that is considered to



represent or identify a particular people or culture, e.g., the Acheulian industry. If more than one class of objects (e.g., flint tools or bronze weapons) is found, it is a “culture.”

**infiltrated remains:** artifacts or ecofacts that were created after the deposit in which they were found, but worked their way into it without necessarily leaving any obvious trace of their infiltration. [infiltrated finds]

**infusible clay:** clay that is not fusible and not capable of being dissolved or melted.

**ingot:** a shaped or cast mass of unwrought metal resulting from smelting or other extraction process. Ingots are often of a standard weight, and sometimes of a guaranteed purity. Examples include the ingot of the Mycenaeans (c. 30 kg (65 pounds) of copper) in the shape of an ox hide, the bronze ingot torc of the European Bronze Age, the iron currency bar of the English Iron Age, and the Roman lead pig stamped with the smelter’s name.

**Initial Period:** the period of 1800–900 BC marking the introduction of pottery in Andean South America. It was also the time when agriculture and animal husbandry began to be the subsistence base for most cultures in the area. It is one of a seven-period chronological construction used in Peruvian archaeology. Its close is marked by the occurrence of Chavín materials and the abandonment of many of the coastal centers. Many of the traits that make up the Peruvian cultural tradition – such as intensive agriculture, the widespread use of textiles, monumental ceremonial architecture, and larger and more numerous population centers – occurred during this period.

**inlay:** placement of one material, either glass or metal, into a prepared depression (reservoir) on the surface of an item for decorative purposes.

**inorganic material:** material that is neither animal nor plant; inanimate, or artificial material.

**inscribed:** pertaining to marks or lines forming a design, motif, image, or pattern of some kind that has been cut into stone, metal, bone, wood, ceramic, or other fairly soft material.

**inscription:** something that is inscribed; the act of inscribing. It is writing or any type cut into or raised upon a hard surface – clay, wood, stone, metal, etc. – and therefore endures. Inscriptions on coins, medals, seals, currency notes, etc., may be done with symbolic picture writing, abbreviations, or phonetic alphabets.

**intaglio:** a gemstone into whose surface a decoration is cut; this technique of decoration. This prehistoric incised carving was also done on precious metal. The design was especially used on seal stones, which were sometimes set into rings and used as personal seals. The engraved subject is sunk beneath the surface, thus distinguishing it from a cameo, which is engraved in relief.

**Integration period:** last stage of Ecuadorian prehistory, from about AD 500 to the Inca conquest (AD 1550), characterized by greater cultural uniformity over wider areas. There is evidence for urban centers, class distinction, intensive agriculture, and high-quality metallurgy throughout the region. The absorption of Ecuador into the Inca Empire was the culmination of this trend. It is part of the chronological continuum – the Formative, Regional Development, and Integration periods – formulated by Betty Meggers.

**intercalation:** act or instance of inserting extra time such as days, months, and the like, into the calendar.

**Intercultural style:** a style of decoration of stone vessels, normally made of chlorite, found in Iran, Mesopotamia, and the Persian Gulf in the second half of the 3rd millennium BC. Vessels and other objects made of chlorite, steatite, serpentine, and other soft stones, shared a rich iconography. A production center was discovered at Tepe Yahya. [Intercultural style carved chlorite]

**interglacial:** a warm period between two glaciations with little or no glacial ice, and with warm climate processes, deposits, flora and fauna, and increased soil formation. The ice sheets diminish in area, and the improved climate allows the growth of temperate types of vegetation. The last 10,000 years (the Holocene) is probably an interglacial. During the Quaternary, interglacials have been considerably shorter than glaciations.

**interior flake:** a flake having no cortex. [noncortical flake, tertiary flake]

**interlace:** a pattern of ornamentation that consists of twisted and plaited ribbons making geometric patterns, or of intertwined strands extending from animal and plant motifs. In the 7th and 8th centuries, interlace ornament was refined and used to great effect by Celtic and Anglo-Saxon metalworkers, sculptors, and manuscript illuminators. This artistic tradition was also prominent during the Viking period.

**Intermediate Periods:** one of the three periods in Egyptian history when the country was divided into regional potentates instead of being united. These periods occurred between the Old Kingdom, Middle Kingdom, New Kingdom, and Late Period. The First Intermediate Period was 2130–1938 BC, the Second Intermediate Period was 1630–1540 BC, and the Third Intermediate Period was 1075–656 BC. In Andean/Peruvian archaeology, there were also intermediate periods. The Early Intermediate Period (200 BC to AD 600) was characterized by the rise of the first great city states, such as Moche and Nasca. The Late Intermediate Period (AD 1000–1476) was characterized by the presence of numerous fractionalized corporate units which arose after the decline of Tiahuanaco and Huari, e.g., Chimu and Aymara.

**interstadial:** a brief period of milder climate within a longer, cooler glacial period (between two cold periods during a major glaciation). Although

it is similar to an interglacial period, it is too cold or too short to allow growth of vegetation. Examples are the Devensian, Weichselian, and Wisconsin.

**intrinsic attribute:** a characteristic that is inherent in an object, such as its length, mass, or chemical composition.

**invent:** to create a new artifact.

**invention:** creation of a new type of technology, often in response to a need to accomplish some task.

**inverse retouch:** retouch that occurs on the edge of a lithic flake, visible only in the ventral view.

**Ipswich ware:** a pottery ware made in the 7th to 9th centuries at Ipswich, England, where kiln debris has been found. The cooking pots and undecorated pitchers were distributed widely in East Anglia, while stamp-decorated pitchers were traded as far as York and Richborough. This ware makes it possible to identify sites of the middle Saxon period.

**Ipswichian:** last interglacial of Britain, equivalent to the Eemian interglacial of North Europe, with its type site at Bobbit's Hole, Ipswich. The Alpine equivalent is the Riss-Würm and the Sangamon is the North America equivalent. The deposits indicate warm conditions with evidence of vertebrate fossils. One radiocarbon date of 174,000–30,000 bp has been found. Levalloisian and Mousterian artifacts are found in Ipswichian deposits.

**Irish bowl:** type of Early Bronze Age ceramic vessel of Ireland and west Scotland, mainly with inhumation burials, from around the early 2nd millennium BC. These vessels have a small flat base, biconical form, sometimes perforated lugs on the carination, and an internally beveled rim. The upper part of the body, neck, and rim are usually decorated with impressed cord or other motifs. [Irish food vessel]

**iron:** a ductile, malleable, magnetic metallic element, used to make artifacts of both practical and decorative function. Its oxide form, hematite, is found naturally and the technique of ironworking was mastered around 1500 BC by the Hittites. Iron began to spread and replace bronze for man's basic tools and weapons – the start of the Iron Age. Early in the 1st millennium BC, iron industries were established in Greece and Italy, and by 500 BC iron had replaced bronze for the manufacture of tools and weapons throughout Europe. The pre-Columbian New World, however, did not develop iron technology. Iron smelting is more complicated than for copper or tin, since the first smelt gives only slaggy lumps, the bloom. Hammering at red heat is then required to expel the stone fragments and to combine carbon with the iron to make in effect a steel; the resulting metal is far superior to copper or tin. The two basic methods of working it are by forging – hammering into shape at red heat – and casting. The Chinese used the latter method as early



as the 5th century BC, but it was not employed in Europe until the Middle Ages. The first evidence of iron smelting in Egypt dates to the 6th century BC. Large-scale steel manufacture depends on the production of cast iron, which in Europe dates only from the 14th century AD. The West did not enter the “Age of Steel” until the 19th century with the invention of the Bessemer and Siemens processes, which are industrial processes for obtaining liquid metal of any desired carbon content by the decarburization of cast iron. Steel was made in China within a few centuries of the first known use of smelted iron. In principle, modern techniques descended from China’s casting techniques.

**Iron Age:** period during which iron was utilized by early man, beginning about 3000 years ago, following the Stone Age and Bronze Age in the Three Age System. In this period, tools, implements, and weapons were first made of iron. Iron had many advantages over bronze, so its spread was rapid. The Iron Age began at different times in different parts of the world according to the availability of iron ore and the state of knowledge. In Europe, the earliest iron appears around 1100 BC. The traditional timing of the transition from bronze to iron is placed in the early 1st millennium BC. The age began about 1500 BC in the Middle East, about 900 BC in southern Europe, and after 400 BC in northern Europe. In most of Asia, the Iron Age falls entirely within the historic period. In America, iron was introduced by the arrival of Europeans; in Africa, it began before the earlier metal ages. The southern African Iron Age is divided into the Early Iron Age, AD 200–1000, and the Late Iron Age, AD 1000 until the 19th century. The term is general and arbitrary. There is evidence that meteorites were used as a source of iron before 3000 BC, but extraction of the metal from ore dates from about 2000 BC.

**iron pyrites:** a nodule of iron pyrites can be used to create fire in combination with tinder and flint or another nodule of iron pyrites.

**ironstone:** a hard sedimentary rock rich in iron, especially a siderite in a coal region. This ore of iron, commonly a carbonate, has clayey impurities. Ironstone china is a hard, heavy, durable white pottery developed in England early in the 19th century.

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**isochrestic style:** a style of toolmaking representing the maker’s particular choices among alternatives in a particular cultural context.

**isochronous:** formed during the same span of time. Isochronal means uniform in time, having equal duration, recurring at regular intervals.

**isolate:** one or two artifacts occurring by themselves and not associated with an archaeological site; generally thought to represent items lost or discarded by people as they moved through an area.

**isolated data:** a single object that is found without association to any other artifact or feature; typically lost during travel or moved by a relic hunter. Any unassociated archaeological remains.

**ivory:** material from enlarged teeth (or tusk) of certain mammals and used for various tools and artifacts from the Upper Paleolithic. The tusks of elephants, mammoths, and walruses have been prized throughout prehistory and history.

# J

**jade:** a name applied to two distinct minerals, nephrite and jadeite; a general term for a semiprecious stone used in East Asia from the Neolithic onwards. Jade, in the form of polished axes, was traded in Neolithic Europe but is chiefly known from contexts in China and Mesoamerica. It is too hard to be cut or flaked, but may be worked by abrasion. The most highly prized of the two is jadeite.

**jadeite:** a rare mineral, the mostly highly prized of the two distinct minerals which may be called jade. Much of jadeite is green, but it varies widely in color. It is a stone carved by Mesoamericans into ornaments and statuary. Many prehistoric artifacts in Europe are made from jadeite, but no suitable European resources are known today. Sources of jadeite are known in Burma, Mexico, and California.

**jadeite ax:** a thin, highly polished, unperforated implement from the 4th and 3rd millennia BC in northwest Europe. [jadeite axe]

**Japanese periodization:** a classification used by archaeologists and historians: Jomon 10,000–300 BC, Yayoi 300 BC to AD 300, Kofun 300–710, Nara 710–794, Heian 794–1183, Medieval (Kamakura, Muromachi, Momoyama) 1183–1603, Feudal (Edo/Tokugawa) 1603–1868, Meiji 1868–1914, Taisho 1914–1925, Showa 1925–1988, and Heisei 1989 to present.

**jar:** a wide-mouthed cylindrical container made of glass or pottery.

**jasper:** a high-quality chert or agate often used as raw material for the manufacture of stone tools. It is an opaque, fine-grained, or dense variety of the silica mineral that is mainly brick-red to brownish-red. Jasper has long been used for jewelry and ornamentation, has a dull luster but takes a fine polish. Its hardness and other physical properties are those of quartz. [jasper chert]

**javelin head:** a type of large flint projectile point of the Neolithic in the British Isles, usually lozenge shaped with slightly convex curves on the leading edges; sometimes polished and ground on the large flat sides.

**Jellinge style:** an art style that takes its name from the Viking site at Jellinge. Much Anglo-Saxon and Scandinavian art from the 9th century until the mid 11th century is characterized by animal ornament and zoomorphic motifs, which are usually disjointed, stylized, and abstract. This type of decoration was most often applied to jewelry, sculptured crosses, and sculptured stones.

**Jemdet Nasr:** a small site between Baghdad and Babylon, near Kish, Iraq, which has given its name to a period of Mesopotamian chronology and its black-and-red painted pottery ware. The period of 3100–2900 BC was characterized by writing in pictographs, pottery with painted designs or plum-red burnished slip, and plain pottery with beveled rims. Cylinder seals are squat and plain and a drill was used in the designs. The period is characterized by increasing populations, the development of more extensive irrigation systems, towns dominated by temples, increased use of writing and cylinder seals, more trade, and craft specialization. The period – equivalent to Uruk III of the Eanna Sounding sequence – was followed immediately by the Early Dynastic period of Sumer. A building of Jemdet Nasr date may be the oldest palace discovered in southern Mesopotamia. [Jamdat Nasr]

**Jermanovice point:** a type of laurel-leaf point flaked completely on one side but bifacially only on the lower part of the blade and on the bulb of percussion. From the Upper Paleolithic Jermanovice culture in Poland.

**jet:** a hard, black, dense form of coal, a lignitic fossil wood. It has been used for decorative purposes (beads, buttons, etc.) in the British Bronze Age as it accepts a strong polish and has good workability. Ornaments of jet are found in ancient tumuli. A well-known British source of jet is at Whitby in Yorkshire.

**jetton:** a token with an engraved design used as a gaming piece or in transactions.

**jewelry:** decorative objects made mainly for the adornment of the body. The art of jewelry-making originated in prehistoric times when early peoples used objects from the animal world – such as horn, shells, and feathers – to adorn themselves. Cave paintings and carvings show figures decorated with bracelets, necklaces, and headdresses. Brooches, or fibulae, were used to fasten clothes and were made of bronze or silver and some were enameled. There were also finger rings and earrings.

**jiggering:** a pottery-forming technique that involves the use of a rotating mold that leaves its impression on either the interior or exterior

surface of the vessel, which is otherwise shaped by wheel-throwing. When the clay body is placed within a concave mold, the process may be called jollying. In jiggering, an article of ceramic is formed by means of a rotating mold and profile tool, usually the mold has the contour of the interior and the profile has the contour of the exterior surface. [jollying; to jigger (v.)]

**joining:** in large ceramics manufacture, several primary components may be joined with the seam removed or hidden.

**jollying:** a technique to form a ceramic hollow ware using a machine similar to a jigger, but the rotating mold forms the outside while a profile forms the interior. [jollying; to jolly (v.)]

**Jomon:** earliest major postglacial culture of hunting and gathering in Japan, 10,000–300 BC, divided into six phases. This early culture, its relics surviving in shell mounds of kitchen midden type around the coasts of the Japanese islands, had pottery but no metal. The pottery was heavy but elaborate, especially in the modeling of its castellated rims. The term Jomon means “cord marked,” reflecting the characteristic decoration of the pottery with cord-pattern impressions or reliefs. One of the earliest dates in the world for pottery-making has been established as c. 12,700 BC in Fukin Cave, Kyshu. Other artifacts, of stone and bone, were simple; light huts, round or rectangular, have been identified. Burials were by inhumation, crouched or extended. The Jomon was succeeded by the Yayoi period. There are over 10,000 Jomon sites divided into the six phases: Incipient (10,000–7500 BC), Earliest (7500–5000 BC), Early (5000–3500 BC), Middle (3500–2500/2000 BC), Late (2500/2000–1000 BC), and Final (1000–300 BC). Widespread trading networks and ritual development took place in the Middle Jomon. Rice agriculture was adopted during the last millennium BC. The origins of Jomon culture remain uncertain, although similarities with early cultures of northeast Asia and even America are often cited.

**Ju ware:** the most highly prized of all Chinese ceramics. Ju wares were produced exclusively for the Northern Sung emperor Hui-tsung from about AD 1107 to 1127. The original kiln site, Ch'ing-liang-ssu, yielded 37 examples. The undecorated bluish- or greenish-gray glaze of Ju wares is cloudy and opaque, often with a pale blue or lavender tinge and fine irregular crackle. This glaze typically covers a gray stoneware body that has a simple, exquisitely elegant shape. [Ru]

**Juan knife:** a long flake with abrupt blunting retouch along one margin. Ethnographic specimens have handgrips of skin or resin and are documented from western, central, and eastern Queensland, Australia. They are very rare in archaeological contexts and are only known from the last few hundred years.

**jue:** a bronze wine vessel characteristic of the Shang bronze tradition of China and used for heating wine in ancestral rituals. [chueh]

**jug:** a deep container for liquids, with a narrow mouth; a cylindrical container with a handle and a lip, for holding and pouring liquids.

**jute:** a plant fiber used in making rope or sacks.

# K

**kabal:** a turntable used in pottery-making in the New World.

**kachina:** a deified ancestral spirit in the mythology of Pueblo Indians.

**Kansyore ware:** a comb-stamped pottery found at several pre-Iron Age sites around Lake Victoria in East Africa in the first millennium BC. The makers of Kansyore ware appear to have been hunter-gatherers, and the makers of a backed microlith industry.

**kantharos:** in Greek antiquity, a large, two-handled drinking cup. This type of pottery cup was made in Greek-speaking areas and in Etruria between the 8th and the 1st centuries BC; it had a deep bowl, a foot, and pair of high vertical handles. It was often consecrated to personifications of Bacchus. Early examples are often stemmed. In the 4th and 3rd centuries BC, it became one of the most popular types of drinking vessel in the Greek world. [cantharus]

**kaolin:** a fine white porcelain clay formed by the weathering of volcanic rocks. Kaolin is named after the hill in China (Kao-ling) that yielded the first clay of this type sent to Europe. This soft white clay is an essential ingredient in the manufacture of china and porcelain and is widely used in the making of paper, rubber, paint, and many other products. [china clay]

**kaolinite:** a common clay mineral with a two-layer structure of silica and alumina.

**kendi:** a spouted water container made in Southeast Asia during the late 1st and early 2nd millennia AD.

**Kensington Stone:** a stone slab found on a Minnesota farm in 1898 with an inscription in runes purporting to record the arrival of a party of exploring Vikings. An object of controversy from the start, it is now dismissed as a forgery, despite recent confirmation of Viking visits to the eastern American coast. This supposed relic of a 14th-century

Scandinavian exploration of the interior of North America is a 90 kg (200-pound) slab of graywacke inscribed with runes (medieval Germanic script). The inscription, dated 1362, is purported to be by a group of Norwegian and Swedish explorers from Vinland who visited the Great Lakes area in that year. The stone is housed in a special museum in Alexandria, Minnesota, and a 26-ton replica stands in nearby Runestone Park.

**Kerbschnitt:** technique of carving or decorating wood by use of an ax or hatchet. [chip carving, chip-carving]

**Kerma ware:** distinctive thin-walled pottery with a black-and-red finish, produced by the Kerma culture in various shapes.

**kernos:** a Greek cult vessel – dish, bowl, or jar – made of terra cotta or stucco-covered, sun-baked brick and used for the offering of first fruits. The jar held small cups around its lip and examples are found from the Bronze Age onwards.

**kero:** a large, wooden, flared beaker, with black, white, and light red designs of pumas, condors, and other creatures on a dark red background and decorated with incised geometric patterns. It is found from Inca times through to post-conquest dates, but as pottery was used by the Tiahuanaco culture.

**kettle:** a vessel, usually made of metal and with a handle, used for boiling liquids or cooking foods; a pot.

**kettle drum:** large bronze drums, also known as Dong Son drums (northern Vietnam), first produced more than 2000 years ago and found throughout Southeast Asia (with the exception of the Philippines and the island of Borneo). These drums are generally associated with wealth, power, and fertility and were important in rituals. [Dong Son drums]

**key:** a small piece of shaped metal with incisions cut to fit the wards of a particular lock, which is inserted into the lock and rotated to open or close it or to operate a switch.

**key blank:** an object that is going to become a key. It has the shape but has not been cut to fit a lock.

**khoker frieze:** name of a decorative motif common in ancient Egyptian architecture from at least as early as the 3rd dynasty (2686–2613 BC). The motif consists of rows of knots in decorative carved or painted friezes around the upper edges of buildings.

**Khirbet Kerak:** a Palestinian site on the southwest shore of the Sea of Galilee, settled from the Early/Middle Bronze Age and occupied again from the Hellenistic to the Byzantine periods. In the 4th to 3rd millennia BC, it was a small walled town which lent its name to a distinctive pottery ware (Khirbet Kerak ware, c. 3400) which has been found on many sites throughout the Near East, from Judeidah in Amuq to Lachish in the south. This highly burnished ware with red or black



slip is often incised or ribbed in decoration. Its origins lie up in the southern Caucasus (it was related to early Transcaucasian wares), from which it was likely carried south by an emigration of the ancestors of the Hittites. The pottery belongs to the Early Bronze Age III phase and has a wide distribution in Syria and Palestine. It is usually thought to have originated in northeast Anatolia and may have been distributed either by emigration or by trade. The town of the mid 3rd millennium BC contains a massive public building, probably a religious structure, that comprises eight circular stone structures all enclosed by a massive outer rectangular wall. [ancient Beth-yerah, Tell Beth Yerah]

**Kian ware:** a white ware made at Yung-ho near Kian/Chi-an in Kiangsi, which was often in the form of bowls decorated with leaves, medallions, birds, or plants. It could be black-glazed and was made during the Sung dynasty (AD 960–1279). This ware appears to be an imitation of Ting. [Chi-an]

**kick:** raised center of a vessel's base that rises to a hollow peak.

**Killke:** a culture and ceramic pottery style of the Cuzco Basin of Peru, from the Late Intermediate Period, c. AD 1000–1438. It immediately preceded the Inca style ceramics. Killke pots have globular bodies, white or buff slip, and simple black (or black and red) geometric patterns.

**kiln:** a chamber built for the firing (baking) of pottery, used from pre-historic times. These, usually dome-shaped, structures are designed to produce the high temperatures needed for the industry. In a pottery kiln, the pots were often stacked upside-down on a shelf. An opening for draft was left at the top, and a flue provided at the side. Fuel was piled within and around the kiln, and when the heat was at its greatest the openings were shut to preserve the temperatures and fire the pots inside, with temperatures of 800–1000°C achieved. Other versions were used in glassmaking or the parching of corn. The kiln, like the potter's wheel, implies craft specialization, and appears only at advanced stages of economic development. Important types of kilns include: bottle (updraft kiln with a narrow chimney shaped like a bottle), clamp (open-topped updraft kiln of semipermanent construction), climbing (kiln set along a slope to aid the draft), continuous (in which ware is fed continuously into the kiln on a track, moving through it during firing), downdraft (an enclosed periodic kiln in which the heat is passed to the top of the kiln, then the draft carries it down through the ware), intermittent or periodic (kiln that is loaded, fired, cooled, and then unloaded before firing a new batch), muffle (kiln constructed so that the ware is not directly subjected to the radiant heat from the flame or heating elements), pit (clamp that is dug partly into the ground), scove (updraft kiln usually having no permanent parts), tunnel (type of continuous kiln), and updraft (kiln in which

the heat or flame passes upward through the ware and then is vented outside).

**kiln firing:** a method of firing ceramics in which the ceramics are exposed to the heat from a fire within an ovenlike structure called a kiln rather than to a direct flame.

**Kimberley point:** a pressure-flaked bifacial point with serrated margins and long shallow surface scar beds, found in the Kimberleys region of Western Australia and neighboring areas of the Northern Territory and northwest Queensland. South of the Kimberleys, the point was a trade item and was used as a surgical knife. The points were made at the time of European contact, when bottle glass and porcelain were adapted for the industry.

**Kingdoms, Old, Middle, and New:** names traditionally applied to the three peak periods of development in the history of ancient Egypt, separated by times of decline and disorder. The Old Kingdom included the 3rd to 6th dynasties, c. 2700–2200 BC; the Middle Kingdom included the 11th to 13th dynasties, 2100–1650 BC; and the New Kingdom consisted of the 18th to 20th dynasties, 1580–1075 BC.

**Klepsydra:** a spring on the northwest slope of the Acropolis of Athens. It is also the name of a Greek water clock with one basin draining into a second basin at a lower level. [klepsydra]

**kleroterion:** an ancient machine used to decide who would serve on a jury in courts of law. There are surviving examples, such as the one from the Agora at Athens. Different colored balls would drop when tickets were inserted; the color determined acceptance or rejection.

**kline:** a Greek couch with a headboard and sometimes a footboard, used for reclining during a symposium. Their placement in dining rooms is revealed on archaeological sites by the placement of entrance doors.

**knapper:** one who manufactures stone artifacts.

**knapping:** working of stone by applying force to its surface – by percussion or pressure – to produce a tool. A knapper is one who manufactures stone artifacts, especially by chipping. This technique of striking flakes or blades from a hard, brittle rock, such as flint or obsidian, is done by means of short, sharp blows delivered with a hammer of stone, bone, or wood. Knapping was used to fashion stone tools and weapons, such as blades and arrowheads, in the Harappan culture of the Indus Valley and was also applied to making beads from agate and carnelian.

**Knapton ware:** a type of crude handmade pottery c. 4th century AD in Humberside of northeastern England.

**knife:** a backed blade; a cutting instrument composed of a blade and a handle into which it is fixed, either rigidly or with a joint.



Knives

**knife-trimming:** pottery technique using a knife to pare away the surface of a pot; the effect was sometimes used decoratively so as to produce facets around the vessel.

**knight jug:** a type of medieval jug with a tubular spout and horses and knights decorating the body, dating to the 14th century AD and later in Europe.

**knobbed:** in lithics, a stem form having a rounded lump or protruding appearance.

**kodja:** a type of flaked stone hatchet of southwest Australia, made with two stones hafted in a ball of resin on the end of a stick, known for 2000–3000 years. One stone is used for pounding and the other is sharp for chopping. [kodj]

**kofun, Kofun:** name of the protohistoric tomb period of Japan, AD 300–710, and the type of tumulus used for the burials. Large tombs were built that were covered with artificial hillocks about 8 m (26 feet) high, with burial chambers about 2 m (6.5 feet) underneath the top surface. The burial chamber, enclosed with stones, contained coffins and various funerary offerings. The period when tombs of this kind were built in abundance was characterized by Haji ware and Sue ware. It is divided into Early (4th century), Middle (5th century), and Late (late 5th to 7th centuries). The Kofun period falls between the Yayoi period and the fully historic Nara period and partially overlaps the

Asuka and Hakuho periods of art historians. In their writings, the *Kojiki* and *Nihon Shoki* texts, the culture was explained. Early kofun were built by modifying natural hills, as were Late Yayoi burial mounds. Haji pottery, used throughout the Kofun period, is very similar to Yayoi pottery and farmers lived in the same kinds of houses, using very similar tools. Technical advances over the Yayoi period include irrigation canals and dams. There were also silversmiths who made the ornaments deposited in the kofun, and professional potters began making Sue pottery in the 5th century. Those in the fertile and well-protected Yamato Basin actively sought new technical and administrative skills on the continent and thus artisans came to make new kinds of pottery, ornaments, and weapons. Yamato leaders gained control over much of Japan in the 7th century and moved the capital to Heijō in AD 710. The magnificent kofun tombs indicate that the Yamato court based in the Yamato area (the present Nara prefecture) succeeded in bringing almost the whole of Japan under its control.

**Kon-Tiki:** replica of a balsa raft constructed by Thor Heyerdahl in 1947 to test the hypothesis that South American Indians could have drifted into Polynesia. This was the type of raft used in the 16th century AD along the coasts of Ecuador and northern Peru. Heyerdahl sailed the raft from South America to the Tuamotu Archipelago to show that Indians could have reached Polynesia. Archaeological evidence, however, has shown that any contacts were only of a minor nature.

**kore:** a type of freestanding statue of a maiden – the female counterpart of the kouros or standing youth – that appeared with the beginning of Greek monumental sculpture in about 660 BC and remained to the end of the Archaic period in about 500 BC. It evolved from a highly stylized form to a more naturalistic one. The statue was usually draped, carved from marble, and painted in its original form. They are often dedications in sanctuaries and some are found in funeral contexts. Important series were in the temple of Hera on Samos and on the Acropolis in Athens. [korai (pl.)]

**Korean periodization:** classification of the eras of Korea by archaeologists and historians. The major divisions following the Paleolithic are: Chulmun, 7000–1000 BC; Bronze Age, 700 BC to AD 1; Iron Age, 400 BC to AD 300; Proto-Three Kingdoms, AD 1–300; Three Kingdoms, AD 300–668; United Silla, 668–935; Koryŏ, 935–1392; Yi, 1392–1910; Japanese Colonial, 1910–1945; Modern, 1945 to present.

**kotyle:** a Greek drinking cup with two horizontal handles. [skyphos]

**kouros:** a Greek statue of a youth or a standing nude male youth, of the Archaic period. The large stone figures began to appear in Greece about 615–590 BC. They were funerary markers or dedications in sanctuaries. They were usually larger than life size, made of marble,

bronze, or alabaster, and were sometimes painted. The kouros is thought to have been influenced by Egyptian sculpture; the first appearance of such monumental stone figures seems to coincide with the reopening of Greek trade with Egypt in c. 672 BC. The kouros remained a popular form of sculpture until about 460 BC. The female equivalent is called a kore. [kouroi (pl.)]

**krater:** ancient Greek vessel used for diluting wine with water. It usually stood on a tripod in the dining room, where wine was mixed. Kraters were made of metal or pottery and were often painted or elaborately ornamented. In Homer's *Iliad* the prize offered by Achilles for the foot race at Patroclus' funeral games was a silver krater. The Greek historian Herodotus describes many enormous and costly kraters dedicated at temples or used in religious ceremonies. Kraters are large, with a broad body and base and usually a wide mouth. They may have horizontal handles placed near the base, or vertical handles rising from the shoulder. Among the many variations are: the bell krater, confined to red-figure pottery, shaped like an inverted bell, with loop handles and a disk foot; the volute krater, with an egg-shaped body and handles that rise from the shoulder and curl in a volute (scroll-shaped form) well above the rim; the calyx krater, the shape of which spreads out like the cup or calyx of a flower; and the column krater, with columnar handles rising from the shoulder to a flat, projecting lip rim. Some were fitted with a strainer. [bell krater, calyx krater, column krater, krater, volute krater]

**Krukowski microburin:** a tool backed like a La Mouillah point but the scar runs back onto the body of the bladelet.

**kshemenitsa:** a term for a dense scatter of flint artifacts and debitage on a Late Paleolithic or Mesolithic site in eastern Europe, indicating a flint working site.

**Kuan ware:** fine Chinese stoneware of the Sung dynasty, AD 960–1279, characterized by a wash of brown slip and by glazes varying from pale green to lavender-blue. A wide-meshed crackle is brought out by the application of brown pigment. First made in north China, Kuan ware was produced from about 1127 at Hang-chou, Chekiang province, in the south. [Guan ware]

**kudurru:** 1. An Akkadian term meaning frontier, or boundary, for a type of boundary stone used by the Kassites of Mesopotamia. It was a stone block or slab which served as a record of a grant of land made by the king to a favored person. The original kudurrus were kept in temples, while clay copies were given to the landowners. On the stone were engraved the clauses of the contract, the images or symbols of the gods under whose protection the gift was placed, and the curse on those who violated the rights conferred. The

kudurrus are important not only for economic and religious reasons but also as almost the only works of art surviving from the period of Kassite rule in Babylonia, around the 16th to 12th centuries BC. The term also applies to the 3rd millennium cuneiform documents in southern Mesopotamia that record land transfers. 2. The word also means “son,” as in personal names such as Nabu-kudurri-usur (Nebuchadnezzar).

**k'uei:** a bronze bowl with handles for food, of the Zhou/Chou dynasty of China.

**Kulli:** an important Chalcolithic culture and pottery style of south Baluchistan. The pottery is mainly buff and wheelmade, painted in black with friezes of elongated humped bulls, cats, or goats and spiky trees between zones of geometric ornament. Clay figurines of women and bulls are found in this culture, as are copper tools and ornaments of lapis lazuli, bone, and other materials. The culture is further distinguished from those of Amri-Nal in the same area by the practice of cremation burial; an important cemetery was excavated at Mehi. Mud-brick architecture and small tell sites are common to the two cultures. There are signs of Indus civilization influences on later Kulli material with carved stone vessels identical with examples from Early Dynastic Mesopotamia, dating to the early 3rd millennium BC.

**kyathos:** a Greek or Etruscan dipper of silver, bronze, or clay which consists of a small bowl at the end of a long handle.

**kylix:** a Greek stemmed drinking cup or chalice, usually made of clay or metal. The term was originally used for a cup of any form, but modern scholars restrict it to shallow two-handed stemmed forms. This wide-bowled drinking cup with horizontal handles was one of the most popular pottery forms from Mycenaean times through the Classical Athenian period. There was usually a painted frieze around the outer surface, depicting a subject from mythology or everyday life, and on the bottom of the inside a painting often depicting a dancing or drinking scene. [cylix]

# L

**La Mouillah point:** a point like a piquant-triedre except that it is backed, the tip is then twisted off so the microburin scar forms an extended point.

**La Tène art:** an art style of the European Iron Age, c. 500 BC, developed presumably by Celtic peoples. It originated on the middle Rhine River, extending to the upper Danube and the Marne. Its finest specimens are from the British Isles in the 1st century BC and AD. It appears most commonly in bronzework or other metals, weapons and horse gear, eating and drinking vessels, personal ornaments, and monumental stone carvings. It seems likely that the craftsmen worked under the direct patronage of the chieftains. Techniques employed were decoration in relief, engraving, and inlay. Stylistically, Celtic art combines elements taken from the Classical world, from the Scythians to the east and from the local earlier Hallstatt Iron Age. The art developed into several styles in continental Europe (Early, Waldalgesheim, Plastic, and Sword styles) but came to an end with the Roman occupation. In Ireland, the art style returned after the Roman withdrawal. [Celtic art]

**labret:** a lip plug or ornament inserted in an incision in the lower lip, often made of shell, bone, ivory, metal, stone, wood, or pottery. Sometimes a succession would be worn, each larger than the predecessor. Labrets indicated the eminence of the wearer, e.g., women of high rank of the northwest coast of North America. Although styles vary and labrets were particularly popular in Mesoamerica, they occur in artifact inventories from the Arctic to the Andes. [labrum]

**labrum:** a large, shallow basin for hot water, set on a pedestal and usually carved from marble, granite, or a fine-grained stone, and found in a Roman bath house.

**Laconian pottery:** Spartan pottery made in the 6th century BC, characterized as black-figured and black-glossed. The fabric was widely exported – to Cyrenaica, Etruria, and Greek colonies in Italy.

**lacquer:** the resin of the sumac tree, used as a coating to harden and strengthen manufactured items. This varnishing substance was used from prehistoric times and was indigenous to southern and central China. Applied in many coats to a core made of wood, fabric, paper, baskets, leather, ceramics, etc., it forms a tough and durable protective surface, resistant to water, and capable of a high polish. In China lacquered vessels were made as early as the Shang dynasty. Lacquer is often colored red or black.

**lacquer ware:** a type of ornate, wooden, domestic and funerary vessels of China from the Shang dynasty (14th century BC) onwards, made by multiple layers of lacquer on a wooden or fabric preform to create a rich shiny surface.

**ladle:** a long-handled scoop usually used with liquids.

**lagena:** a Greek or Roman earthenware vessel with a globular body, used for holding wine, vegetables, or fruit.

**lagynos:** a Greek or Roman jug with a low, squat body, vertical neck, rounded mouth, and single strap handle.

**lamassu:** colossal stone figures – part human, part animal – carved on the doorways of Assyrian and Achaemenid buildings, as at Nineveh. They were guardian figures.

**Lambeth sword:** a type of Late Bronze Age straight-sided bronze sword with a flat mid-section and rectangular hilt tang, of southern Britain in the 12th and 11th centuries BC (Penard phase).

**laminating:** the production of a high-quality metal tool or weapon by repeatedly forging out a blank form, folding the metal over and forging it again so that qualities of malleability and hardness can be combined.

**lamp:** a device for producing illumination, consisting originally of a vessel containing a wick soaked in combustible material. The lamp was invented by at least 70,000 BC and was originally a hollowed-out rock filled with an absorbent material soaked with animal fat and lit. Simple saucers of stone or chalk for this purpose go back to the Upper Paleolithic. In pottery, the use can rarely be proved unless a special spout or pinched lip was provided to support the wick, or signs of burning have survived at the rim. In ancient Greece, lamps did not begin to appear until the 7th century BC, when they replaced torches and braziers.

**lamp-filler:** a globular, narrow-mouthed jar with a projecting spout of very narrow bore.

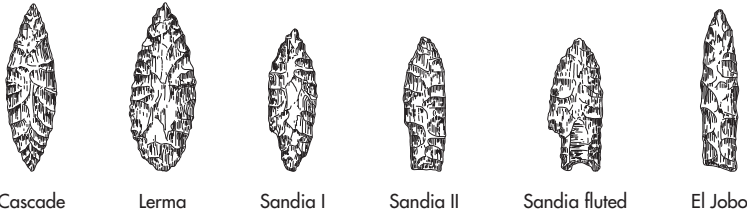
**lamp-holder:** a shallow, flat-bottomed, asymmetrical dish, shaped like a jug's mouth, and usually having a handle, from Roman times.



**lance:** a long spear used on horseback.

**lancehead:** a large, flat missile point of stone, bone, ivory, or metal – larger than an arrowhead and smaller than a spearhead. It is assumed to have armed a light lance or javelin and was mounted on a long shaft for hunting or war.

**lanceolate:** shaped like a lancehead, referring to projectile points tapering to a point at the apex and sometimes at the base. The term is often applied to flaked stone blades of laurel-leaf form, much like spearheads.



Types of lanceolates

**lancet:** a pointed, two-edged surgical knife.

**landscape signature:** the material remains of human activities across the landscape.

**lapis lazuli:** a semiprecious stone of an intense blue color, very popular in the ancient Near East for decorative inlays, beads, seals, etc. It is a metamorphosed form of limestone, rich in the blue mineral lazurite, which is dark blue in color and often flecked with impurities of calcite, iron pyrites, or gold. Its main source was Badakhshan, northern Afghanistan, and Iran, from which it was traded as far as Egypt. The Egyptians considered that its appearance imitated that of the heavens, therefore they considered it to be superior to all materials other than gold and silver. They used it extensively in jewelry until the Late Period (664–332 BC), when it was particularly popular for amulets. One of the richest collections of lapis lazuli objects was found in the burials at Tepe Gawra. It has also been found at Ovalle, Chile.

**Lapita:** a major Oceanic culture complex, named after the type site of Lapita, New Caledonia. It is defined by a distinctive type of pottery with dentate-stamped, banded decoration in geometric patterns, appearing c. 3500 bp throughout much of the western Pacific, including Fiji and Samoa. Most Lapita sites are on offshore islands and assemblages include elaborate shell tools and ornaments, the use of obsidian, and stone adzes. The obsidian and pottery style suggest long-distance trade. The culture is almost certainly associated with ancestral Polynesians moving eastwards from island Southeast Asia (perhaps from the Philippines), through previously inhabited Melanesia, to the hitherto empty islands of Tonga and Samoa in western

Polynesia. The culture therefore represents the origin of the Polynesians prior to their settlement of geographic Polynesia. It is thought to be associated with the spread of Austronesian speakers into the Western Pacific. [Lapita pottery]

**larnax:** 1. A Minoan-Mycenaean clay or terra cotta coffin. This kind of coffin, resembling a rectangular wooden chest, enjoyed a brief popularity in the eastern Greek region c. 530–460 BC. The sarcophagus was often crudely painted on the sides with funerary or religious scenes. “Clazomenian” examples were painted in imitation of contemporary vase styles. 2. The term was also used for a closed box, seen in a royal tomb at Vergina, and in art. 3. A bathtub made of a fabric containing straw. [larnakes (pl.)]

**Last Glacial Maximum:** the geological period dating between 25,000 and 14,000 bp, during which global temperatures reached the lowest levels of the Upper Pleistocene (127,000–10,000 bp). Massive continental ice sheets formed in the northern hemisphere and sea levels fell worldwide. The people were anatomically modern and conducted industries of the Upper Paleolithic in unglaciated parts of the Old World.

**latch:** a small bar raised or lowered by a latch-lifter which is used to fasten gates or doors, etc.

**latch-lifter:** a type of early key in Roman and early medieval times – a bent piece of iron rod with an expanded end that could be pushed through a hole in a wooden door to raise a catch-bar on the inside.

**Late Bronze Age:** a period of the Levant, following the expulsion of the Hyksos, during which the Egyptians invaded and Canaanite cities were under Egyptian control. It is divided into the Late Bronze Age (LBA) I, c. 1550–1400 BC; LBA Iia, c. 1400–1300 BC; and LBA Iib, c. 1300–1200 BC.

**Late Glacial:** the closing stages of the Pleistocene Ice Age, when the glaciers had begun their final retreat and when much of northern Europe was tundra. This period lasted from c. 13,000 to 8500 BC. The substages in northern Europe are the Oldest Dryas (13,000–10,450 BC), the Bølling oscillation (10,450–10,050), the Older Dryas (10,050–9850), the Allerød oscillation (9850–8850), and the Younger Dryas (8850–8300). Cultures of the Late Glacial period include the Ahrensburgian, Creswellian, Federmesser, and Hamburgian.

**Late Horizon:** a division of time in central Andean chronology, c. AD 1450–1533, which corresponds to the Inca Empire’s expansion from Cuzco. It is the most recent and briefest period of a chronological construction of Peruvian archaeology. The start date marks the point at which territorial expansion was virtually complete; the end date marks the passing of control to the Spanish under Pizarro. Archaeologists have come to distinguish the various peoples and

civilizations by descriptive terms – the Late Preceramic, the Initial (or Lower Formative) Period, the Early Horizon, the Early Intermediate Period, the Middle Horizon, the Late Intermediate Period, and the Late Horizon. [see Andean chronology]

**Late Intermediate Period:** a division of time in central Andean chronology, c. AD 1000–1450, which was a period of regional diversification on the coast and in the highlands. New styles, cultures, and kingdoms arose after the collapse of the Middle Horizon empires. The period began with the dying out of the signs of unity imposed by Huari. Warfare, secularization of urban centers, and rectangular enclosure plans were prominent. The cultures and styles were the Chimú, Chancay, Pachacamac, Chíncha, Ica, Cajamarca, Chanca, Killke, Lucre, Colla, and Lupaca. The various empires that developed during the Late Intermediate Period were conquered by the Inca Empire.

**Late Period:** a phase of Egyptian history, c. 664–332 BC comprising the 26th to 31st dynasties, stretching from the end of the Third Intermediate Period to the arrival of Alexander the Great. Shabako (716–702 BC), the second ruler of the Kushite 25th dynasty, exerted Nubian influence by moving the administrative center back from Thebes to Memphis. In writing, the demotic script – the new cursive form – was introduced from the north and spread gradually through the country. Hieratic was, however, retained for literary and religious texts, among which very ancient material, such as the Pyramid Texts, was revived and inscribed in tombs and on coffins and sarcophagi. The Late Period also saw the greatest development of animal worship in Egypt.

**late stage biface:** a biface in the final step of manufacture, usually with relatively straight edges and complex surface topography.

**Late Woodland period:** a period of time, c. AD 400–1000, in the American Midwest, when populations spread west to the eastern slopes of the Rockies and were in contact with the eastward-moving Pueblo people. A favorable agricultural period was indicated by the marked increase in village size and in population density. Areas along major streams were occupied by various interrelated cultural groups collectively known as the Plains Mississippian cultures. Part of this complex was connected to the developing Mississippian complexes to the east by diffusion and, to some degree, by a migration of such groups as the Omaha and Ponca from the St. Louis area by about AD 1000. It follows the Middle Woodland era but lacks the elaborate Hopewellian artifacts and structures.

**Later Stone Age:** the third and final phase of Stone Age technology in sub-Saharan Africa, dating from about 30,000+ years ago until historic times in some places. There was a lot of art and personal

decoration, evidence of burials, and some microlithic stone tools in assemblages. Pottery and stone bowls appear during the last three millennia as the lifestyle changed to herding from nomadic hunting and gathering. The large number of distinctive Later Stone Age industries that emerged, reflected the increasing specialization as hunter-gatherers exploited different environments, often moving seasonally between them, and developed different subsistence strategies. As in many parts of the world, changes in technology seem to mark a shift to the consumption of smaller game, fish, invertebrates, and plants. Later Stone Age peoples used bows and arrows and a variety of snares and traps for hunting, as well as grindstones and digging sticks for gathering plant food; with hooks, barbed spears, and wicker baskets they also were able to catch fish and thus exploit rivers, lakeshores, and seacoasts more effectively. The appearance of cave art, careful burials, and ostrich eggshell beads for adornments suggests more sophisticated behavior and new patterns of culture. These developments apparently are associated with the emergence between 20,000 and 15,000 BC of the earliest of the historically recognizable populations of southern Africa – the Pygmy, San, and Khoi peoples – who were probably genetically related to the ancient population that had evolved in the African subcontinent.

**lateral:** positioned away from the midline, to the left or right.

**lateral flutes:** the initial, usually short, flutes that were removed from either side of the midportion of the basal edge to form a striking platform for the removal of the median flute.

**lateral section:** a cross-section in which the cut is made perpendicular to the base line of the artifact drawing and the outline of the section is oriented like a profile view but in horizontal alignment with the points through which the cut was made.

**lattice:** a structure or pattern consisting of strips crossing each other with square or diamond-shaped spaces left between.

**laurel-leaf point:** a distinctive long, thin, leaf-shaped Solutrean flake tool made with delicate workmanship. The largest was found from Volgu, France. It was made during the Upper Paleolithic in Europe. [laurel-leaf blade]

**Laurentide:** the ice mass that covered most of Canada and parts of the United States, including the Great Lakes area and northern New England, during the Pleistocene epoch. It originated in northeastern Canada during the Wisconsin glacial and then spread south and west. At its maximum extent, about 20,000 years ago, it was connected with the Cordilleran ice sheet to the west and covered an area of more than 13,000,000 km<sup>2</sup> (5,000,000 square miles). In some areas its thickness reached 2400–3000 m (8000–10,000 feet). The system began to recede about 14,000 BP.

**Le Croy point:** an Early Archaic bifurcate, chipped-stone projectile point of the US southeast, small- or medium-sized with short triangular blades. They are dated to c. 6500–6000 BC and are found in the Ohio and Tennessee river drainages and north to the Great Lakes. [LeCroy]

**lead:** a soft, silvery-white or grayish metal that is very malleable, ductile, and dense and is a poor conductor of electricity. Known in antiquity and believed by the alchemists to be the oldest of metals, lead is highly durable and resistant to corrosion, as is indicated by the continuing use of lead water pipes installed by the ancient Romans. In antiquity, galena (from which silver may also be extracted) was the main source of lead in the Old World, although anglesite and cerussite were also exploited. Lead was used to make patterns for casting, to “wet” bronze and ease its casting; in making glazes; and, alloyed with tin, to make soft solder for joining metals and pewter for tablewares as well as for pipes, roofing, etc. The first evidence for lead extraction in parts of Europe was the addition of the metal to bronze during the Late Bronze Age.

**lead glaze:** a type of glaze found on European pottery and the soft-fired earthenware of the Han dynasty of China. It was probably invented by the Greeks and/or Romans by the 3rd century BC, involving either dusting the unfired vessel with galena (lead ore) or dipping it into a mixture of lead ore and water. The glaze fuses in one firing. The natural color of lead glaze has a yellowish tinge; after the 13th century copper ore was often added to give a greenish-gray effect. In China it was used for vessels and miniature ceramic sculptures in funerary deposits. [lead-glazed ware]

**leaf arrowhead:** a leaf- or diamond-shaped arrowhead with shallow retouching at the edges.

**leaf-shaped:** of a tool, pointed at the ends and with convex sides, as on a willow leaf. The term is applied to an arrowhead, the blade of a slashing sword, or the flattened bow of a fibula and other tools which have been retouched on both faces to produce a flattish effect. Many Upper Paleolithic tools are named after leaves (e.g., Solutrean laurel leaf). Some Middle Paleolithic industries were characterized by the presence of bifaces, others by the presence of leaf-shaped objects. Mousterian industries produced leaf-shaped items in central and eastern Europe. [foliate, foliated]

**leather-hard:** a stage in the manufacture of ceramic artifacts between forming and firing when the clay is sufficiently dry to lose plasticity but still can be polished to compact its surface.

**legionary ware:** types of pottery used by Roman legions in Britain in the mid 1st century AD, specific to legions such as the Wroxeter, Lincoln, York, and Caerleon.



Leaf arrowhead



Leaf-shaped point  
(Archaic)

- leilira:** a large, pointed or rectangular blade that may be retouched to form a point or scraper-like tool. It could be hafted as a spearhead or fighting pick or used as a knife. It is associated with the Australian Small Tool tradition in northern Australia.
- leister:** a two-pronged, fork-like fish spear made of two bone or antler heads with barbs pointing inwards and backwards. They are recorded from Mesolithic and lakeside Neolithic settlements, as well as present day use by the Inuits, mainly for salmon.
- lekaneis:** in Greek antiquity, a shallow basin, usually with two horizontal handles and fitted with a lid or cover which could be reversed to act as a stemmed plate. There are red-figured examples decorated with scenes of women. [lekane]
- lekythos:** in ancient Greece, a pottery oil flask used at baths and gymnasiums and for funerary offerings. The flask has a long, cylindrical body gracefully tapered to the base, and a narrow neck with a single loop-shaped handle. The body was often covered with white slip and then painted in polychrome. [lecythus; lecythi, lekythoi (pl.)]
- lenticular:** meaning “lens-shaped;” any object with a biconvex cross-section; also a term used to describe the cross-section of a blade that is excurvate on both faces thus looking like a convex lens or an ellipse. [elliptical]
- lepaste:** a large vessel shaped like a cylix but resting on a broad stand, used for holding pure wine.
- leptolithic:** describing industries with many blades and blade tools, especially end scrapers, burins, and backed blades, typical of the Upper Paleolithic. The term leptolithic, literally “of small stones,” has sometimes been used specifically to refer to this type of stone technology, without any dating connotation or evolutionary position.
- Lerma point:** a projectile point made before 7000 BC in Tamaulipas and Puebla, Mexico. It is laurel-leaf-shaped and similar to those found in the Great Basin of the US.
- Levallois core:** a prepared core from which a single flake or blade has been produced. The technique was primarily used in the Paleolithic and Neolithic.
- Levallois flake:** a flake produced from a carefully prepared core. [Levallois point]
- Levallois technique:** a distinctive method of stone toolmaking in which flakes are removed by percussion from a preshaped core, with little other modification. This prepared-core knapping technique allows the removal of large flakes of predetermined size and shape. The face of the core is trimmed to shape in order to control the form and size of the intended flake. Characteristically the preparatory flaking is directed from the periphery of the core towards the center. The

residual core is shaped rather like a tortoise, with one face plane and the other domed, while the flake shows the scars of the preparatory work on one face and is plane on the other. It is named for Levallois-Perret, a suburb of Paris, where such artifacts were first discovered. The Levallois technique was known from the Acheulian period and was employed by certain late Lower Paleolithic hand-ax makers, and throughout the Middle Paleolithic by some Mousterian communities. It lasted into the Upper Paleolithic of the Levant, and in the Epi-Levalloisian industries of Egypt. [Levallois facies]

**Levalloisian:** pertaining to the Levallois technique or describing tools made by this method of producing flint flakes from a prepared core. It is also the name of the Middle Paleolithic culture or industry of the second interglacial in France, characterized by the introduction and refinement of flake tools. The name is derived from Levallois-Perret, a suburb of Paris, where such artifacts were first discovered. [Levallois, Levalloisian flake technique]

**Levanna projectile point:** projectile points are usually associated with Late Woodland and Contact Period occupations in southern New England (c. 700–300 BP). Common material types associated with this point include quartz, quartzite, hornfels, and basalt. Nonlocal cherts were also used in the manufacture of this point type. The Levanna point type is characterized by the equilateral triangular form and concave base.

**Levantine art:** rock art found mainly in eastern Spain and dating to the Neolithic period. Small red-painted deer, ibex, humans, etc. were used in hunting scenes. The art was once assigned to the Mesolithic.

**lever:** a bar used to increase the force being brought to bear in order to move an object.

**levigate:** in pottery-making, a method of purifying clay by sedimentation. The clay is thoroughly mixed with water and then left to stand so the coarser particles sink to the bottom while the water and any organic impurities rise to the top and can be poured off. The middle contains a layer of fine-textured clay.

**li:** a cooking vessel common in the Chinese Neolithic and Bronze Ages in both pottery and bronze. It is a small tripod bowl with hollow legs, characteristic of the Henan and Shaanxi Longshan cultures (Hougang II, Kexingzhuang II), that in Shang and Zhou/Chou times was copied in bronze. The Xian steamer was a perforated bowl set atop a li and first appeared in Henan Longshan pottery and bronze in the Shang period.

**lian:** Chinese term for lacquered wooden box in which toilet necessities or food such as cooked cereals are kept.

**lid-seated vessel:** a pot in which the rim is ledged, dished, or grooved internally to keep a lid in place.

- lienzo:** a large document similar to a codex, made of an animal skin or cloth. The major difference is that a lienzo is either rectangular or irregular and a codex is a folded scroll. In Mesoamerica, the lienzo is frequently a map showing elite land holdings. Its name comes from Spanish for “linen,” and all surviving specimens are post-conquest.
- lifting:** in wheel-throwing pottery, a vessel that involves using hands or fingers to squeeze the vessel walls thinner and higher as the body rotates.
- limace:** a type of blade tool retouched along both sides to form a slug-shaped object.
- lime popping:** a surface defect on ware containing inclusions of calcium carbonate (limestone, shell, calcite). [lime blowing]
- limpet scoop:** a small stone tool usually made from an elongated pebble, one end beveled off to form a rough blade.
- linchpin:** a metal spike, sometimes enlarged at one end, that passed through a hole in the end of a fixed axle to stop the wheel from falling off. [linch pin]
- line sinker:** a weight attached to a fishing line in order to help it sink towards the bottom.
- lingling-o:** a kind of knobbed earring made of jadeite, glass, or metal and typical of Sa Huynh in Vietnam. It is also found in the neighboring islands and was possibly traded in Southeast Asia.
- lip:** the part of a vessel most distant from its base as measured along the center of the vessel walls, or the portion of the vessel that would touch the surface on which the vessel rested upside-down (or orifice down).
- lithic, Lithic:** pertaining to or describing a stone tool or artifact. The capitalized term describes the first developmental period in New World chronology, preceding the Archaic period and characterized by the use of flaked stone tools and hunting and gathering subsistence. The combining form means relating to or characteristic of a (specified) stage in humankind’s use of stone as a cultural tool and to form the names of cultural phases, e.g., Neolithic, Mesolithic. Lithics is the process or industry of making stone tools and artifacts. [-lithic, lithics]
- lithic analysis:** the analysis of stone tools and stone tool technology.
- lithic experimentation:** experimenting with the manufacture of stone tools; a useful analytical approach to the interpretation of prehistoric artifacts.
- lithic scatter:** a common class of sites where tools were made or repaired, resulting in a large number of flakes (and typically few other artifacts) at a site.
- lithofacies:** a part of a sediment or rock that is different in composition or character, such as grain size. Characteristics of sediment are closely related to their depositional environment. Lithofacies is a lateral, mappable subdivision of a designated stratigraphic unit, dis-



tinguished from adjacent subdivisions on the basis of lithology – or a facies (appearance and characteristics of a rock) characterized by particular lithologic features.

**lithophone:** naturally occurring stones, often stalactites or stalagmites, that were struck to make music as early as Paleolithic times. The set of struck sonorous stones (individually called phonoliths) have been found from the South Seas and South America to Africa and the Far East. Large stones were used in some Vietnamese religious temples and one of the oldest surviving lithophones was discovered there. Remains of other ancient stones come from Chinese archaeological digs, and such instruments are mentioned in sources as early as the Zhou/Chou dynasty (c. 1122–256/255 BC). [phonoliths, stone chimes]

**livre de beurre blade:** distinctive blade cores of Grand Pressigny (France) flint which are yellow and resemble slabs of butter.

**Liyu:** a village near Hunyan in northern Shanxi, China, where a large hoard of bronzes of the 6th and 5th centuries BC was found. The name Liyu has since been applied to a style of decoration shared by many bronzes from the hoard and characterized by an interlace of dragons whose ribbon-like bodies are textured with fine meander and volute patterns. Its borrowings from steppe art are common to much Chinese art of the period.

**lobate:** a type of stem that describes points and knives with curved or rounded ears.

**lobbed:** a term used to describe the base portion of a point or blade that is eared. The ears are rounded and are formed by the meeting of two circles creating a lobbed effect. An object with an oval-shaped base or stem.

**local sequence:** a chronological series of components or phases within the geographic limits of a locality.

**Loch Lomond stadial:** a widespread but short interval of renewed glacial activity and cold climatic conditions in the British Isles. This event occurred about 11,000 years ago, some 2000 years before the dissipation of the ice sheet. It is a stadial of the Devensian cold stage during which small glaciers were formed in the high mountains of Wales and the Lake District and an icecap was formed over the highlands of Scotland. The Loch Lomond stadial may be correlated with Godwin's Pollen Zone III and the Younger Dryas (Scandinavia).

**lock:** a mechanism for keeping a door, lid, or container fastened, typically operated by a key.

**lock ring:** small penannular (almost complete ring) ornament of gold or bronze popular in the Early to Middle Bronze Age in northern Europe. They are thought to have been used as hair ornaments. [lock-ring]

- loculus:** in Roman antiquity, a small chamber or cell in an ancient tomb for the reception of a body or urn. It was generally made of stone.
- London ware:** a type of pottery with a burnished gray or black fabric, often decorated with inscribed lines, impressed stamps, rouletting, and compass-scribed circles. It was made in the Thames Estuary area, Suffolk, Hertfordshire, and the Nene Valley in the late 1st and 2nd centuries AD.
- loom:** a device used for weaving cloth. Normally the variety of loom used can be deduced from surviving fragments of the resulting cloth. The cloth shows, for example, that the horizontal loom was the more usual in ancient Egypt, and the vertical loom in Syria and Mesopotamia. In Europe, the vertical loom with weighted warps was standard. The weights – disk-shaped, quoit-shaped, or pyramidal – are frequently found on sites from the Late Neolithic to the Bronze Age and reappear with the Anglo-Saxons. In the Americas, the most common form was the belt or backstrap loom, in which a continuous warp thread passed between two horizontal poles. One was attached to a support while the other was attached to the seated weaver, who could adjust the tension of the warps simply by leaning forward or backward. The earliest evidence of the use of the loom, 4400 BC, is a representation of a horizontal two-bar (or two-beamed, i.e., warp beam and cloth beam) loom pictured on a pottery dish found at al-Badari, Egypt. Loom weights have been found at archaeological sites dating from 3000 BC, but this type of loom may have originated even earlier. By about 2500 BC, a more advanced loom was apparently evolving in East Asia.
- loom weight:** a perforated stone or ceramic block used for stretching the threads forming the warp or the weft on a loom. [loomweight]
- looped handle:** small, sharply curving handles that are fixed to the body of a vessel without being countersunk.
- looped spearhead:** a bronze spearhead of the Middle Bronze Age of Europe, with a pair of small loops cast into the outside of the hafting socket near the base.
- lorica hamata:** a type of body armor worn by Roman legions: a shirt made of iron chain mail.
- lorica segmentata:** a type of body armor worn by Roman legions: a cuirass made from iron strips hinged together.
- lorica squamata:** a type of body armor worn by Roman legions: a cuirass made from shaped scales of iron and bronze riveted together.
- lost wax casting:** a method of casting metals in which the desired form is carved in wax, coated with clay and baked; the wax runs out through vents left in the clay for the purpose, and molten metal is then poured through the same vents into the mold. When the metal is cool, the

clay is broken off to reveal the metal casting. Each mold can only be used once. The technique was first developed in the 4th millennium BC in the Near East, especially by the Shang bronzeworkers of China. It was also used for gold in South America and Mesoamerica. The method was used for casting complex forms, such as statuary. [cire perdue, lost wax, lost wax casting technique, lost wax process]

**lot:** any unit of collection in which artifacts are presumed to share the same particular context, typically a level of a trench.

**lot number:** the number assigned to an archaeological collection that identifies an aspect of context within a collection; part of the catalog number.

**loutrophoros:** in Greek antiquity, a container with a slender ovoid body, long neck, flaring mouth, and two long handles. They were used from the 6th century BC for ritual purposes at weddings and funerals. The shape also appears in relief or in the round on Attic grave stelae.

**loving cup:** a two-handled cup passed round at banquets.

**low side notched:** a flaking technique applied to accommodate hafting which involved the flaking of notches into the side of a preform near its base.

**Lower Paleolithic:** the earliest part of the Paleolithic period, beginning about 2.5 million years ago and lasting to about 100,000 years ago. It was characterized by the first use of crude stone tools, the practice of hunting and gathering, and the development of social units, settlements, and structures. It was the era of the earliest forms of humans. The phases of the Paleolithic have been subdivided based on artifact typology; the Lower Paleolithic is the period of early hominid pebble tool and core tool manufacture. In China, the Early Paleolithic ran from 1,000,000 to 73,000 BC.

**Luangwa pottery:** a Late Iron Age complex of central, eastern, and northern Zambia in the 2nd millennium AD with a distinctive pottery style. It appeared as a break from the Chifumbaze complex in the 11th century, originated in Zaire, and has continued into Recent times. The term (also Luangwa variant) is also used for Earlier Stone Age Sangoan collections from eastern Zambia. This facies of the Sangoan industry is found in gravel deposits of the Luangwa and tributary valleys of eastern Zambia, and is marked by large picks and other core tools made from water-rounded cobbles.

**Lucanian pottery:** red-figured pottery made in Lucania from the late 5th century through to the 4th century BC. There are links with Apulian pottery.

**lucerna:** an oil lamp or lantern of terra cotta or bronze. One side had a handle, the other had one or more places for wicks. The oil was poured in through an opening in the center.

- lug:** an ear-shaped protuberance, sometimes flattened, added to the wall of a pot to assist in holding it. It may or may not be perforated. The hole was designed to take a cord or thong only and it was not a true handle.
- lunate:** a crescent- or half-moon-shaped flint with the inner edge untrimmed and the thick, rounded edge having small chips removed. It was used as an arrowhead.
- lunula:** a crescent-shaped sheet of gold, probably worn as a collar or chest ornament in the Early Bronze Age, possibly for rituals. Their incised geometric decorations are similar to those on bell beakers. They originated with the Food Vessel people of Ireland, Scotland, and perhaps Wales in the Early Bronze Age, and were traded not only to southern England but also across to northern Europe. The decoration has led to the suggestion that it imitates the multiple-strand necklaces of jet and amber that are also found during the Early Bronze Age. [lunulae (pl.)]
- Lupemban:** a stone industry of the Lower Paleolithic of west-central Africa, developed from a Sangoan predecessor and characterized by tools appropriate for rough woodwork. Lupemban industry has been found in northern Angola and southern Zaire and an important dated site is at Kalambo Falls on the Zambia–Tanzania border. In contrast with the Sangoan, Lupemban assemblages are marked by the fine quality of their bifacial stoneworking technique on elongated double-ended points, large side scrapers, and thick core-axes. The industry spans from before 30,000 BC until c. 15,000 BC. [Lupemban]
- lur:** a Late Bronze Age, large bronze musical horn or trumpet, having a double curve and a disk-shaped, permanent mouth. The long curving tube was cast in sections by the lost wax (cire perdue) method that fitted together, ending in a flat metal disk decorated with raised embossing. Lurer come from the peat bogs of Scandinavia and are almost always found in pairs, suggesting that they were votive offerings. Lurer are among the most elaborate products of the European bronzesmiths; experiments have shown that they have a surprisingly large musical range. [lure; lurer (pl.)]
- Luristan bronze:** any of the horse trappings, utensils, weapons, jewelry, belt buckles, and ritual and votive objects of bronze probably dating from roughly 2600 to 600 BC that have been excavated in the Harsin, Khorramabad, and Alishtar Valleys of the Zagros Mountains in the Lorestan region of western Iran, especially at the site of Tepe Sialk. Their precise origin is unknown. Scholars believe that they were created either by the Cimmerians, a nomadic people from southern Russia who may have invaded Iran in the 8th century BC, or by such related Indo-European peoples as the early Medes and Persians. The

term denotes a broad region of this metalwork and therefore has little cultural historical meaning. [Lorestan]

**luster:** a gentle sheen or soft glow, especially that of a partly reflective surface.

**lusterware:** pottery decorated by applying metallic compounds to the glaze which become iridescent metallic films during firing. [luster pottery]

**lute:** to join together two leather-hard pieces of a vessel by using slip as a glue.

**lydion:** in Greek antiquity, a type of pot for perfumes. Numerous examples have been found in Lydia, western Turkey, and Athens.

**Lyles Hill ware:** a type of Early and Middle Neolithic pottery found in the northeast of England, named after the site of Hanging Grimston in what was formerly the East Riding of Yorkshire. It is characterized by fine fabrics, good-quality finish, and round-bottomed forms with a carinated profile. In 1974 Isobel Smith suggested that such pots were part of a far wider distribution of carinated vessels found right across the British Isles and she proposed the term Grimston-Lyles Hill ware. These vessels represent the earliest style of pottery found in the British Neolithic, although the term shouldered bowl is now preferred to Grimston-Lyles Hill. [Grimston ware]

**Lyngby:** a site in Jutland, Denmark, which has given its name to a kind of small bone implement (ax) made of antler stem and branch and beveled to form a sharp edge. The tools date to c. 9000–8000 BC. [Lyngby ax, Lyngby axe, Lyngby tools]

**Lyon ware:** fine colored cups and beakers with roughcast appliqué or rusticated decoration from Lyon, France from c. AD 43 through to c. AD 70.

# M

**macaroni style:** in art, Late Paleolithic finger tracings in clay, the oldest form of art known. Innumerable examples appear on the walls and ceilings of limestone caves associated with human habitation in France (Pech Merle) and Spain, the oldest dating from about 30,000 BC. They range from simple scratchings and jumbled lines to deliberate meanders and arabesques and outline drawings of animals and are so-called because they look like pieces of macaroni. It is thought that these macaroni, like the numerous foot and handprints pressed into the clay of the caves, were inspired by animal tracks. [macaroni]



Macehead

**mace:** a small club-like weapon, usually of stone, crafted to fit snugly in the hand, for pounding. It often had a perforated head and was attached to a shaft of wood (or ivory or horn), often tapering towards the end that was gripped. Many maceheads have been excavated from Predynastic and Early Dynastic cemeteries in Egypt. In medieval times, it was made of iron and used for breaking defensive armor.

**macehead:** the stone or metal top of a mace, usually perforated.

**macroblade:** a large blade, greater than 5 cm (2 inches) in length.

**macrofauna:** large animals. [see microfauna]

**macrolith:** any large stone tool. [see microlith]

**magatama:** term meaning curved bead/jewel, or a jade or jasper pendant made since the Neolithic but especially during the Jomon, Yayoi, and Kofun periods. These comma-shaped beads (with a perforation at the thick end) have been found in 4th to 7th century AD tombs in Korea and Japan. They purportedly had magic properties. In the Tumulus/Kofun period (3rd to 6th centuries) of Japan, it was an imperial emblem. Many of these beads decorated the gold crowns of Silla (Korea). Its form may derive from prehistoric animal-tooth pendants. [kogok]

**Magdalenian:** the final major European culture of the Upper Paleolithic period, from about 15,000 to 10,000 years ago; characterized by composite or specialized tools, tailored clothing, and, especially, geometric and representational cave art (e.g., Altamira) and for beautiful decorative work in bone and ivory (mobiliary art). The people were chiefly fishermen and reindeer hunters; they were the first known people to have used a spear thrower (of reindeer bone and antler) to increase range, strength, and accuracy. Magdalenian stone tools include small geometrically shaped implements (e.g., triangles, semilunar blades) probably set into bone or antler handles for use, burins (a sort of chisel), scrapers, borers, backed bladelets, and shouldered and leaf-shaped projectile points. Bone was used extensively to make wedges, adzes, hammers, spearheads with link shafts, barbed points and harpoons, eyed needles, jewelry, and hooked rods (probably used as spear throwers). They killed animals with spears, snares, and traps and lived in caves, rock shelters, or substantial dwellings in winter and in tents in summer. The name is derived from La Madeleine or Magdalene, the type site in the Dordogne of southwest France. The culture's center of origin was southwest France and the adjacent parts of Spain, but elements characteristic of the later stages are represented in Britain (Creswell Crags), and eastwards to southwest Germany and Poland. The Magdalenian culture, like that of earlier Upper Paleolithic communities, was adapted to the cold conditions of the last (Würm) glaciation. The Magdalenian has been divided into six phases; it followed the Solutrean industry and was succeeded by the simplified Azilian. Magdalenian culture disappeared as the cool, near-glacial climate warmed at the end of the fourth (Würm) glacial period (c. 10,000 BC), and herd animals became scarce. [Age of the Reindeer]

**Magellan periods:** a chronological sequence covering 8000 BC to AD 1000, constructed on the basis of assemblages from Fell's Cave and the Palli Aike Cave in Patagonia, South America. The sequence is divided into five phases, describing a series of hunting and marine adaptations. The earliest assemblage (Magellan I) contains fishtail projectile points, signifying Paleoindian activity. Horse and sloth bones and the remains of three partly cremated Dolichocephalic humans, found in association with these points, have produced a single radiocarbon date of c. 8700 BC. A shift to willowleaf points occurred in Magellan II c. 8000–4000 BC, which coincides with the disappearance of Pleistocene megafauna and widespread climatic change. Magellan IV–V are ill-defined but represent a continuing hunting strategy blending into a period of ceramic use.

**magic brick:** a set of four mud bricks that were often placed on the four sides of an Egyptian tomb during the New Kingdom, c. 1550–1069 BC, in order to protect the deceased from evil.

**magma:** hot fluid or semifluid material within the Earth's crust from which lava and other igneous rock is formed by cooling.

**magnetite:** a strongly magnetic form of iron ore, a major constituent of magnetite and a common accessory mineral in igneous rocks. In the Mesoamerican region, magnetite was commonly mined and polished to make mirrors and compasses. It frequently has distinct north and south poles, and has been known for this property at least since 500 BC.

**mail armor:** armor made up of interlaced metal rings.

**majolica:** tin-glazed earthenware; a distinctive kind of colorful, decorated earthenware that is tin enameled and glazed – usually of Italian, Spanish, or Mexican origin. This earthenware was introduced by Moorish potters from the island of Majorca in the 15th century. Distinguishing features of majolica ware are coarseness of ware, intricacy of pattern, and occasionally prismatic glaze. It is made of potter's clay mixed with marl and sand, and is soft or hard according to the nature of the composition and the degree of heat under which it is fired in the kiln. Soft wares are either unglazed or lustrous, or glazed, or enameled. The majolica painter's palette was usually restricted to five colors: cobalt blue, antimony yellow, iron red, copper green, and manganese purple; the purple and blue were used, at various periods, mainly for outline. A white tin enamel was used also for highlights or alone on the white tin glaze in what was called *bianco sopra bianco*, "white on white." The Italian lustrous ware is properly majolican and originated in Faenza, Deruta, Urbino, Orvieto, Gubbio, Florence, and Savona. [delft, faience, maiolica]

**maker's mark:** a manufacturing mark etched or stamped on mass-produced ceramics, glassware, or metal. [hallmark]

**malachite:** a minor ore but a widespread mineral of copper; basic copper carbonate, green in color. It was first employed as a cosmetic and ointment for the eyes, to cut down the glare of the sun, and discourage flies. The discovery that metal could be obtained from it was probably accidental and then it was used as a source of copper. The extensive deposits in Sinai were much exploited in antiquity. It was also used for oils and watercolors and was encrusted upon other materials as ornament.

**Malvernian ware:** a pottery industry of west central England, c. Middle Bronze Age, but from the mid 1st millennium BC onward very coarse, handmade jars were added.

**Mamóm:** a type of pottery made in lowland Maya villages in Late Formative (Late Pre-Classic) times, usually monochrome with a waxy surface, with many flat-bottomed bowls.

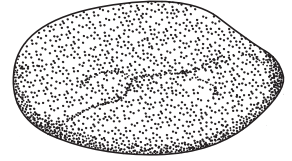
**manacle:** a shackle for the hand.

**Mangaasi pottery:** a long-lived pottery tradition of central Vanuatu, Melanesia, dated to between c. 700 BC and AD 1600. It had incised



and applied relief and was quite different from the ancestral Polynesian Lapita pottery. It was a Melanesian tradition, with parallels in the northern Solomons and New Caledonia.

**mano:** a one- or two-handed, small and flat ground stone tool used with a metate (quern) for grinding vegetable material such as maize, seeds, nuts, pigments, etc. Manos date to the Archaic Indian period, the word coming from the Spanish *mano de piedra*, “hand stone” – referring to the upper stone which is usually cylindrical or ovoid in shape. The underlying smooth stone slab is the metate. It is a hallmark artifact, defining the economic or subsistence base of prehistoric societies. Its forms vary considerably, from a barely modified cobble to a long cylinder similar to a rolling pin. [handstone]



Mano

**mantelet:** great wicker or wooden shields, sometimes mounted on wheels, used in sieges by archers as a protective screen.

**manufacture:** the second stage of the behavioral processes (following acquisition, and before use and deposition), in which raw materials are modified to produce artifacts.

**manuport:** any artifact or natural object that is transported, but not necessarily modified, and deposited by humans. Examples would include seashells found inland or water-rolled pebbles away from any river.

**Marajó Island, Marajoara:** a large island at the mouth of the Amazon River in Brazil with numerous artificial mound sites. Small ones served as house platforms and larger ones contain urn burials. The pottery has sophisticated polychrome designs and is similar to that of pre-Columbian Andean cultures. Radiocarbon dates suggest that the Marajoara style began no later than the 5th century AD and lasted until AD 1300. The largest center, Os Camutins, has 40 mounds. It is the world’s largest fluvial island (one produced by sediments deposited by a stream or river) and half of it is flooded during the rainy season. [Marajó]

**marble:** metamorphic rock composed wholly or in large part of calcite or dolomite crystals, the crystalline texture being the result of metamorphism of limestone by heat and pressure. The term marble is loosely applied to any limestone or dolomite that takes a good polish and is otherwise suitable as a building stone or ornamental stone.

**marbled ware:** pottery patterned with veins or streaks or color resembling marble.

**Marcavalle:** an Early Horizon period pottery style of Cuzco, Peru, overlapping with and from which the Chanapata style derived, c. 1200 BC.

**margin:** the edge of a stone tool or flake.

**mark:** any drawing, painting, engraving, or other modification of nature that is the product of some human action.

**marl:** a calcareous clay; a mixture of clay and particles of calcite, dolomite, and/or shell.

**Maros point:** small, hollow-based, stone projectile points, often with serrated edge retouch, and characteristic of a mature phase of the Toalian industry of southwestern Sulawesi, India, from c. 6000 BC into the 1st millennium BC. They were part of a mid-Holocene stone flake and blade industry.

**Mary Rose:** a Tudor warship, the flagship of Henry VIII's fleet, which sank in Portsmouth harbor, off the south coast of England, on its maiden voyage in 1545. The exploration, excavation, and recovery of the ship is the largest underwater archaeology project ever undertaken. By the time the ship was raised in October 1982, the project had already cost US\$4 million. The *Mary Rose* excavation has yielded remarkable information about Tudor military and daily life. It has also provided the opportunity for the development of new equipment and techniques for underwater archaeology.

**mask:** an object worn, or carried, to cover the face.

**massebah:** a standing stone or group of stones in the Levant similar to a dolmen. There was probably a cult purpose when they were erected by the Canaanites (as at Gezer, Hazor). When set up by the Israelites, it was likely commemorative.

**mastos:** a breast-shaped drinking cup, usually with one horizontal and one vertical handle. In Athens, black-glossed and figured decorated examples have been found.

**mataa:** large-stemmed obsidian spearpoint that was shaped and hafted by inhabitants of Easter Island, from the period of internal wars, 18th to 19th centuries AD.

**matchlock:** a device for igniting gunpowder in firearms, developed in the 15th century, that was a major advance in the manufacture of small arms. The matchlock was the first mechanical firing device. It consisted of a type of musket that used an attached burning taper to light the gunpowder. A match would fire the priming powder in the pan attached to the side of the barrel. The flash in the pan penetrated a small port in the breech of the gun and ignited the main charge.

**Matera ware:** a Middle Neolithic ware from many sites in the neighborhood of Matera, northwest of Taranto, and a cave site, the Grotta dei Pipistrelli, Italy. A dark burnished ware with curved bowls and straight-necked jars, it is characterized by rectilinear geometric designs scratched after firing and filled with an inlay of red ocher. A quite different ware, thin, buff-colored, and painted with broad bands of scarlet, is sometimes included in the term.

**material:** substance of which an artifact is made, such as bone, obsidian, jade, etc.

**material culture:** the artifacts and ecofacts used by a group to cope with their physical and social environment. Material culture includes the

buildings, tools, and other artifacts that constitute the material remains of a former society – its technology and artifacts combined. Material culture thus embraces folk architecture, folk arts, and folk crafts. For example, the construction of houses, the design and decoration of buildings and utensils, and the performance of home industries, according to traditional styles and methods, make up material culture. The distinction is made between those aspects of culture that appear as physical objects, and those aspects that are nonmaterial. It is the major source of evidence for archaeology.

**matrix:** the soil or physical material in which an excavation is conducted, or within which artifacts or fossils are embedded or supported; the surrounding deposit in which archaeological finds are situated. Originally the term described the grains in sediments or rocks that are finer than the coarsest material in the sediment or rock.

**matting:** the method of incising a cross-hatched pattern on metal to create a dull area.

**mattock:** a tool used for digging where the blade is at right angles to the handle.

**mattpainted pottery:** Middle Helladic pottery with simple decoration in manganese-based purple-black paint on a pale ground. Mattpainted pottery has been found in the nearer islands to mainland Greece and even as far as Crete and the Anatolian coast.

**maturity:** range of temperature and time (maturing range) at which a clay body fires to desired qualities of hardness, porosity, and serviceability; the temperature and time at which a glaze develops qualities of bonding (to the body), stability, strength, and texture.

**maul:** a heavy, massive, long-handled hammer dating to the Archaic Indian period.

**Mazapan ware:** a ceramic style developing out of Coyotlatelco and first appearing in association with major architecture at Tula, Mexico in the Post-Classic Toltec phase (9th to 12th century AD). The orange-on-buff (or red-on-buff) pottery was decorated by straight or wavy parallel lines produced by multiple brushes.

**mazer:** a drinking bowl, often wooden.

**McKean point:** the bifacially worked chipped stone projectile points of the McKean complex of the Middle Archaic stage in the Great Plains of North America, c. 2900–1000 BC. They are lanceolate in outline with curved sides and a hollow base.

**meadowood point:** a triangular side-notched point, with notches chipped into each side of the base to form a stem below the main part of the arrowhead point, generally 6 cm (2.5 inches) long.

**mean ceramic dating formula:** a statistical technique devised for pooling the median age of manufacture for temporally significant pottery types.



McKean point

**meander:** any running design consisting of a single line or regular band twisting. The spiral meander is a simple running spiral, the square meander is a rectilinear form of the same thing. The earliest known examples of finger painting are the prehistoric decorative and figurative meanders traced on walls of the Altamira caves in Spain.

**medal:** a piece of metal, usually in the form of a disk, struck or cast with an inscription or device to commemorate an event, or awarded as a mark of distinction.

**medallion:** a large medal.

**medial:** middle portion of an artifact or faunal element.

**medial axis:** the middle of an imaginary line about which a body rotates or with respect to which it possesses rotational symmetry.

**median historic date:** intermediate age of occupation for a known-age site.

**median ridge:** a ridge that usually runs from the tip of a blade to the hafting area which was formed by collateral flaking techniques in the manufacture of the artifact. The median ridge can be the thickest part of the blade.

**medithermal:** the last of the divisions of the Neothermal (postglacial) period, dating from about 4000 years ago to the present.

**megalithic art:** Neolithic engravings found on megalithic stones of chambered tombs and menhirs. Motifs include the concrete and the abstract. The art is associated with passage graves; examples are Gavrinis, Knowth, and Newgrange. Megalithic art objects often suggest a highly developed cult of a spirit world connected with the remains of the dead. [stone art]

**Megarian bowl:** a handleless hemispherical Greek drinking cup made in molds and often decorated in relief and finished in the black-glossed technique. Widespread in the Hellenistic period from the 3rd century BC, they developed into the red-glossed Arrentine wares. The type was first recognized at Megara and they were made until the 1st century AD. They were imitations of gold and silver vessels and served as the first form of book illustration. They often bear on their exteriors scenes in relief from literary texts that are sometimes accompanied by Greek quotations. They likely served as models for Roman artists who created the first true book illustrations.

**Meillacoid phase:** one of two ceramic series (the other being the Chicoid) that emerged from the Ostinoid series. Originating in Haiti, it remained largely confined to the western Greater Antilles. Sites are usually village shell middens, but are often close to good agricultural land. The characteristic pottery is thin and hard but with a rough surface texture and simple incision, sometimes combined with appliquéd strips. The dates are usually within AD 850–1000, although some sites in central Cuba endured to as late as 1500. [Melliac]

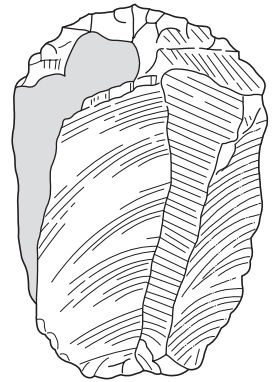
**Meipin:** Japanese name for a type of bottle with a narrow neck, high shoulders, and pinched-in base. Meipin were originally a Chinese creation, popular in the Sung, Yuan, and Ming periods and the beginning of the T'ing period. The shape spread to Korea (Koryo celadons) and to Japan. Some were made in the kilns. [Meiping (Chinese)]

**menhir:** a single, vertical standing stone; any prehistoric structure consisting of a tall, upright megalith ("huge stone"). The name is from the Old Breton *men*, meaning "stone," and *hir*, meaning "long." Menhirs occur in all parts of the world where megalithic monuments are known, but they are particularly profuse in prehistoric Europe. Menhirs are difficult to date, but in Ireland and southwest England a few examples mark burials dating from the Neolithic to the Middle or Late Bronze Age. A similar or slightly earlier date is attested for some of the Breton menhirs. In all these areas, a few of the stones bear cup marks. Such a megalith is often isolated, erected by a family or tribe as a memorial stone for some deceased hero or some great event. It may have been a religious object for worship like the American Indian totem pole. Other are associated with dolmens, tumuli, and circles of stones. Menhirs may occur singly, in rows (alignments), or in enclosures (stone circles). Anthropomorphic examples are known as statue-menhirs.

**merchant's hoard:** any collection of Bronze Age metalwork deposited together, possibly either for ceremonial reasons or to hide it in times of danger, consisting of new or recently manufactured objects ready to be traded.

**mesial:** to or directed towards the midline of a body.

**Mesolithic:** a time period in human history beginning with the retreat of glacial ice c. 8500 BC and the changing climatic conditions following it; a development in northwestern Europe that lasted until about 2700 BC. This Middle Stone Age followed the Upper Paleolithic and preceded the Neolithic. It was a period of transition in the Early Holocene between the hunter-gatherer existence and the development of farming and pottery production. Glacial flora and fauna were replaced by modern forms and the flint industries are often distinguished by an abundance of microliths. The equipment was designed for fishing and fowling as well as hunting and often included many tiny flints, or microliths, that were set in wooden shafts and hafts, and stone axes or adzes used for woodworking. Forests grew in Europe and people modified their lives accordingly. In the Near East, which remained free of ice sheets, climatic change was less significant than in northern Europe and agriculture was practiced soon after the close of the Pleistocene. In this area the Mesolithic period was short and poorly differentiated. In Britain the Mesolithic-Neolithic transition did not come until around



Mesolithic microlith

4000 BC. The dog was domesticated during the Mesolithic. The term is used widely only in European prehistory.

**Mesozoic:** the second of the Earth's three major geological eras of Phanerozoic time and the interval during which the continental landmasses as known today were separated from the supercontinents Laurasia (North America and Eurasia) and Gondwana by continental drift. It occurred before the Cenozoic and after the Paleozoic, and was marked by the development of the ancestors of the major plant and animal groups that exist today and the extinction of the dinosaur, suddenly, at the end of the Cretaceous period. It lasted from about 245 to 66.4 million years ago and included, in order, the Triassic, Jurassic, and Cretaceous.

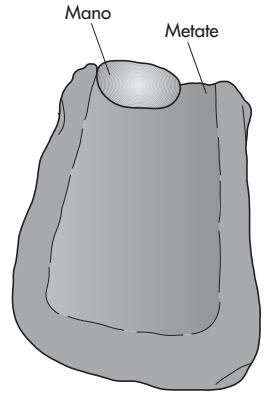
**metal artifact:** any artifact made from metal, including copper, bronze, iron, gold, silver, tin, and lead. They were commonly used as constituents of alloys.

**metallographic microscopy:** microscopic examination of metal artifacts with the aim of studying their manufacturing techniques rather than their composition. A sample is taken from the artifact, preferably a cross-sectional slice, and is highly polished. The surface is then etched in order to dissolve some of the metal, leaving visible its internal structure for examination under a metallurgical microscope. This uses reflected light which emphasizes the uneven surfaces revealed by the etching process and caused by such features as the boundaries between grains of metal. The size and shape of the grains or dendrites in a metal (crystalline structure), as well as other details of microstructure, can yield information on casting methods or post-casting working. The technique can be used on both ferrous and nonferrous metals. [metallographic examination]

**metallurgical analysis:** the study of metals; metal artifacts and the tools or waste products of their manufacture are examined to reconstruct manufacturing processes, the source of raw materials, and the usage. This may be done by the various techniques of chemical analysis, or may involve metallographic examination under a microscope. In the case of copper, bronze, and other nonferrous metals, such analysis may yield information about alloys, casting, cold working, and annealing. For iron and steel, there may be information about forging, carburization, quenching, and tempering.

**metamorphic rock:** rocks that have been changed from their original form by heat or by pressure beneath the Earth's surface. Metamorphic transformations include limestone to marble, shale to slate, and slate to schist. When magma forms an intrusion, it heats and alters the surrounding rocks by contact metamorphism, which forms a ring of altered rocks – the metamorphic aureole – around the intrusion.

**metate:** a ground-stone slab with a concave upper surface used as a lower millstone against which another stone is rubbed to grind vegetable material such as cereal grains, seeds, nuts, etc. A metate is one of a two-part milling apparatus – the other part being a mano (handheld upper grindstone). Metates are found in agricultural and pre-agricultural contexts over much of the world and are often made of volcanic rock in Mesoamerica. It is a Spanish term for a smoothed, usually immobile, stone with a concave upper surface and is mostly associated with the grinding of maize. It is a hallmark artifact in the definition of prehistoric subsistence patterns. [concave quern, grinding platform, lower grindstone, stone saddle quern]



**metope:** in architecture, the space between two triglyphs of a Doric frieze, often adorned with carved work. The entablature or frieze in buildings using the Classical Doric order is usually composed of alternate triglyphs (projecting rectangular blocks, each ornamented with three vertical channels) and metopes (spaces).

**mica:** a mineral that occurs in a glittering, scaly form, widely prized for ornament.

**mica-dusted pottery:** pottery coated with a slip containing mica particles to give a golden or bronze sheen. [mica-gilt pottery]

**Micoquian:** final Acheulian phase defined on the basis of assemblages from La Micoque, near Les Eyzies, France. Sites are found in central Europe, including some in the former Soviet Union. The characteristic artifact is a pointed pyriform (pear-shaped) or lanceolate (tapering) biface with a well-made tip.

**microblade:** a small, narrow stone blade, ranging from less than 5 to 11 mm (0.1–0.4 inches) wide and about 15–45 mm (0.6–1.7 inches) long. They were often made from a conical or wedge-shaped microcore, often punch-struck or pressure-flaked. Microblades were often retouched into various forms of microliths. Microblades are found in the Upper Paleolithic industries of Eurasia and in the Upper Paleolithic of Siberia, but are also characteristic of the Mesolithic and later industries of the circumpolar regions. Examples are the Eastern Gravettian, the Dyuktai culture, and the Arctic Small Tool tradition.

**microblade core:** nucleus from which microblades were manufactured; usually a small barrel- or conical-shaped stone artifact with a flat top and one or more fluted surfaces left as scars from the removal of the microblades.

**microburin:** a microlith produced by notching and snapping a blade; a small piece of stone snapped off a microlith which is a byproduct of the manufacture of microliths. A blade is notched and then snapped off where the chipping has narrowed and weakened it. One piece becomes a microlithic tool, while the residue (the microburin) still shows

traces of the original notch and fracture. Certain trapeze-shaped microliths were made from the central part of a double-notched blade, in which case both ends have the appearance of microburins. This procedure allowed the maker to obtain a strong head with a sharp point by breaking up flint blades after making a notch in them – a practice widespread in the Mesolithic as a means of manufacturing arrowheads. The name originates from the erroneous belief that these pieces were the same as burins. [microburin technique]

**microdenticulate:** a small flake or blade with a series of notches along the edge.

**microfauna:** small animals, such as rodents and insectivores, as compared with macrofauna. Besides referring to the small or strictly localized fauna, as of a microenvironment, the term is applied to minute animals, especially those invisible to the naked eye.

**microflake:** a tiny scar on the surface of a stone tool that may indicate the use of a specific type, such as for cutting or scraping. Microflaking is minute edge flaking that occurs when stone tools are used.

**microlith:** any of various very small stone tools varying in size from 1 to 5 cm (0.4–2 inches) – mainly thin blades or blade fragments with sharp cutting edges, usually geometric in shape, and set into a wooden handle or shaft or the tip of a bone or antler as an arrow point. They were shaped by abrupt retouch into various shapes like triangles and crescents. Microliths were produced during the later Upper Paleolithic and Mesolithic and were either struck as blades from very small cores or were made from fractured blades using the microburin technique. They are characteristic, for example, of the Azilian culture of the Mesolithic. Microliths represent both a versatile and an economic use of raw material – just as blades yield more cutting edge than flakes per unit weight of raw material, so bladelets improve yet further this advantage, by a factor of something over 100 compared to core tools. [pigmy stone]

**micropolish:** any edge or surface abrasion and gloss that increases from tool use. It is sometimes evident only when stone tools are studied under high-powered microscopes.

**microscarring:** minute patterns of edge damage on a stone tool, often suggesting how that tool was utilized.

**microstructure:** the arrangement of phases of a material; in a ceramic, the internal arrangement of crystalline and amorphous materials, pores, and boundaries between them.

**microwear:** patterns of edge damage on a stone tool providing archaeological evidence of the ways in which that tool was used. Microscopic scratches and polish on the surface of stone tools or hominid teeth might reveal how various tools were used or what types of food certain hominids ate. [microscarring]



**microwear analysis:** study of the patterns of wear or damage on the edge of stone tools, which provides valuable information on the way in which the tool was used.

**midden:** a refuse deposit resulting from human activities, generally consisting of soil, food remains (bone and shell), and discarded artifacts.

**Middle Assyrian:** 1. A period in the history of the Assyrian Empire extending from the 14th to 12th centuries BC. In the Late Bronze Age, Assyria was dominated by the Mitanni state, but in the 14th century BC, Assyria became dominant. Ashur-uballit I created the first Assyrian Empire and initiated the Middle Assyrian period. With the help of the Hittites, he destroyed the dominion of the Aryan Mitanni (a non-Semitic people from upper Iran and Syria) and ravaged Nineveh. Later, allied with the Kassite successors in Babylonia, Ashur-uballit ended Hittite and Hurrian rule. By intermarriage he then influenced the Kassite dynasty and eventually dominated all of Babylonia, thus paving the way for the Neo-Assyrian mastery during the Sargonid dynasty (12th to 7th century). The succeeding Assyrian kings expanded the empire through northern Mesopotamia and the mountains to the north and briefly occupied Babylonia. Several kings weakened Assyria, but then others brought back its dominion. 2. The name of a form of cuneiform that was used extensively in writing law code and other documents. Middle Assyrian laws were found on clay tablets at Ashur (at the time of Tiglath-pileser I, 1114–1076 BC).

**Middle Bronze Age:** in the Levant, the period of sophisticated urban civilization of the Canaanites, divided into Middle Bronze Age (MBA) I, c. 1950–1800 BC, and MBA II, c. 1800–1550 BC. The Middle Bronze Age provides the background for the beginning of the story of the Old Testament. The archaeological evidence for the period shows new types of pottery, weapons, and burial practices. It was an urban civilization based on agriculture. There was much contact with the Phoenicians and the Egyptians during this time. The destruction of Megiddo, Jericho, and Tell Beit Mirsim that followed the Egyptians' expulsion of the Hyksos into Palestine occurred at the end of the Middle Bronze Age.

**Middle Horizon:** a division of time in Andean/Peruvian South America, c. AD 600–1000, used to refer to the first imperialistic domination of the area under the unifying forces of the Tiahuanaco and Huari (Wari) cultures. It was the time of the first large-scale imperial expansions. During the first half of the Middle Horizon, in central Peru, the Huari came to control the highlands and possibly the coast. The remains of large groups of food-storage buildings in the Huari strongholds suggest military activity like that of the late Inca. The Huari culture is closely linked in its art style to the monuments of the great site of Tiahuanaco, located on Lake Titicaca, Bolivia. Tiahuanaco expanded over the altiplano and adjacent regions of Bolivia, southern Peru, and

northern Chile. The principal buildings of Tiahuanaco include: the Akapana Pyramid, a huge platform mound or stepped pyramid of earth faced with cut andesite; a rectangular enclosure known as the Kalasasaya, constructed of alternating tall stone columns and smaller rectangular blocks; and another enclosure known as the Palacio. They practiced the raised-field system of agriculture. Some Tiahuanaco effigy vessels have been discovered at Huari, but otherwise they seem to have been independent entities. In the second half of the Middle Horizon, the political and economic systems slowly collapsed. The decline of these two states was followed by a period of more localized political power. The Late Intermediate Period began about AD 1000.

**Middle Kingdom:** a period in Egyptian history including the 11th to 13th dynasties, c. 2008–1630 BC. This phase began with the reunification of Upper and Lower Egypt by the 11th dynasty king Mentuhotep II (Nebhaptre), ushering in years of stability and prosperity. It is usually divided into two phases, the early Middle Kingdom (late 11th and early 12th dynasties) and the late Middle Kingdom (from the reign of Senusret III to the end of the 13th dynasty).

**Middle Paleolithic:** the intermediate part of the Paleolithic period, from about 100,000 years ago to about 35,000 years ago. It was characterized by the development of a variety of stone tools and the first symbolic use of artifacts and sites. It ended with the extinction of the Neanderthals. The Middle Paleolithic is equivalent to the Middle Stone Age in sub-Saharan Africa. The Middle Paleolithic comprises the Mousterian, a portion of the Levalloisian, and the Tayacian, all of which are complexes based on the production of flakes, although the hand-ax tradition survived in many instances. Middle Paleolithic assemblages first appear in deposits of the third interglacial and persisted during the first major oscillation of the fourth glacial (Würm) stage. Associated with the Tayacian, in which the artifacts consist of very crude flakes, remains of modern man (*Homo sapiens*) have been found. Mousterian man, on the other hand, is of the Neanderthal race. It is in the Mousterian levels of the caves and rock shelters of central and southern France that the earliest evidence of the use of fire and the first definite burials have been discovered in western Europe. The artifacts consist of: (1) the prepared striking platform, “tortoise” core (Levalloisian) tradition; (2) the plain striking platform, discoidal core technique of the Clactonian tradition; and (3) a persistence of the bifacial core tool, or Acheulean tradition.

**Middle Stone Age:** the second part of the Stone Age in sub-Saharan Africa, dating from c. 150,000 to 30,000 years ago and roughly equivalent to the Middle Paleolithic elsewhere in the Old World. Assemblages

are characterized by flakes made by preparing the core; there were many shapes and sizes of these artifacts. The characteristic tools are made from flakes produced by a developed Levalloisian technique, including slender unifacial and bifacial lances or spear points for stabbing or throwing. In the final stages of the Middle Stone Age, known as the South African Magosian, microlithic elements appear. Middle Stone Age assemblages are associated with anatomically modern *Homo sapiens* in southern Africa. People continued to live in open camps, while rock overhangs also were used for shelter. Middle Stone Age bands hunted medium-size and large prey. Sometimes they collected tortoises and ostrich eggs in large quantities, as well as seabirds and marine mammals that could be found along the shore. The rich archaeological deposits of Klasies River Mouth Cave preserve the earliest evidence in the world for the use of shellfish as a food source.

**Middle Woodland period:** a term sometimes used to describe the time period during which the Hopewell culture flourished throughout the American Midwest, from roughly 50 BC to AD 400.

**Midland:** Paleoindian complex of the North American Plains similar to the Folsom but the point is different. The type site is the Scharbauer site near Midland, Texas, though the culture is best represented at Hell Gap. A skeleton (Midland Man) of a young woman dating to 10,000 BP from Scharbauer was one of the earliest acceptable human remains in North America. The Midland point is an unfluted Folsom point. [Midland point]

**midline:** in lithics, an imaginary line extending along the center of a projectile from the distal tip to the midpoint of the basal edge.

**midpoint:** in lithics, an imaginary point at the intersection of the midline and the transverse line.

**midrib:** the raised midline or thickening of the center line of a bronze weapon, such as a dagger, to add strength and reinforce the blade.

**Migration period:** the period of large-scale movement of peoples in western Europe during the 4th, 5th, and 6th centuries AD – including the Anglo-Saxon settlement of England. These movements are associated with the collapse of the Roman Empire. Barbarians from beyond the Roman frontiers settled within many of the former provinces. The Migration period is often extended to cover the period from the 3rd century AD to the accession of Charlemagne in AD 800.

**Mildenhall ware:** a type of Middle Neolithic pottery of central-eastern England and East Anglia c. 4th millennium BC. It consists mainly of round-bottomed bowls with elaborate decoration and deep S-profiled forms with rolled or thickened rims.

**milestone:** roman road markers – cylindrical blocks of stone usually about 1.8 m (6 feet) high – recording the distance from a central point within



Midland point

the province or a local center. These were placed along all principal roads, and instances are found from about 250 BC onwards. The stone was typically inscribed to give the distance in (Roman) miles to the nearest major town, and commonly a date of installation, expressed in terms of republican magistracies, or the years of an emperor's reign. They often bore the title of the emperor or consults under whose direction the road was laid out or repaired.

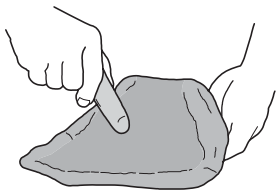
**millefiore:** a type of multicolored glass and the technique which creates it – literally meaning “a thousand flowers.” One millefiore method is to take a cane of glass, encase it with several layers of glass of different colors, and then heat the whole and roll it on a corrugated surface, thus compressing the colors at certain points and producing a rod with a flowerlike section. Small slices can be cut off this rod and inlaid into the object to be decorated. Another method is to lay thin glass rods of different colors into a pattern, fuse them together, draw them out, and cut in slices in the same way. The effect is that of mosaic. The technique was developed by Anglo-Saxon glass- and metalworkers. Some of the finest examples of the millefiore technique can be seen adorning the Sutton Hoo discoveries – the brilliant reds and blues on the purse lid and shoulder clasps. [millefiori]

**milling stone:** any stone slab or basin that is used to process seeds, nuts, and other such foods by rubbing, grinding, or pounding them against this object with another stone. [grinding stone, metate]

**millstone:** one of a pair of cylindrical stones used in a mill for grinding grain in a mill. One face of each stone is roughened by means of a pattern of lines cut into the surface while the other face may be slightly domed. Millstones were used in pairs (an upper and lower stone), a central hole in each taking the spindle that keeps them concentric and in the case of the upper stone attaches to the power source that turns it.

**Mimbres culture:** pueblo-based farming communities living along the Mimbres River in southwest New Mexico, US c. AD 1000–1130. Mimbres is probably best known for its very fine ceramics, which include magnificent ceremonial bowls adorned with painted geometric and pictorial designs. Examples are often found inverted over the head of the deceased in burial deposits, ritually broken by making a small hole in the center of the base.

**Mimi style:** a style of art associated with the Pirri culture of Arnhem Land in which plain red stylized human figures showing vigorous movement are depicted. The thin, stick-like human figures are a feature of the Arnhem Land rock art of northern Australia. The painting are thought to be about 3000 years old, earlier than X-ray art. [Mimi figures]



Milling stone

**Mina:** a pottery style found in coastal shell mounds in Brazil near the mouth of the Amazon, with a radiocarbon date around 3880 BC. It is among the oldest pottery in the New World.

**Mindel glaciation:** the second major Pleistocene glaciation of Alpine Europe which ended with the onset of the Holsteinian interglacial. It was the second major ice age in the Pleistocene period, shown in Quaternary deposits in the Alps and the valleys of south German rivers. The Mindel consists of moraine and related river terraces of pro-glacial deposits. The Mindel glacial stage is part of the early geological scheme (developed c. 1900) that first recognized the importance of multiple episodes of Pleistocene glaciation. The stage, a period of relatively severe climatic conditions and glacial advance, preceded the Mindel-Riss interglacial and followed the Günz-Mindel interglacial, both periods of relatively moderate climatic conditions. The Mindel glacial stage lasted from about 750,000 to 675,000 years ago. At least two periods of glacial advance, separated by a moderate period, are recognized in the Mindel.

**Mindel-Riss:** the interglacial stage that followed the Mindel glacial stage, a separation between the Mindel and Riss glacials in Alpine Europe.

**mineral:** a solid homogeneous crystalline chemical element or compound that results from the inorganic processes of nature. The term includes any of various ground substances such as stone, coal, salt, sulfur, sand, petroleum, water, or natural gas. Each of these naturally occurring substances has a characteristic chemical composition expressed by a chemical formula.

**mingqi:** a Chinese term used to describe small objects, sometimes imitating objects of daily life or buildings. They were placed in tombs as offerings and were of fairly early origin, some from the Shang period.

**miniature cup:** any of a number of small ceramic vessels accompanying Bronze Age cremation burials in the British Isles during the 2nd millennium BC.

**minim:** small Roman coin of low value, c. 3rd to 4th century AD in Britain.

**minimissimus:** extremely small Roman coin of low value of the 3rd and 4th centuries AD in Britain.

**mintmark:** a mark on a coin indicating the mint at which it was struck.  
[mint mark]

**Minyan ware:** a distinctive Middle Helladic pottery – a gray or yellow wheelmade ware of high quality first appearing at Troy VI and in Greece c. 19th century BC. It was the first wheelmade pottery to be produced in Middle Bronze Age Greece. It was ancestral to Mycenaean pottery, and may represent a movement of new peoples into the Aegean area, the first Greek speakers. Traditionally it has been associated with an apparently violent end to the Early Helladic culture, c. 2000–1900 BC,

and the arrival of Greek-speaking peoples in the Aegean. The term was coined by Heinrich Schliemann. The ware had a soap-like feeling and its forms were modeled after metal objects.

**Miocene:** a geological epoch of the Tertiary period in the Earth's history, in which many of the great mountain chains were formed and mammals came to dominate animal life. During this epoch, many mammals of modern form, such as dogs, horses, and human-like apes, evolved. The Miocene occurred after the Oligocene and before the Pliocene and is dated between 25 and 5 (23.7–5.3) million years ago (mya). It is often divided into the Early Miocene epoch (23.7–16.6 mya), the Middle Miocene epoch (16.6–11.2 mya), and the Late Miocene epoch (11.2–5.3 mya). The Miocene may also be divided into six ages and their corresponding rock stages; from oldest to youngest these ages or stages are the Aquitanian, Burdigalian, Langhian, Serravallian, Tortonian, and Messinian.

**mirror:** a polished metal artifact with functional and symbolic uses. It was made in the Iron Age and the backs were decorated in beautiful La Tène designs. It was also made in Egypt from at least the Old Kingdom (c. 2686–2181 BC). In China, mirrors were thought to have magical powers to influence the spirits, and were therefore frequently buried in tombs from the late Zhou/Chou dynasty (1072–221 BC) until the T'ang dynasty (AD 618–906]. Made of bronze, they were cast with elaborate decoration on the reverse of a highly polished convex surface. In Japan, many round imported mirrors and their domestic copies are found from Yayoi and Kofun graves. In the Greek and Roman world, mirrors were made of polished tin and bronze, decorated, and had handles of bone or ivory. Celtic Britain had fine bronze mirrors c. 100 BC to AD 100.

**misericorde:** a narrow-bladed dagger of the 14th century, which was pushed through the eye slits or between the armor plates of a knight immobilized on the ground by the weight of their armor, and so giving the *coupe de grâce*.

**Mississippian:** a group of cultures which arose in southeastern North America – especially the central and lower Mississippi Valley – after AD 700 and into the historic period. It spread over a great area of the southeast and mid-continent, in the river valleys of what are now the states of Mississippi, Alabama, Georgia, Arkansas, Missouri, Kentucky, Illinois, Indiana, and Ohio, with scattered extensions northward into Wisconsin and Minnesota and westward into the Great Plains. It stands in contrast to the Woodland tradition having three new traits – the building of rectangular, flat-topped mounds as bases for temples; burial mounds becoming less prominent; and radical pottery changes (pulverized shell rather than grit used for temper). New

pottery shapes and forms, such as olla, and new types of decoration (burnishing, painting) appeared. Maize became the predominant crop, accompanied by beans and squash, which supplemented hunting and gathering. The largest of the earthworks is Monks Mound, in the Cahokia Mounds near Collinsville, Illinois. The Mississippian is divided into the periods Temple Mound I (c. AD 700–1200) and Temple Mound II (AD 1200–1700). It was the last major cultural tradition in prehistoric North America. By the late 17th century, all the major centers had been abandoned.

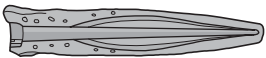
**Madec point:** a point made from bone, antler, or ivory with an elongated oval shape. It has been found at Aurignacian sites in central Europe. [Lautch point]

**MNI:** the minimum number of individuals represented in a given faunal or human bone collection; determined from the number in the largest category of skeletal elements recovered. It is a method of assessing species abundance in faunal assemblages based on a calculation of the smallest number of animals necessary to account for all the identified bones. It is usually calculated from the most abundant bone or tooth from either the left or right side of the animal. [minimum number of individuals]

**moai:** 1. Colossal stone figures found on Easter Island carved between approximately AD 600 and 1500. There are 800–1000 known to have been quarried from the volcanic tuff at Rano Raraku. They can be up to 10 m (33 feet) tall and up to 28 tons in weight. Many were put in ahu on the coast, on top and facing inland. The moai were probably ancestor figures. Most of the moai were knocked over during internal strife on the island. 2. A small wooden statue of uncertain religious significance, also carved on Easter Island. The figures are of two types, moai kavakava (male) and moai paepae (female). They were sometimes used for fertility rites but were more often used for harvest celebrations. During the time between these public festivals, the statues were wrapped in bark cloth and kept in private homes.

**mobilier art:** a general term used to describe the small and portable objects produced by artists during the Upper Paleolithic period. These included carved or engraved stone, bone, ivory, or antler, and small crudely fired clay models. Artifacts include figurines, artists' trial pieces, decorated weapons, tools, and ornaments. The distribution extends from Siberia to Spain. Cave art covers the paintings, engravings, and reliefs found on the walls of caves and rock shelters of the same period. Unlike wall art, which is difficult to date, mobilier art is usually found in archaeological layers and can therefore be dated. The earliest pieces probably date to about 35,000 years ago and they continued being made throughout the Upper Paleolithic to c. 10,000 BC. [chattel art, French art, mobilier home art]

- moccasin:** a soft leather slipper or shoe, having the sole turned up and sewn to the upper in a gathered seam, originally worn by North American Indians.
- mocha ware:** a pottery ware of the late 18th through the early 20th centuries, ornamented with colored glaze worked into branch-like patterns by drops of a diffusing agent applied while the glaze is still wet.
- Moche culture:** Early Intermediate Period state-based society centered on the northern coast of Peru in South America during the period AD 200–700. The site of Moche in the Moche Valley was the capital of the Mochica state and comprised two huge adobe platforms, an immense plaza, and an extensive residential area. Moche pottery includes stirrup-spouted funerary vessels on which there are painted depictions of gods, ceremonies, and scenes from everyday life. [Mochica culture]
- mocronate tip:** a type of distal end or tip treatment in which a small sharp nipple has been left on the very tip of the blade.
- mode:** the most specific category of classification for artifacts, representing items within the same type and variety that share further common attributes. Modes are single or multiple attributes whose frequencies change through time and space. They are useful in constructing culture history.
- modeling:** a ceramic vessel construction technique where a mass of clay is handworked into a rough approximation of the vessel through punching, pinching, and/or drawing.
- Moershoofd interstadial:** an interstadial of the Weichselian cold stage. It is dated to c. 50,000–43,000 bp.
- Mogollon tradition:** later prehistoric farming communities living in Arizona and New Mexico, US, in the period c. AD 250–1450. Characterized by distinctive red-on-brown and polished red ceramics, early Mogollon settlements were small villages with few houses and large associated ceremonial complexes.
- Mohs scale:** a scale from 1 to 10 used to determine the hardness of minerals, talc being 1 and diamond being 10. It is a rough measure of the resistance of a smooth surface to scratching or abrasion by a substance of known or defined hardness, expressed in terms of a scale devised in 1812 by the German mineralogist Friedrich Mohs. [Mohs' scale]
- mokkan:** in Japan, wooden tablets from the Han dynasty Chinese sites. There were used for keeping track of taxes, work, etc. and thousands have been found in the Heijo Palace and other administrative offices. The United Silla of Korea and the Ritsuryo state in Japan, c. 8th century AD, adopted their use.
- mold:** a hollow container used to give shape to molten or hot liquid material (such as wax or metal) when it cools and hardens.





**mold construction:** preparing paste into a prepared form or mold, which then imparts its shape to the paste.

**molding:** 1. A ceramic vessel construction technique where a flat, circular mass of clay is pressed into a concave mold, or placed over the top of a convex mold. 2. Any prepared receptacle used to impart specific shapes to materials such as clay, glass, or metal.

**monitoring:** making periodic checks on the condition of collections, recharging exhausted silica gel, and taking action on deteriorated objects where necessary.

**monstrance:** an ornamental vessel of gold, silver, silver-gilt, or gilded or silvered copper, in which the Eucharistic Host is carried in processions and ceremonies. The decoration often represents a sun with rays, in the center of which is a lunule or glass box in which the consecrated wafer is carried and exposed on the altars of churches. The earliest monstrances do not date before the 12th century. First used in France and Germany in the 14th century, monstrances were modeled after pyxes or reliquaries, sacred vessels for keeping the Host in. [expositorium, ostensorium]

**montmorillonite:** a common clay mineral of the smectite group, having a small particle size and an expanding lattice.

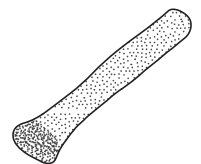
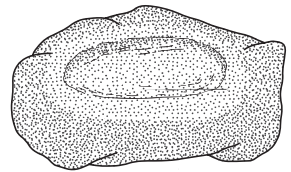
**mood:** a blank for a knife that has not been hammered out.

**morphological type:** a descriptive and abstract grouping of individual artifacts whose focus is on overall similarity rather than specific form or function. The shape, size, and superficial characteristics of artifacts, features, structure, sites, etc. provided by measurements (including weight) permit the comparative statistical analysis of attributes and frequencies. [morphological typology]

**Morrow Mountain point:** Middle Archaic bifacially worked chipped stone projectile points of eastern North America dating to the period c. 6000–4000 BC. The points are triangular in outline with slightly flared sides towards the base and a small rounded tang on the base.

**mortar:** 1. Part of an ancient device for processing plant foods, usually used with a pestle. It was a stone or wooden receptacle with a cup-shaped depression. Mortars were frequently made of special rocks, which might be traded over considerable distances. The mortars of the medieval period in Europe have been studied at length; the first stone mortars occur in 8th century Dore-Stad and have origins in the Moselle Valley, while the French Carolingians at this time were using pottery mortars. 2. A mixture of lime with cement, sand, and water, used in building to bond bricks or stones.

**mortarium:** a Roman grinding bowl, or mortar; a culinary pottery form. Examples are often stamped with the maker's name, and some sophisticated versions have been found.



Mortar (and pestle)

**Mortlake ware:** a family of elaborately decorated Neolithic ceramics found in southern and eastern parts of the British Isles. Dating to the period 3000–2000 BC, Isobel Smith divided Peterborough wares into three successive styles – Ebbsfleet, Mortlake, and Fengate – on the basis of their occurrence in the ditch fills at Windmill Hill. It is now recognized that these three groups overlap rather more than originally thought, and that they are best seen as part of the broad group of impressed wares found over much of northern Europe in the 3rd millennium BC. The decoration on Peterborough ware consists of pits, “maggot impressions” made by impressing tightly rolled cord, and the impressions made by pressing the ends of bird bones into the soft clay before firing. Some of the later vessels are the first in Britain to be made with flat bases. [Peterborough ware]

**mosaic:** a technique of decoration used mainly on floors or walls involving the setting of small colored fragments of stone, tile, mineral, shell, or glass, each called a tessera (plural tesserae), in a cement or adhesive matrix. Mosaic also refers to a tessellated area, often of complex designs and, possibly, inscriptions. Mosaic floors were made from small squares, triangles, or other regular shapes up to 2 cm (1 inch) in size. They were laid in cement to form designs, figures of animals, or classical figures representing the seasons, etc. Old limestone would be used for white and various reds, browns, or grays from baked clays were used. Glass, too, was sometimes incorporated. The earliest known mosaics date from the 8th century BC and are made of pebbles, a technique refined by Greek craftsmen in the 5th century BC. Greek mosaics were simple pebble floors and then became more complex and sophisticated under Macedonian kings. Mosaics are known from Pompeii, Rome, Tivoli, Aquileia, and Ostia – as well as Africa, Antioch, Sicily, and Britain. Under the Roman Empire, the achievements of the 5th to 6th-century Byzantine artists at Ravenna are impressive. An excellent collection of mosaics from Pompeii may be seen in the Museo Nazionale at Naples, and a good selection of Imperial Roman provincial work may be seen at the Museum of Le Bardo, outside modern Tunis, Tunisia. Pre-Columbian American Indians favored mosaics of semiprecious stones such as garnet and turquoise and mother-of-pearl. These were normally used to encrust small objects such as shields, masks, and cult statues. Mosaic as an art form has most in common with painting. It represents a design or image in two dimensions. It is also, like painting, a technique appropriate to large-scale surface decoration. [mosaic work]

**motif:** a single repeated design (or color); an element in a (usually) complex design. It may be nonrepresentational or pictorial.

**mottled:** having spots of different colors or shades.

**motto beaker:** a beaker decorated with white-painted scrolls and words forming phrases or maxims, made in Gaul or the Rhineland.

**Mousterian:** a Middle Paleolithic culture that is defined by the development of a wide variety of specialized tools made with prepared-core knapping techniques, such as spear points. It is named for the first such artifacts recovered from the lower rock shelter at Le Moustier, Dordogne, France. Stone tools, scrapers, and points found in the cave came to be recognized as the flint industry present throughout Europe during first half of the last glaciation (Würm) and associated with Neanderthal man. The earliest Mousterian goes back to the Riss glaciation, but most of it comes from the late/middle Würm glaciation, giving a total lifespan from 180,000 BC until c. 30,000 BCE. Flintwork of Mousterian type (with racloirs, triangular points made on flakes, and – in some variants – well-made hand axes) has been found over most of the unglaciated parts of Eurasia, as well as in the Near East and North Africa (in the latter two areas, it constitutes the Middle Paleolithic). Three major regional variants have been identified – West, East, and Levallois-Mousterian, each with subgroups. In certain industries, called Levallois-Mousterian, the tools were made on flakes produced by the Levallois technique. It was a progressive stage in the manufacture of stone tools. Mousterian peoples mainly lived in cave mouths and rock shelters. [Mousterian industry]

**mouth:** the orifice or opening of a hollow ware vessel.

**mud brick:** a brick dried in the sun rather than baked, used for construction in dry climates, such as the Middle East, Africa, Asia, and Mesoamerica. In a dry climate, where fuel for baking brick is scarce, bricks were and are commonly sun-dried only. A building constructed of these can expect only a limited life, perhaps 30 years. When it collapses, new brick would be brought in for any new building, which would be superimposed on the leveled ruins of the old, with the floor at a correspondingly higher level. It is this process which largely explains the great height and bulk of Near Eastern tells. The two principal building materials used in ancient Egypt were unbaked mud brick and stone. Mud brick was even used for royal palaces, fortresses, and the great walls of temple precincts and towns, and for subsidiary buildings in temple complexes. The first fired bricks appeared about 3000 BC (in Mesopotamia). [adobe, mud-brick, pisé]

**Mudejar:** a unique style of art and architecture, part Gothic, part Islamic, which developed in the Iberian peninsula during the Moorish occupation of the 12th to 15th centuries. The style, marked by the frequent use of the horseshoe arch and vault, distinguishes the church and palace architecture of Toledo, Córdoba, Seville, and Valencia. Many of the greatest Mudejar buildings were constructed by Moorish



Mud brick from Thebes stamped with name of Ramesses II, 19th Dynasty, 1250 BC

workmen for Christian masters, and were executed in brick, tile, and wood. One of the finest examples is the great Mudejar palace of the Alcazar in Seville.

**muff glass:** a flat piece of window glass made by blowing a bubble of glass and swinging it from the pipe to create a long cylindrical bubble. The ends were cut off and then it was split along the middle and allowed to uncurl on a flat surface inside an oven to make a sheet of glass. [cylinder glass]

**mug:** a large cup, typically cylindrical and with a handle.

**muller:** a small grinding stone, often for use with pigments but also for grains, ores, and drugs. In painting, it is an instrument used in conjunction with a slab to grind artists' colors by hand. From ancient Egyptian times until the 18th century, porphyry (a rock of feldspar crystals) was used.

**multidirectional core:** a core that has had flakes removed from two or more directions.

**multifaceted platform:** a platform with more than one plane of detachment, such as on the margins of some bifaces or multidirectional cores.

**multiple fluting:** a technique of fluting that involved the removal of two short lateral flutes in preparation for the removal of a longer flute.

**multivocality:** concept that an artifact can have different meanings depending on its context.

**mummification:** technique of preserving a body whereby the viscera and brain are extracted from the dried body prior to embalming it in sodium carbonate and finally wrapping it in bandages and a canvas shroud. This treatment of a cadaver, the mummy, had the aim of preserving a life-like appearance and was used by the Egyptians from the time of the Old Kingdom. The preservation of the body was an essential part of ancient Egyptian funerary practice, since it was to the body that the ka would return in order to find sustenance. If the body had decayed or was unrecognizable the ka would go hungry, and the after-life would be jeopardized. Mummification was therefore dedicated to the prevention of decay. In the New Kingdom, new techniques of removal of internal organs (though in the Late Period they were replaced after treatment), use of effective desiccating agents, and subcutaneous padding made mummification possible on a large scale. Sacred animals and birds were also mummified. Mummification was accompanied by elaborate rituals. Among the many other peoples who practiced mummification were people living along the Torres Strait, between Papua New Guinea and Australia, and the Incas of South America. The term is also applied to bodies accidentally preserved in this way in other parts of the world, as in desert regions of Peru and Andean caves.

**mummy:** dead body of a person or animal preserved according to the rites practiced in ancient Egypt. After removal of the organs to separate canopic jars, the body was treated with resin (natron) to dry it out thoroughly. It was then wrapped tightly in linen bandages, accompanied by jewelry, religious texts, and unguents of various kinds. Human mummies were then generally enclosed in cartonnage, wooden, stone, or gold cases of human form, before being placed in the tomb. All stages of the procedure were accompanied by elaborate rituals, culminating in the ceremony of the “opening of the mouth,” which symbolically restored to the completed mummy the faculties of life. The practice arose from the accidental preservation of bodies by desiccation in the desert sand, giving rise to the idea that such preservation was necessary to the survival of the dead man’s soul. It continued until the end of pharaonic times. The name derives from “moumiya,” or bitumen, with which the Persians mistakenly thought the bodies were coated.

**mummy label:** a type of identification tag used during the Greco-Roman period, when corpses were regularly being transported from the home to the cemetery or back to their village. The tags were made of wood and, occasionally, stone. Mummy labels were inscribed with short ink texts in Greek or demotic, giving the name, age, home town, and destination of the deceased. [tabla (Greek)]

**mumun:** a Korean term meaning “no decoration” for the plain pottery of the peninsula which succeeded Chulmun pottery from c. 1500 BC to AD 300. It was the dominant pottery type from the Bronze Age through the Proto-Three Kingdoms period.

**Munsell color chart:** a color identification system for sediment, soil, chert, pottery, and rock; an aid used in the physical examination and recording of objects where color is felt to be an essential or at least a significant aspect of the analysis. Devised by Albert H. Munsell, the three factors of hue, value, and chroma are taken into consideration, all rated on a scale of 0–10, and expressed quantitatively. Hue describes the colors of the spectrum present, value their concentration, and chroma their purity. The color of soil or, for example, pottery, can be matched in the chart and given a value, so that anyone with a similar set of charts can understand the exact color of the material. The method allows direct comparison of colors without physically moving the material, and is clearly preferable to the use of such subjective descriptions as reddish-brown or yellowish-gray. The charts are contained in a loose-leaf notebook with pages of hundreds of standardized color chips, each perforated with a hole, by which the color of the soil or other material can be compared with the standard sample. [Munsell]

**mural:** a work of art on a wall or ceiling surface.

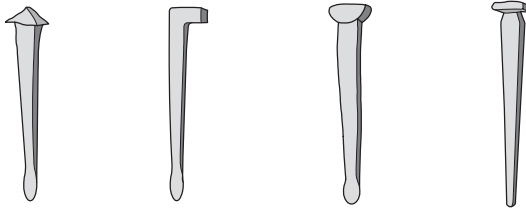
**musket:** an infantryman's light gun with a long barrel, typically smooth-bored and fired from the shoulder.

**mutisalah:** small, opaque, reddish glass bead used in the late 1st millennium BC at maritime Southeast Asia sites. It was probably made in southern India.

**muzzle:** a strap or series of straps and/or bars worn over the mouth of an animal to prevent it biting.

# N

**nail:** any small metal spike with a broadened flat head, driven into wood to join things together.



**native copper:** metallic copper found naturally in nuggets, which can be worked by hammering, cutting, and annealing.

**natural type:** an archaeological type coinciding with an actual category recognized by the toolmaker.

**nave band:** a circular frame or disk arranged to revolve on an axle and facilitate the vehicle's motion.

**Nderit ware:** first discovered at Stable's Drift on the Nderit River, south of Lake Nakuru in the central Rift Valley of Kenya, Nderit ware is a widespread variety of pottery which may predate the florescence of the Pastoral Neolithic in the area. It is one of several distinct pottery wares associated with the Pastoral Neolithic in Kenya and northern Tanzania. It is characterized by finely executed, wedge-shaped decoration, apparently made by means of repeated impressions of a pointed object such as obsidian; it is also often deeply scored on the inside surface of the vessel. In northern Kenya, the pottery occurs at

- least as early as the 3rd millennium BC. Further to the south, Nderit ware only occurs with other pottery traditions. [Gumban A]
- neck:** a restriction of a vessel's orifice, often cylindrical in shape, above the maximum diameter of the vessel's body or shoulder; the part of a vessel between the shoulder and the rim. [collar]
- necked bowl:** bowl or jar with a rim curving out from its shoulder to form a neck of concave quarter-round profile. [cavetto neck, cavetto rim]
- necklace:** a chain, band, or cord, often ornamented with beads, pearls, jewels, etc., worn around the neck.
- needle:** a very thin pointed piece of metal or bone with a hole or eye for thread at the blunter end, used in sewing.
- needle-case:** a container in which needles are held.
- negative bulb of percussion:** a small depression on a core below the striking platform, produced by the force that detached the flake. [bulb pit]
- negative painting:** a technique of pottery decoration used in many parts of the Americas in which a design area is covered with a paint-resistant substance (wax, gum, clay) and then dipped in paint or dye, dried, and fired. The pot might be either smoked or dipped into a black wash. The dark coating is unable to reach those areas of the surface protected by the resistant substance, and when the resistant substance is removed, the pattern stands out in the original color against the black background. [resist dyeing]
- nemset vessel:** a type of spouted vase or lustration vessel usually used in ritual contexts such as the Egyptian "opening of the mouth" ceremony, which was a ritual intended to instill life into funerary statues or mummies.
- Nene Valley ware:** a type of Roman pottery made by an organized industry on the banks of the River Nene, west of Peterborough, by the Roman town of Water Newton (ancient Durobrivae), England, from the 2nd to 4th centuries AD. (It was formerly known as Castor ware.) The commonest shapes are drinking vessels and tumblers, made of a light clay with a dark slip, sometimes with white decoration. Decoration was by applied scales, rouletting, or barbotine. Barbotine ornamentation is applied to pottery by squeezing a bag containing thin clay slip in the same way as a cake is iced today. It may be applied by brush or spatula as well. The best known are the Hunt Cups, showing dogs pursuing deer or hares, but human scenes also occur. It is a local ware, made in imitation of the dark, glossy Rhenish wares, and was perhaps the first fineware to be produced locally in Roman Britain. [Castor ware]
- Neo-Assyrian:** a political period of the Assyrian Empire in the Iron Age, an extension of the Middle Assyrian. It lasted from Assurnasirpal II (883–859 BC) until Sargon, Sennacherib, Esarhaddon, and finally

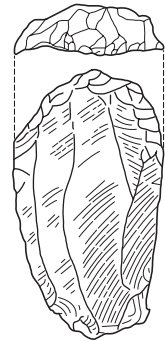


Assurbanipal (668–627 BC). The Assyrian Empire was destroyed by the Babylonians and Medes in 612 BC. The Neo-Assyrian period was the great era of Assyrian power, and writings culminated in the extensive records from the library of Ashurbanipal at Nineveh (c. 650 BC). Neo-Assyrian is also the name of the cuneiform script of the time.

**Neo-Babylonian:** a political and economic period of weakness during the early 1st millennium BC which ended with the absorption of Babylonia into the Neo-Assyrian Empire by 688 BC. A rebellion in the 620s evicted the Assyrians and in alliance with Medes, they destroyed the Assyrian Empire in 612 BC. Persia's Cyrus invaded and occupied Babylon in 539 BC.

**Neogene period:** upper division of the Tertiary system including the Miocene and Pliocene periods; latest of the two divisions of the Cenozoic era (66.4 million years ago to the present). The Neogene, which means “new born,” was designated as such to emphasize that the marine and terrestrial fossils found in the strata of this time were more closely related to each other than to those of the preceding period, called the Paleogene. The term Neogene is widely used in Europe as a geological division, but is generally not employed in North America, where the Cenozoic era is simply divided into the Tertiary period (66,400,000–1,600,000 years ago) and the Quaternary period (1,600,000 years ago to the present).

**Neolithic:** the period of prehistory when people began to use ground stone tools, to cultivate plants, and to domesticate livestock, but before the use of metal for tools. It is the technical name for the New Stone Age in the Old World following the Mesolithic. In the Neolithic, villages were established, pottery and weaving appeared, and farming began. The Neolithic began about 8000–7000 BC in the Middle East and about 4000–3000 BC in Europe. It was followed by the Bronze Age, which began about 3500–3000 BC in the Middle East and about 2000–1500 BC in Europe. The criteria for “defining” the Neolithic has become progressively more difficult to apply as both food production and metalworking took a long time to develop. In Britain, the Neolithic has other more specific characteristics: the use of pottery and of ground stone (beside the long-employed flaked stone), and the appearance of construction works like the long barrow, causewayed camp, and megalithic tomb. Elsewhere, however, some Mesolithic cultures made use of pottery, in Japan for example; and certain so-called Pre-Pottery Neolithic groups had none, as at Jericho. If the term Neolithic is to be retained at all, it must be based on the appearance of food production (especially cereal grains), sometimes called the Neolithic Revolution, commencing in southwest Asia 9000–6000 BC.



Neolithic flake

This might be considered the most important single advance ever made by man, since it allowed him to settle permanently in one spot. This in turn encouraged the accumulation of material possessions, stimulated trade, and by producing a storable surplus of food allowed a larger population and craft specialization. All these were prerequisite to further human progress. The Neolithic was followed by the Mesolithic period, the Chalcolithic, or the Bronze Age, depending on the terminology used in different areas and the nature of the archaeological sequence itself. The Neolithic followed the Paleolithic period.

**Neopalatial:** the period of the New or Second palaces of Minoan Crete.

It is also known as Minoan III–Late Minoan IIIA1, c. 1700–1375 BC, in traditional chronology.

**Neothermal:** postglacial times; a period of time from about 11,000 years ago to the present.

**nephrite:** the more common form of jade, an iron calcium magnesium silicate of the amphibole mineral group. It is whitish to dark green in color, though it can be blue and black, and is prized as an ornamental stone for carving and jewelry. Jadeite is tougher and more compact. Sources of the material are known in China, Siberia, Pakistan, New Zealand, the Philippines, New Guinea and Australia, Poland, the Swiss Alps, Italy and Sicily, and North and South America. [jade]

**net float:** an object designed to float in water and to support a net.

**net sinker:** a term applied loosely to any perforated stone or terra cotta object that may have been used to keep a fishing net vertical in the water. They are found all over the world. [net weight, sinker]

**netting needle:** a needle for making and mending nets, often forked at both ends and with a hollow center in which the thread or twine can be wound.

**New Forest ware:** one of the pottery wares of southern Roman Britain in the late 3rd to 4th centuries AD, produced by craftsmen in the New Forest area. Decoration is scarce, consisting of white slipped scrolls or rosette stamps or stamped-on designs. Vessel shapes included cups, flagons, and mortaria. It was of two kinds – one a hard gray ware, with a painted, white ornamentation and a dark purple glaze, and the other a creamy ware with a red slip. It had limited distribution, no farther than 80 km (50 miles) from the kilns.

**New Kingdom:** a period of Egyptian history comprising the 18th to 20th dynasties, c. 1550–1070 BC. It was the period following the expulsion of Asiatic Hyksos rulers and the subsequent reunification by Thutmose I–IV, Amenhotep, Akhenaten, Tutankhamen, and Ramses I–XI. The Egyptian army pushed beyond the traditional frontiers of Egypt into Syria-Palestine. The Theban conquerors established the 18th dynasty (1550–1295 BC), creating a great empire under a succession of rulers

bearing the names Thutmose and Amenhotep. The newly reunified land had a stronger economy, supplemented by resources of the empire in Nubia and western Asia. To this period belongs much of the monumental architecture of Egypt. From the beginning of the New Kingdom, temples of the gods became the principal monuments; royal palaces and private houses, which are very little known, were less important. Temples and tombs were stone with relief decoration on their walls and were filled with stone and wooden statuary, inscribed and decorated stelae (freestanding small stone monuments), and, in their inner areas, composite works of art in precious materials.

**niello:** powdered sulfides of copper, silver, and lead, heated and used to make a bluish-black plastic substance applied to metalwork. The material was soft; it was cast into the cut-out pattern on the object and polished flat. It was used in particular to decorate the inlaid daggers of shaft grave circles at Mycenae. The art of chasing out lines or forms, and inlaying a black composition was probably well known to the Greeks. The Byzantines compounded silver, lead, sulfur, and copper, and laid it on the silver in a powder, then put it through a furnace, where it melted and was incorporated with the solid metal. Germanic and Anglo-Saxon metalworkers also used the technique. Objects decorated with niello, called nielli, are usually small in scale. During the Renaissance, at the height of its popularity, the technique was widely used for the embellishment of liturgical objects and for the decoration of cups, boxes, knife handles, and belt buckles. [nigellum, Tula work]

**Ninevite 5:** the period or horizon c. 2900–2500 BC in northern Mesopotamia characterized by distinctive painted and incised or excised pottery. The name derives from the site of Nineveh where it was first excavated. The term also refers to the pottery itself.

**Noailles burin:** an Upper Paleolithic flake tool retouched to give several chisel-like edges; the Noailles burin also distinguishes a facies of the Upper Perigordian or Noaillian, dating to c. 27,000 bp. The Grotte de Noailles, close to Brive, Corrèze, southwest France, has given its name to this small multiple burin. [Noailles graver]

**nock:** one of the notches cut in either of two tips of horn attached to the ends of a bow for holding the bowstring or a groove into which the bowstring is inserted on an arrow. The term is also used for the part of an arrow having a notch for the bowstring and for the notch itself.

**nodule:** a hard mass of mineral, usually rounded, found in various forms in soil and created by the deposition of minerals from solution. The way nodules are formed can assist in paleoenvironmental reconstruction and the age of the conditions under which they formed. Nodules are often elongate with a knobby irregular surface; they usually are

oriented parallel to the bedding. Chert and flint often occur as dense and structureless nodules of nearly pure silica in limestone or chalk, where they seem to be replacements of the carbonate rock by silica.

**nomoli:** figures carved in soapstone by the Mende in Sierra Leone, which were set up in shelters to protect the crop. The figures are similar in style and are thought to be similar in date to ivories carved in the 16th century for Portuguese traders in the adjacent Sherbro area.

**noncortical flake:** a flake having no cortex. [interior flake, tertiary flake]

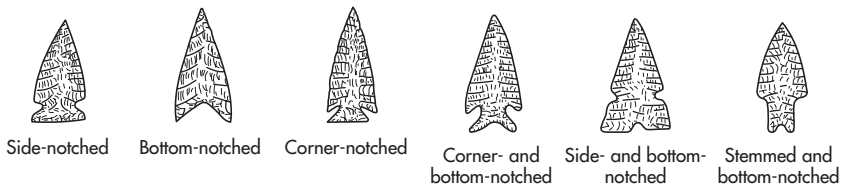
**nonplastic:** material in a clay, mineral or organic, which by virtue of a generally large particle size lacks the property of plasticity and reduces the stickiness of the clay.

**Northampton ware:** type of late Saxon pottery of the midlands of England, c. AD 850–1150.

**Northern Black Polished ware:** a fine gray metallic ware with a glossy black surface characteristic of the Iron Age civilization of northern and central India, dating to c. 500–100 BC. It is a hard, wheelmade ware, mainly consisting of bowls and dishes. The surface is made with an alkali flux and fired in a reducing atmosphere. It succeeds Painted Grey ware in the Ganges sequence and is the main pottery type associated with the Ganges civilization. It characterizes the urban kingdoms of early historic India. [NBP, NBPW, northern black polished ware]

**nosed scraper:** narrow blade tool with a convex working edge at one or both ends. [end scraper]

**notch:** a flaked U- or V-shaped indentation; matching indentations in the point base area or corners or sides. [notched (adj.)]



**notch width:** in lithics, the measurement of the space between the notches across the narrowest part of the stem or base of the point.

**notching:** practice of chipping small, semicircular notches out of the base or side of a projectile point in order to aid in hafting. [notched (adj.)]

**notching flake:** a flake produced when putting hafting notches on a stone tool.

**nucleus:** block of primary material from which flakes have been removed by percussion for use in tools. The nucleus is what is left after the stone has been worked on and often bears characteristic signs of the method used. [core]

# O

**oar:** a pole with a flat blade, used for rowing or steering a boat, which differs from a paddle in being secured to the side of the boat itself and being used in pairs.

**obelisk:** ancient Egyptian monolithic monument, consisting of a stone pillar with tapering square section and a pyramid top (called a pyramidion or benbenet (Egyptian)). They were erected for religious or monumental purposes and frequently bear carved inscriptions in hieroglyphs. Old Kingdom examples were squat and closely related to the pyramids, both being solar symbols. They were set up in pairs outside the entrances to some Old Kingdom tombs, and outside temples; a single obelisk in east Karnak was the object of a cult. Later ones, such as Cleopatra's Needle, one of a pair erected by Thothmes III at Heliopolis, were much more slender. They were derived ultimately from the ancient benben stone in the temple of the sun-god at Heliopolis. This stone was believed to be that on which the rays of the rising sun first fell, sacred at least by the 1st dynasty (3100–2890 BC). Obelisks were usually cut from hard stone, particularly red granite from Aswan. The largest surviving examples (30 m (98 feet) high, 450 tons) were products of the New Kingdom. The earliest surviving obelisk dates from the reign of Sesostri I (1918–1875 BC) and stands at Heliopolis, where once stood a temple to Re. [needle, tekhen (Egyptian)]

**object clustering:** an approach to typology based on clusters of human artifacts that are seen as specific classificatory types.

**objet d'art:** an object of artistic value.

**oblique:** at an angle to both the vertical and horizontal.

**oblique flaking:** a flaking technique in which the flake scars appear from left to right diagonally across the face of an artifact.

- oblique striae:** slanting linear marks, ridges, or grooves, especially one of a number of similar features.
- obliquely blunted point:** an early Mesolithic microlith of northern Europe, etc., that has a narrow flint blade backed or blunted along one edge toward the tip.
- oblique-transverse flaking:** a unique flaking style in which the removal of flakes from a blade face results in long diagonal parallel flake scars that extend from one side of the blade across the blade face to the other side of the blade.
- obol:** Greek silver coin, six of which equaled a drachma.
- obsidian:** a jet-black to gray, naturally occurring volcanic glass, formed by rapid cooling of viscous lava. It was often used as a raw material for the manufacture of stone tools and was very popular as a superior form of flint for flaking or as it is easily chipped to form extremely sharp edges. Obsidian breaks with a conchoidal fracture and is easily chipped into precise and delicate forms. It was very widely traded from the anciently exploited sources in Hungary, Sardinia, Lipari of Sicily, Melos in the Aegean, central and eastern Anatolia, Mexico, etc. Chemical analysis of their trace elements now allows most of the sources to be distinguished (especially by neutron activation and X-ray fluorescence spectrometry), so that the pattern of trade spreading out from each can be traced. Two dating methods have been applied to obsidian: obsidian hydration dating and fission track dating. In Europe, obsidian was exploited extensively from c. 6000–3000 BC; after 3000 BC it generally went out of favor for everyday purposes (perhaps as a result of competition from metal tools) but it continued to be used for prestige objects in some areas, especially by the Minoans and Mycenaean. Obsidian has been quarried and traded by western Melanesians since at least 19,000 bp, with the earliest-used and most important source being that at Talasea on New Britain. Obsidian was also an important trade item in Mesoamerica.
- obtuse:** a term used to describe a rounded tip or blunt-tipped artifact.
- obverse:** side of a coin or medal bearing the head or principal design.
- obverse face:** on a fluted projectile, it is the face from which the initial or primary flute was removed.
- occupation span:** time period during which a site is occupied by humans.
- ocher:** soft varieties of iron oxide (hematite, limonite, goethite) which were ground and used with other materials in prehistory to make pigment. Ocher occurs naturally and was much used for coloring matter, as in cave art, pottery painting, and personal decoration. Red ocher was certainly used ceremonially to give an impression of life to the corpse during funerary rites. There are many records from the Upper

Paleolithic onwards of ocher staining of skeletons. It was mixed with earth, clay, blood, or grease to make the paint. Ocher was used as crayons or powder in the Aurignacian period for paintings on walls of caves or on bone or stone artifacts. It was mainly yellow, brown, black, orange, or red (hematite). [ochre]

**ocher-colored pottery:** an Indian pottery type that was a distinctive ceramic of the post-Harappan upper Ganges Valley. It is a thick and usually badly fired and badly preserved red ware with an ocher wash, and its importance lies in the fact that it serves to bridge the gap in the later 2nd millennium between the Harappan material of the Indus civilization and the Black-and-Red and Painted Gray wares of the Iron Age. The earliest date for the ware comes from Jodhpura in Rajasthan c. early 3rd millennium BC, but in the upper Ganges Valley it has early 2nd millennium BC dates. It has been found in association with a harpoon of Gangetic-hoard type at Saipai and with Gangetic hoards. [ochre-colored pottery, OCP]

**oculists' stamp:** any small rectangular tablets of stone with inscriptions cut in the sides for marking eye ointment prescription cakes.

**oculus:** 1. A decorative motif on pottery and rock art consisting of a pair of circles or spirals resembling a pair of eyes. This motif was found in western Europe c. 3rd millennium BC and in passage grave art.  
2. A round window or opening in the top of a dome.

**Odderade interstadial:** an interstadial of the Weichselian cold stage, dated by radiocarbon to c. 58,000 bp, but it may be earlier. The beginning of the Weichsel has been placed at about 70,000 years ago.

**oenochoe:** a wine jug from the Classical period of Greek pottery, a graceful vessel with a delicately curved handle and trefoil-shaped mouth. It was used to take the wine out of the crater and distribute it into cups (especially at symposiums) and is the vase carried by the goddesses and used for libations in conjunction with a phiale. It was made from precious metal, bronze, or clay. The oenochoe was revived during the Renaissance and again during the Neoclassical period of the 18th century. [oinochoe]

**offering table:** an important element of the Egyptian private tomb throughout the Pharaonic and Greco-Roman periods. It was usually placed in an accessible location, such as the chapel, so that offerings could be brought to it by the funerary priests or relatives of the deceased.

**offertory:** in Egyptian archaeology, an offering made to the gods. As an artifact, it could take on various forms: outstretched hands supporting a cup, or spoons of ivory, wood, or bronze, the handle of which is formed by a human figure.

**ogee:** a double curve, one concave and one convex.

**Old Babylonian period:** chronological period of c. 2000–1600 BC when there were competing kingdoms in southern Mesopotamia which were eventually conquered by Hammurabi of Babylon. The kingdoms included Isin and Larsa, important during the first half of the period, and the large kingdom created by Hammurabi, which flourished in the second half. The period was a time of increasing intellectual endeavors in literature, astronomy, mathematics, law, etc.

**Old Kingdom:** a period in Egyptian history including the 3rd through 8th dynasties, c. 2575–2130 BC. It preceded the Middle Kingdom and is marked by the building of colossal stone pyramids. Most of the royal pyramid complexes and private mastaba tombs of the Memphite necropolis were built during this time. The first significant ruler of the 3rd dynasty was Djoser Netjerikhet (2667–2648 BC), whose step pyramid still dominates the skyline of northern Saqqara. Also, the term refers to one of the two main periods of Hittite history, covering c. 1700–1500 BC (the New Kingdom, or Empire, was c. 1400–1180 BC). With the end of the 8th dynasty, the Old Kingdom state collapsed.

**Oldbury-type bead:** type of Late Iron Age bead found in southeastern England, hexagonal in outline with white spirals in a blue ground mass.

**Older Dryas:** a stadial of the Weichselian cold stage, dating to between c. 12,000 and 11,800 bp.

**Oldishi:** Kenyan Pastoral Neolithic pottery tradition. There are southern, eastern, and northern facies; Narosura ware belongs to the southern facies.

**Oldowan:** an Earlier Stone Age industry and complex seen at Olduvai Gorge in Tanzania and other African sites, dating from c. 2.5 million to about 1.6 million years ago (and later). It comprises the earliest toolkits, flake and pebble tools, used by hominids (*Homo habilis*). Robust australopithecines were present at the same time and at the same sites, however. The simple stone tools were flaked in one or two directions and were characterized by the production of small flakes removed from alternate faces along the edge of a cobble. In its pure form, hand axes are absent. Oldowan tools were made for nearly 1 million years before gradual improvements in technique resulted in a standardized industry known as the Acheulian.

**Oligocene:** major worldwide division of the Tertiary period that began about 36.6 million years ago and ended about 23.7 million years ago. It follows the Eocene epoch and precedes the Miocene epoch. The term Oligocene is derived from Greek and means the “epoch of few recent forms,” referring to the sparseness of the number of modern animals that originated during the Oligocene. Many large mountain systems and herbivorous mammals began to develop, however. During this



epoch, many of the older types of mammals became extinct and the first apes appeared. The largest land mammal of all time, *Baluchitherium*, is known from Asia, and the first mastodons are known from Egypt. In North America, primitive horses were evolving, including three-toed forms such as *Mesohippus* and *Miohippus*. Pigs and peccaries first appeared in the early Oligocene of Europe and reached North America late in the epoch. The earliest ape-like form, *Parapithecus*, is known from Oligocene deposits in Egypt, which also have yielded remains of several kinds of Old World monkeys. The earliest New World monkeys are known from late Oligocene deposits in South America.

**olive jar:** a type of pottery vessel used to ship olives and wine (and other commodities) from Spain; commonly found in Spanish colonial archaeological sites.

**Olivella:** a genus of marine univalve shells commonly used as raw material for the manufacture of beads and ornaments. It is a small spiral shell.

**olla:** a ceramic vessel generally used to store and cool water – globular-shaped and narrow-mouthed. It resembled flower pots, but had swelling sides, flaring necks and rims, and was covered with a lid.

**Olmalenge:** Kenyan Pastoral Neolithic pottery tradition. There is a northern facies in the Turkana region and a southern facies in the Nakuru Basin. [Nderit ware]

**Olmec:** chiefdom-based civilization, the earliest in Mesoamerica, comprised of numerous small polities that flourished around the Gulf of Mexico in central Mexico from about 1200 to 600 BC. All the Olmec ceremonial centers comprised complexes of platforms supporting ceremonial courts, house mounds, stone monuments (including carved stone heads, altars, and large free-standing sculptures), and large conical pyramids. The large stone heads are particularly distinctive, up to 3 m (10 feet) tall, and thought to be representations of chiefs and the elite of Olmec society. Trade was important and again focused on the ceremonial sites; obsidian, magnetite, serpentine, and mica were among the materials acquired through exchange. The Olmec style of art is visible mostly in sculpture and is realistic in its representation of natural and supernatural forms. Craftsmanship of a very high order is represented in objects of shell and jadeite.

**Oltome:** Kenyan Pastoral Neolithic pottery tradition. Kansyore ware may be a facies/phase.

**omphalos:** the navel of the earth, marked by a stone shaped like a Christmas pudding, decorated by a network of woolen ribbons and located at Delphi in the Temple of Apollo. It supposedly marked the

exact center of the universe. Omphalos-based jars were ceramic vessels with a prominent hollow dome raised in the base of the pot.

**opaline:** a fine-grained siliceous rock type widely used for stone artifact manufacture in the southern African Stone Age. [agat, chalcedony, chert]

**open mold:** an early and simple mold developed for casting metal tools and weapons and, later, glass and brick. It consisted of a single block of stone, or occasionally clay, with the shape of the required artifact cut into it. Only very simple objects can be cast in this way, especially when one surface must be flat. The molds continued in use after more sophisticated versions had been developed, mainly for the manufacture of blanks for coins. The molds were probably not technically open, since this would result in oxidation of the surface of the metal, so probably a flat stone or other cover was placed over the mold during cooling. Glass was cast in open molds by the Egyptians as early as 5 BC.

**open vessel:** a vessel with an orifice that is large relative to the vessel's height, as is a bowl.

**open-work:** decorative technique in which gaps or interstices are left around a pattern, sometimes to be filled in with a different material. It is also any work constructed so as to show openings through its substance; work that is perforated or pierced. [open work]

**opposing pressure flaking:** in finishing blade edges, where pressure flakes were removed from each face opposite to each other. [opposing flaking]

**optic mold:** a mold used to impart a decorative pattern to a sheet of glass, which is then pressed into a contact mold in order to make a finished item.

**oracle bones:** bones (usually shoulder blades) of oxen or tortoise undershells used in the Shang culture of northern China for divination. Used to divine messages from ancestors, they are inscribed with either the question or answer, and/or the name of the diviner. Oracle bones ordinarily record a question addressed by the Shang king to his deceased ancestors, or the response to the question, or even the ultimate outcome of the matter divined. The subjects of divination comprise a limited range of royal concerns. The Anyang kings asked chiefly about war, hunting, rainfall, harvests, sickness, their consorts' childbearing, the fortune of the coming week, and, above all, sacrifices. They originated in the Lung-Shun culture and have been discovered at the Zhou/Chou site of Qishan and the Shang site of Anyang, dating to the late 2nd millennium BC. Anyang was the last capital of the Shang dynasty; apart from the far more limited corpus of inscriptions on bronze ritual vessels, the oracle texts are the only documents left by the Shang civilization. The depressions were made in bone and then a heated

point was applied to cause the bone to crack. Divination was by the interpretation of these cracks. The inscriptions are the earliest examples of the fully developed form of Chinese characters. Those deciphered from Anyang have helped reconstruct the Shang kinship system and aspects of the culture. These inscriptions preserve the earliest known Chinese writing and sometimes, by naming kings and ancestors, confirm the historical basis of early legends. A few examples have been found at Neolithic sites as Kexingzhuang (Dadunzi). The divination practice is called “scapulimancy” (scapulae are shoulder blades).

**order of blows:** evidence of the sequence in which flakes of stone were removed, explaining the artifact’s pattern of manufacture; as each successive flake is removed from a piece of stone, its scar encroaches upon adjacent scars and obliterates portions of earlier ones.

**ordering:** arranging of artifacts in logical classes and in chronological order.

**organic artifact:** artifact made of organic materials – living organisms, including wood, bone, horn, fiber, ivory, or hide. [organic material]

**Orientalizing:** period in the 8th and 7th centuries BC during which Scythian-Iranian Oriental objects with their animalistic motifs were spread and consequently imitated throughout the Mediterranean countries, especially in Greece and Italy. It is also the style of Greek art in that period, a decorative scheme found especially on pottery. The style was probably the result of renewed contact with Syria, Phoenicia, and Egypt. It is an art history term used of various periods and cultures in antiquity when a “western” production showed evidence of influence from the Near, Middle, or Far East. An example would be the borrowing by Greek black-figure painters of numerous abstract, vegetable, and animal motifs from Syrian and Phoenician art. From about 650 BC on, the Greeks began to visit Egypt regularly, and their observation of the monumental stone buildings there was the genesis of the ultimate development of monumental architecture and sculpture in Greece. The Egyptians executed such monuments in hard stone instead of the limestone, clay, or wood to which the Greeks had been accustomed. The Greeks learned the techniques of handling the harder stone in Egypt, and at home they turned to the fine white marble of the Cyclades islands (Paros, Naxos) for their materials. It was at this time that the first truly monumental examples of Greek sculpture appeared. The period in Greece continued through the 7th century BC and saw the rise of narrative in Greek art. [orientalizing]

**orientation:** the way an artifact is positioned for illustration, according to its type and attributes.

**orifice:** mouth or opening, usually at the top, of a vessel.

**orrery:** an apparatus that illustrates the relative positions and motions of bodies in the solar system by rotation and revolution of balls moved by wheelwork, sometimes incorporated in a clock.

**orthographic projection:** a way of depicting an object graphically, similar to a perspective view but with lines that would be parallel on the object shown parallel on the paper.

**Oseberg ship:** important Viking ship burial, discovered in 1903 in south Norway in a peat mound. It was found with most of its timbers intact and its main burial chamber still filled with most of its contents. Among the objects in the chamber were the skeletons of a man (c. AD 850–900), dogs and horses, a chest containing oil lamps and personal items, a wooden bed, and a sledge. Now reconstructed in the Oslo Ship Museum, the Oseberg ship is a fine example of a large sophisticated Viking warship. The ship itself was plank-built and had a pronounced keel, a large mast, and a beautifully carved stern. It shed much light on the everyday life of Vikings.

**ossuary:** a charnel house used for multiple, mainly secondary, inhumations; the name for a sarcophagus of earthenware, stone, or marble, in which the vessel containing the cremated ashes of the dead was placed. It may be either a small portable article for a single interment (larnax, pithos, urn) or a cave or built structure to take a number of burials (chamber tomb, tholos). [ossarium, ossuarium, osteotheke]

**Ostionoid:** one of three associated ceramic series in the Greater Antilles area. Seen as transitional to the Chicoid and Meillacoid, the Ostionoid appears in c. AD 650 in Puerto Rico, where it overlays Saladoid materials. Vessels are generally smooth, finished in red monochrome slip, and often with plain tabular lugs. The introduction of items like petaloid celts, potter stamps, and zemis indicates external influences, possibly Mesoamerican. Agriculture activity is indicated by the presence of griddles used in the preparation of manioc. [Ostiones]

**ostrakon:** a potsherd or, more rarely, a flake of stone, bearing an inscription in ink or paint. In Greece they were employed for voting; in Egypt for memoranda, business accounts, writing exercises, jottings, artist's sketches, and listmaking. They commonly consisted of personal jottings, letters, sketches, or scribal exercises, but were also often inscribed with literary texts. They could also be fragments from inscribed jars (e.g., a wine jar inscribed with the details of a vintage). Ostraka are known from all periods, but 19th- and 20th-dynasty examples are commonest in Egypt (up to 20,000 have been found). Most of the Egyptian examples are in hieratic or demotic, but there are also cursive hieroglyphic texts and numerous pictures, including drafts of hieroglyphic inscriptions. The term is derived from the Classical Greek voting practice of ostrakismos ("ostracism"), a 5th-century BC

political move in which each citizen could write upon a potsherd the name of someone whom he wished to see banished. If sufficient votes were cast against one person (the number seems to have been 6000), the person named would be banished for 10 years. The usage of inscribed sherds seems to have spread to Egypt with the Greek conquest. Ostraka from the New Kingdom are especially numerous. Deir el-Medina's ostraka are a great source of evidence for the life of its villages and communities. [ostrakon; ostraca, ostraka (pl.)]

**ostrich eggshell:** shells of ostrich eggs were sometimes used as containers for water and pigments like ocher and specularite. Fragments were also made into beads by Later Stone Age people in southern and East Africa. They were sometimes decorated with incisions and are often found buried near springs and streams. Fragments have been found at Middle and Later Stone Age sites; the earliest 14,000-year-old fragments were found at Boomplaas Cave in South Africa.

**Otley-type ware:** a late Saxon wheel-thrown pottery c. AD 850–1150 of Yorkshire and the north midlands of England.

**Otranto mosaic:** a Romanesque cathedral in Apulia, southeastern Italy, with a mosaic pavement covering the nave and aisles. Laid between 1163 and 1166, it was designed by a priest named Pantaleon and shows certain similarities to the Bayeux Tapestry. The central theme is the history of the universe. Similar mosaics existed at other Apulian Romanesque cathedrals, but this splendid work is the only one to have survived.

**Otter Creek point:** large, bifacially worked, chipped stone projectile points with a side notch, from the Archaic stage in northeastern North America, c. 4500–2600 BC.

**Ounan point:** pointed bladelet with a basal stem used in the North African late Pleistocene and Holocene, such as in Ounanian, and early Neolithic industries of the eastern Sahara. [Ounanian point]

**outline:** a key and obvious diagnostic feature is the outline or silhouette of the implement. The outline is the two-dimensional image perceived when viewing the outer perimeter of an artifact with a blade face towards the viewer. Some projectile point types have distinctive outlines and can be accurately identified by this singular feature.

**ovate:** a refined Acheulian biface with an egg-shaped outline and a flat or twisted profile; some have a tranchet finish. [ovate projectile point]

**ovoid:** of a solid or three-dimensional surface, egg-shaped; of a plane figure, oval, especially with one end more pointed than the other.

**Oxfordshire ware:** a type of pottery in a variety of fabrics, made around Oxford, England, important around the 4th century AD, and including distinctive types of mortaria, parchment ware, and red-color-coated ware in the Samian tradition.

- ox-hide ingot:** a copper or tin ingot shaped like a stretched ox hide, from the Mediterranean in the Early Bronze Age.
- oxidized:** a pottery fabric fired in an oxidizing atmosphere with abundant oxygen available to form red hematite from the iron in the clay fabric or in pigments. [oxidized ware]
- oxidizing atmosphere:** a term used in relation to pottery technology, describing certain firing conditions involving a gaseous atmosphere in which an oxidation reaction (the oxidation of solids) occurs. If a kiln is being fired with good, dry fuel and with plenty of draft, the carbon in the fuel is converted into carbon dioxide, and there is oxygen in the atmosphere. This is the oxidizing atmosphere that causes pottery to be fired to a red or orange color whether it has a slip or not. The opposite phenomenon, a reducing atmosphere, produces black pottery. Much pottery, however, varies in color over its surface caused by changing conditions during the firing process. [oxidation]
- ox-scapula shovel:** a digging implement made of the shoulder blade of an ox or large cow, of Neolithic and Early Bronze Age sites in the British Isles, usually in association with antler picks and antler rakes.
- Oxus Treasure:** a collection of Persian art of the Achaemenidian period (6th to 4th century BC) now in the British Museum, London. It was discovered in 1877 on the bank of the Oxus River near the present Afghanistan–Russian border. This large hoard of gold and silver metalwork included a variety of jewelry, ornamental plaques, figurines, chariot models, and vessels. One of the armllets consists of a circular gold band with its two ends meeting in the form of finely worked griffins.

# P

**pack rat midden:** any collection of artifacts or objects concealed at some point by a pack rat (also wood or trade rat) and remaining in an assemblage at that location. They are so-called because the rats collect various bits of material to deposit in their dens. They sometimes pick up shiny objects in camps and may at the same time leave something they were carrying, thus giving the impression that they are trading one item for the other.

**paddle-and-anvil:** a pottery-making method in which a wooden paddle and a stone or ceramic disk are used to smooth and shape a coiled pot. The paddle was used to strike the exterior surface of the vessel as a convex stone or clay anvil was held against the corresponding interior surface. [paddle and anvil, paddle-and-anvil technique]

**padlock:** a detachable lock hanging by a pivoted hook on the object fastened.

**Paestan pottery:** south Italian pottery made at Paestum, some signed by the craftsmen, starting in the mid 4th century BC.

**Paffrath ware:** hard-fired ware with a black finish, made from the 10th to 11th centuries until the 13th century at Paffrath, near Cologne, Germany. The best-known products of this center are the so-called handled ladles – small cooking pots or bowls with a curved handle.

**Paiján point:** a type of bifacially worked, chipped stone point with a triangular outline and small stem or tang at the base, of the Archaic stage Paiján tradition of South America c. 9000–7000 BC.

**paint:** a material applied to the surface of another material in a layer, to color it. It is usually a pigment containing a coloring agent and sometimes organic substances to make it easier to brush and ensure that it adheres.

**painted glass:** glass that has been colored and decorated by painting.

**Painted Gray ware:** a pottery type characteristic of Iron Age sites in northern India, with its center of distribution in the eastern Punjab and central Ganges Valley. It was a fine, wheelmade, thin-walled ware with a gray surface decorated with simple designs of circles and pothooks, made before 500 BC. The designs were in red or black paint. The forms that occur most frequently are a shallow dish and a deeper bowl. It occurs in deposits of the later 2nd millennium and early 1st millennium BC. Many authorities believe that Painted Gray ware was the pottery used by the early Aryans in India. [Painted Grey ware]

**painting:** artwork first found on rocks in Europe and Africa, created with charcoal, lime, and iron oxide of various colors mixed with animal fat or marrow. European paintings are found in caves and date back to early Aurignacian times, 80,000–70,000 BC; if created purely for art, though, they would not have been done in the depths of the cave. It is thought that they must have been of religious, magical, or ritual significance. There is proof that schools of painting were held in some caves. Polychrome paintings were made at the peak of Paleolithic art, mid-Magdalenian times, about 10,000 BC.

**Paleocene epoch:** the earliest geological epoch and division of the Tertiary period, beginning about 66.4 million years ago and lasting about 8.6 million years (c. 65–55 million years ago). It precedes the Eocene epoch and follows the Cretaceous period. During this epoch, there was major development of primitive mammals. The earliest-known primates date from the Paleocene. [Palaeocene]

**Paleogene:** lower division of the Tertiary system including the Paleocene, Eocene, and Oligocene periods, lasting about 42.7 million years. It is the older of the two stratigraphic divisions of the Cenozoic era (which began about 66.4 million years ago and extends to the present) and was followed by the Neogene period. The term Paleogene, which means “ancient born,” was devised in Europe to emphasize the similarity of marine fossils found in rocks of the first three Cenozoic epochs, as opposed to the later fossils of the Neogene period. In North America, the terms Paleogene and Neogene are not widely used, and the Cenozoic is divided only into the Tertiary period (c. 66.4 million to 1.6 million years ago) and the Quaternary period (c. 1.6 million years ago to present). Thus, the Paleogene period may also be considered to be roughly equivalent to the first two-thirds of the Tertiary period. [Palaeogene]

**Paleoindian:** 1. One of the prehistoric people who migrated from Asia and settled throughout the Americas no later than 10,000 BC. They existed as big-game hunters from about 10,000 BC to about 6000 BC in the Great Plains and eastern North America. (The other tradition at the time was the Desert-culture peoples of the western basin range



region.) Some regard the term as referring to all hunting groups involved with now-extinct mammals, in which case the peoples who hunted the species of bison that became extinct about 4500 BC would also be classified as Paleoindians. The oldest remains of the Paleoindian tradition are found on sites where large Pleistocene mammals were killed and butchered. The most distinctive artifact type of this horizon is the Clovis fluted projectile point, which was accompanied by side scrapers. Paleoindians were most frequently associated with mammoth, although associations with extinct species of bison, horse, and camel have also been reported. 2. The earliest period in New World chronology, representing the time up to the development of agriculture and villages. 3. In yet another sense, it refers to the period in archaeology (also called Early Lithic) beginning with the earliest stone tools, about 750,000 years ago. [Palaeo-Indian, Palaeoindian, Paleo-Indian]

**Paleolithic:** more technical name for the Old Stone Age, a division of prehistory covering the time from the first use of stone tools by humans, c. 2.5 million years ago, to the retreat of the glacial ice in the northern hemisphere, c. 10,000–8500 BC. It began in the Pliocene epoch and was followed by the Mesolithic. It is the Old World equivalent, although with a much greater extension back in time, of the Paleoindian or Early Lithic stage of New World development. The Paleolithic was characterized by the making of chipped or flaked stone tools and weapons and by a hunting and food-gathering way of life. It is usually divided into Lower, Middle, and Upper (or Late) Paleolithic – mainly based on artifact typology. The subdivisions are characterized as: Lower Paleolithic, c. 2.5 million to 200,000 BC, with the earliest forms of human (*Australopithecus* and *Homo erectus*), and the predominance of core tools of pebble tool, hand-ax, and chopper type; Middle Paleolithic, c. 150,000–40,000 BC, the era of Neanderthals and the predominance of flake-tool industries (e.g., Mousterian) over most of Eurasia; and Upper Paleolithic (starting perhaps as early as 38,000 BC to c. 10,000 BC), with *Homo sapiens sapiens*, blade-and-burin industries, and the development of cave art in western Europe. During this stage, people colonized the New World and Australia. The main Paleolithic cultures of Europe were, in chronological order: the Pre-Abbevillian, Abbevillian, Clactonian, Acheulian, Levalloisian, Mousterian, Aurignacian, Solutrean, and Magdalenian. The term was introduced in 1865 by John Lubbock in *Prehistoric Times* (5th edn, 1990). The Paleolithic was originally defined by the use of chipped stone tools, but later an economic criterion was added and the practice of hunting and gathering is now regarded as a defining characteristic. [Palaeolithic]



Paleolithic tool

**Paleolithic art:** art of the last ice age. It is divided into: (1) portable or mobiliary art; (2) deep engravings or bas-reliefs on large stones; and (3) cave art or parietal art. Portable or mobiliary art is know in a variety of forms from Spain to Siberia; engravings are found mainly in southwestern France; and cave art in France, Italy, and Sapin. Art of similar antiquity is known on other continents. [Palaeolithic art]

**Paleozoic:** major interval of geological time extending from 540 to 245 million years ago. It is the first era of the Phanerozoic eon. It is a geological era in the Earth's history before the Mesozoic and after the Precambrian, marked by the development of fishes, land plants, insects, reptiles, and fern-like trees. The Early Paleozoic (probably the first 130 million years) was characterized by widespread ups and downs of the Earth's crust, which resulted in mountain building and geosynclines (downward flexing) in parts of North America, Europe, and Asia. Great seas were formed in the southern areas of the emergent landmasses. Much of North America was covered by a warm shallow sea with many coral reefs. The Late Paleozoic, which extended from about 410 to 245 million years ago, saw tremendous changes wrought in the Earth. Both plant and animal life flourished in the great, warm, shallow seas, and the various convolutions of the Earth laid down extensive mineral deposits. Much of the copper, gold, lead, zinc, and other minerals mined today derive from Devonian times in the Late Paleozoic. Huge swampy forest regions covered much of the northern continents, and these were repeatedly and suddenly invaded by the seas, which buried the vegetation, then covered it with silt. When the sea subsequently withdrew, the forests revived and were again buried in rhythmic cycles that are now evident in deposits called cyclothems. Heat and pressure transformed the buried vegetation into oil and coal. During the Devonian period animal life emerged from the ocean, and various species adapted themselves to breathing air and moving about on land. This happened by way of the amphibians, which evolved in the Carboniferous and Permian periods, and were succeeded by reptiles. The Late Paleozoic also saw the beginning of insect life – and fishes and land plants underwent rapid development. [Palaeozoic]

**Palermo Stone:** a slab of black basalt bearing a record of the first five Egyptian dynasties (Old Kingdom), compiled in the 5th dynasty, c. 2400 BC. It is one of the basic sources of information about the chronology and cultural history of Egypt during the first five dynasties (c. 2925–2325 BC). Named for the Sicilian city in which one slab is stored, the diorite stela is one of six existing fragments that probably originally stood in Egyptian temples; other slabs are now in London and Cairo. It is inscribed on both sides with horizontal lines of hieroglyphic text, the top row listing the names of predynastic rulers. The

following rows, each headed by the name of a different king, are divided into compartments, each compartment signifying 1 year. Within the compartments the hieroglyphs always list one or more memorable events of that year. Thus the original monument was apparently a year-by-year record of all the kings from the 1st to 5th dynasty, although the last name preserved on the stone is that of Neferirkare, the third of the nine kings of the 5th dynasty.

**palette:** a small slab of stone for grinding and mixing substances like paint or cosmetics. A series from early Egypt, such as that of Narmer, is important since the relief decoration provides valuable evidence on the art and history of the country at the beginning of dynastic times, c. 3000 BC. The term is also used to describe scribal palettes. Cosmetic/ceremonial palettes were usually of siltstone (greywacke) and are found amongst grave goods as early as the Badarian period (c. 5500–4000 BC). Scribal palettes, long rectangular pieces of wood or stone (averaging 30 cm long, 6 cm wide (12 by 2.5 inches)), had a shallow central groove or slot to hold reed brushes or pens and circular depressions for cakes of pigment. The order of colors was white, then the yellows, reds, blues, and black.

**palimpsest:** 1. A collection of archaeological artifacts, ecofacts, and material that may not be related – that are together through accident or due to natural forces rather than human activity. 2. A site with a mass of intercut features of different periods.

**palm cup:** a Saxon glass vessel shaped like a hemispherical bowl with a wide everted rim, c. AD 400–700.

**palmate stone:** a large spatulate stone object about 61 cm (2 feet) long, shaped like a hand with extended fingers, believed to be a ceremonial representation of a device worn by ballgame players in Mesoamerica and dating to the Classic period. It rested on a yoke which fitted around the waist and projected upward to protect the chest. Probably of wood or leather with carving on both sides, they may have been trophies, religious symbols, or for burial purposes. The center for these puzzling stone carvings seems to be the coastal Veracruz area. [palma]

**palmette:** a decorative motif suggestive of a palm; a stylized palm frond used to decorate Greek and Roman art.

**palstave:** a Middle Bronze Age form of ax with side flanges, stop-bar (or stop-ridge), and sometimes one or (rarely) two loops attached, and found in Europe. Its features made for more secure hafting of the ax blade by preventing lateral movement and haft splitting. This development led to the socketed ax. The palstave was used by the Celtic nations in war for battering the armor of the enemy.

**pan:** a metal (or other material) container for cooking food in or for rituals.

**pan pipe:** an instrument composed of several pipes in which air is made to vibrate by blowing across the top edge. [panpipe]

**Panaramitee style:** an art style found in many parts of Australia involving rock engravings featuring circles and tridents (possibly kangaroo and emu tracks) and dating to Pleistocene times. It is found at Panaramitee in the Flinder Ranges, south Australia, and arid regions in south Australia, New South Wales, north Queensland, and the Northern Territory; isolated examples have also been found in northern Tasmania and near Sydney. Engravings were found at Ingaladdi dating to 7000–5000 bp, at Early Man Shelter dating to c. 13,000 bp, and at Karolta about 30,000 years old. The style involves the pecking on rock surfaces by indirect percussion, clusters of hundreds of small figures, usually about 10 cm (4 inches) tall, in outline or infilled forms. The designs include dots, spirals, mazes, and crescents, human footprints, lizards, radiating lines, and tectiforms (roof shapes). The art is thought to be of considerable antiquity on the basis of still inconclusive evidence of patination, distribution in both Australia and Tasmania, and the absence of stone tool types belonging to the post-2000 BC Australian Small Tool tradition. [Panaramitee art]

**pancheon:** a large shallow bowl for letting liquids stand.

**panpipe lug:** a type of handle found on Neolithic pottery of the Chassey, Cortaillod, and Lagozza cultures in France, Switzerland, and northern Italy. It consisted of cylindrical vertical lugs placed side by side, thus slightly resembling the panpipe. The panpipe, a wind instrument, was widespread in Neolithic and later cultures, especially in Melanesia and pre-Columbian South America. [flûte de Pan, pan-pipe lug]

**Pantano Longarini:** a large wreck of 5th to 7th century date found in the sea off Pantano Longarini in southeast Sicily. The vessel would have been about 45 m long and 9 m wide (148 by 30 feet); the structural details of the boat have contributed to the study of Byzantine ship building.

**pantile:** curved, interlocking roof tile of S-shaped section usually made of clay or concrete.

**paper:** a thin vegetable-based sheet used for writing, drawing, printing, etc.

**papyrus:** a reed of the sedge family growing in Mediterranean lands, particularly Egypt along the banks of the Nile; the flexible writing material produced from the plant. An inexpensive writing material was created by splitting and opening out the stems, laying them together in two layers at right angles to each other, then beating them together, thus activating the plant's natural starch to form an adhesive. Examples preserved by the dry climate of Egypt and other regions in tombs, caves, etc., have yielded invaluable evidence on the ancient history of the area. *Papyrus* is the Latin form, from which our word "paper" derives. Its

stems were also bound together in bundles together to make lightweight boats. Used first in Egypt, it later replaced clay tablets in the Near East when the Aramaic alphabet replaced the cuneiform script. Unlike engraved clay tablets, papyrus allowed a light, cursive script, thus encouraging the spread of a technique that was originally very restricted and specialized. The earliest papyrus dates to the 1st dynasty, the latest to the Islamic period, when the plant died out in Egypt.

**papyrus column:** 1. In Egyptian religion, an amulet that conveyed freshness, youth, vigor, and the continuance of life to its wearer. 2. The name of the mighty columns erected at Karnak, 134 in total, 12 of which formed the higher central aisle (23 m or 76 feet in height) of the hypostyle hall.

**paradigmatic classification:** a type of systematics that employs a pre-conceived set of classes defined by the intersection of dimensions or attributes. Classification is based on an equal weighting of attributes, so that each class is defined by a cluster of unique attributes and is not dependent on the order in which the attributes were defined.

**parallel flaking:** a secondary flaking technique that is often found on the earliest projectile points and stone tools, usually performed on the blade faces, in which the removal of flakes was performed in such a manner as to remove flakes of similar size, depth, length, and direction and resulted in parallel flake scars. Typically, they are the mark of a well accomplished flint knapper. Such flake scars are found on only a few specimens and can be quite aesthetically beautiful to behold. [collateral flaking]

**parchment:** writing material made from the skin of calves, sheep, or goats, which gradually replaced papyrus during the late Roman Empire, resulting in the book (codex) replacing the scroll. The name apparently derives from the ancient Greek city of Pergamum (in Turkey), where parchment is said to have been invented in the 2nd century BC. It is less fragile, and could also be reused after the original text had been erased by scraping (called palimpsests). The finer kind of parchment known as vellum is from the skins of calves, kids, and dead-born lambs. In the 4th century AD, vellum or parchment as a material and the codex as a form became dominant, although there are later examples of rolls, and papyrus was occasionally used for official documents until the 10th century. Paper then took over from the 14th century.

**parchment ware:** a type of tableware in pale fabrics with simple red-brown painted decoration, mostly bowls, from Britain in the 3rd and 4th centuries AD.

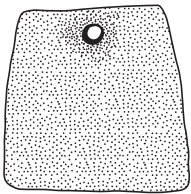
**Parian marble:** a marble quarried from the island of Paros, Greece that is white, close-grained, and very suitable for sculpture. It was used by the leading sculptors of the Mediterranean world.

- parietal art:** literally “art on walls,” a term used to designate art on the walls of caves and shelters, extended to cover art on any nonmovable surface (large rocks, blocks, ceilings, floors).
- paring chisel:** a tool of stone or metal with a shaped narrow blade that could be used carefully to remove thin strips or shavings when fashioning wood.
- Parisian ware:** a thin, dark gray, highly burnished ware decorated with impressed stamps, mainly of Yorkshire and Lincolnshire, Britain, c. late 1st and 2nd centuries AD.
- parrot beak jug:** a type of glazed ceramic jug with a stylized polychrome image of a large-beaked bird on the side, from Britain and northern Europe in the 14th and 15th centuries AD.
- partially cortical flake:** a flake possessing some cortex on its dorsal aspect. [secondary flake]
- parting agent:** a material like sand, ash, or dry clay, sprinkled over a mold or working surface to prevent wet clay from sticking.
- parting vessel:** a container, usually square or rectangular, used in metal processing for separating metals one from another – usually silver from gold.
- paste:** the clay substance of pottery excluding temper/filler additives. [body, fabric, ware]
- paste texture:** in ceramic analysis, the appearance of the ceramic paste as determined by clay particle size.
- Patch Grove ware:** pottery type with a rough gray core and an orange or brown surface, usually wide-mouthed storage jars with notched shoulder decoration. The pottery is from northwest Kent and Surrey, England, into the 2nd century AD.
- patera:** in Roman antiquity, a rounded bowl, often of bronze, usually with a long handle and used for pouring libations. The dish was also used in sacrifices.
- patina:** outermost layer of an artifact, which may differ in color, texture, luster, or substance from the inner part of the artifact due to physical, biological, or chemical alterations due to environmental conditions. The term also refers to any thin, colored film or layer formed on the surface of flint or other rocks as a result of alkaline conditions. It is a porous bluish or white weathering; possibly becoming stained with brown or yellow due to contacts with iron compounds in percolating water. Similarly, the green patina on bronze objects is a product of corrosion. The amount of patination is sometimes used as a very rough indication of age; the longer the exposure, the deeper the patination. [patination]
- patination:** the altered surface and coloring of an artifact made by natural weathering or exposure to soil acids.
- pattern:** any design with regularly repeated parts. [symmetry]

- patterns of discard:** a term referring to remains left for investigation after natural destructive forces have affected artifacts and food stuffs abandoned by their original users.
- patu:** a Polynesian/Maori short, clublike weapon, made of a variety of materials including wood, bone, stone, and whalebone (*paroa*). Finds on the Society Islands that are similar to the Maori patu suggest they may have been part of the early Eastern Polynesian assemblage of New Zealand's first settlers.
- pearlware:** a form of earthenware, developed by Wedgwood (1775–79) as a whiter version of the creamware body. A greater quantity of white clay was used in the body and the transparent lead glaze included traces of cobalt, giving the surface a pearly-white appearance. It was soon adopted by other potteries, such as Spode, Leeds, and Swansea.
- pebble tool:** a simple form of stone cutting tool, the oldest type of tool made by forerunners of modern humans. The tool consisted of a rounded stone that had been struck a number of blows with a similar stone used as a pounder, which created a serrated crest that served as a chopping blade. The core is only slightly altered by striking off a few small flakes. The most typical are choppers and chopping tools. These tools could be used as crude hunting knives, to grub roots, and for other purposes. The oldest examples are perhaps 2–2.5 million years old, from sites like the Omo Valley and Hadar in Ethiopia. Those found in large numbers in Olduvai Gorge, Tanganyika, are universally accepted as eoliths, dating back man's history to 1,000,000 years ago. By a process of refinement these pebble tools developed into the hand axes of Africa, Europe, and southwest Asia, and into the chopping tools of the Far East. [pebble chopper]
- pecking:** a technique of shaping, or producing a design on, stone by hammering. The surface is crushed, usually with a stone hammer, and the dusty fragments swept aside. Incising or pecking designs into rock was practiced by Native American peoples.
- pecking and grinding:** the process of manufacturing heavy-duty stone tools (bowls, mauls, etc.) from granular rocks by prolonged hammering with a hammerstone. Abrasive techniques might be used to finish the piece.
- pectoral:** a plate forming the front of a cuirass which covers the chest.
- pedestal:** a free-standing raised plinth or bollard; also an architectural support or base, as for a column or statue or in the bottom of a kiln.
- pedestal beaker:** type of drinking cup with a definitive base section or foot, from Britain or Gallo-Belgic areas.
- pegged spearhead:** a socketed spearhead of the European Late Bronze Age, with the shaft secured to the metal head by a metal or wooden peg set at right angles to the main axis of the shaft, passing through a pair of opposed holes in the metal casing of the socket.

**pelike:** in Greek antiquity, a large wine container with two vertical handles – a type of amphora where the greatest diameter was below mid-point. It was probably used at a symposium.

**penannular:** a term referring to an artifact in the form of a ring, but with a small break at one point, used particularly for forms of brooches and torcs. The penannular brooch was characteristic of Irish production. It was generally of great size and probably worn on the shoulder with the pin pointing upward, and was decorated with interlaced patterns. It was the most common type of dress fastener of the sub-Roman period and remained popular in Celtic regions of Britain up until the 10th century. Developed out of earlier Iron Age and Roman brooch forms, penannular brooches comprise an open hoop with two terminals and a pin backing the hoop. The terminals in particular were often ornamented, some very elaborately. There is an extensive typology for these ornaments, and they vary in appearance from plain bronze or iron rings to elaborately inlaid and gilded examples such as the Tara Brooch, which was made around AD 700 in Ireland. [penannular brooch]



Pendant

**pendant:** an adornment that hangs from a piece of jewelry (necklace or earring).

**penknife point:** type of late Upper Paleolithic flint tool found in north-west Europe. Made on fairly broad blades, these tools are characterized by a straight unworked edge along one side, a curved distal end, and a lightly retouched edge parallel to the unworked side.

**percussion cap:** a small amount of explosive powder contained in metal or paper and exploded by striking; used especially in toy guns and formerly in some firearms.

**percussion technique:** any of the methods used to strike a flake from a core in the making of stone tools; the reduction of a stone core by hitting it with a hammerstone or bone. This flaking technique usually left a hinge or step fracture. Direct percussion is hitting a core with a hammer. Indirect percussion uses a punch between the core and the hammer. Anvil percussion (block on block) is the striking of a core against a fixed hardstone anvil. Bipolar percussion involves resting the core on an anvil and striking it with a hammer, making a flake with a bulb of percussion on each end. [percussion, percussion flaking, percussion method]

**percussor:** a hammerstone, bone, etc. used to strike a stone in the percussion technique.

**perforation:** a hole or series of holes punched or bored through something, especially a hole in a series.

**periglacial:** a term describing cold climate processes and landforms – an environment with severe frost in nonglacial conditions and with much ground ice, mass movements, and strong winds. It applies to



the region surrounding a glacial area and regions immediately beyond the ice-front during a glaciation. In a periglacial zone, part of the ground is perennially frozen. This so-called permafrost layer is covered by a layer which thaws and freezes seasonally, the active layer. Such seasonal changes give rise to several processes, some of which sort the constituents of the active layer and are collectively known as cryoturbation. A variety of landforms, including involutions, ice wedges, and pingos, are formed in the active layer and permafrost. Hill slopes become mantled with frost-shattered rubble that moves downslope during cycles of freezing and thawing. Rivers are usually seasonal in the periglacial zone, and erosion by frost action is dominant. Wind erosion and deposition is often an important factor, and caused the formation of the huge deposits of loess and cover-sands in Europe and Asia. The periglacial zone is of interest because it would have been the environment in which man lived for long periods of time during the Devensian/Weichselian cold stage. During the coldest periods of the Quaternary (the last 1,600,000 years), the periglacial zone was enlarged to approximately twice its present size.

**period:** any specific interval of time in the archaeological record, such as the Upper Paleolithic period. This term is often confusingly used interchangeably with phase and stage. A period is a true time division of the history of a large region (such as the Valley of Mexico or southern China) and does not necessarily imply any developmental characteristics. In an archaeological context, it is a major unit of prehistoric time, usually containing several phases and pertaining to a wide area. It is a convenient term used to discuss the history of a complex area.

**peripheral chopper:** a pebble tool worked on both faces and often irregular in shape. The cutting edge can go around the periphery or there may be a break; it can also be planoconvex in section. It differs from a biface in that it is often not axially symmetrical and in the undifferentiated position of the cutting edge. It is characteristic of the Oldowan and Acheulian complexes.

**perishable:** any artifact made from organic materials that ordinarily would decay but for some reason was preserved. Such artifacts include basketry, cordage, and leather.

**pernette:** small terra cotta tripod used to stack vases in the kiln so as to prevent them sticking to one another during firing.

**pestle:** club-shaped (oblong cylindrical or subcylindrical) implement of stone used for pounding, crushing, or grinding substances in a mortar.

**Peterborough ware:** a poorly made, elaborately decorated pottery of the British Late Neolithic, found in southern England. The ornament consists of pits, bone, and wooden stick impressions and "maggot" patterns made by impressing a bit of whipped cord into the soft clay.

The earliest (Ebbsfleet) substyle developed from Grimston-Lyles Hill ware c. 3500 BC and consisted of round-based vessels with fairly restrained ornament. The later variants have more complicated decoration and show the influence of Beaker pottery: the second (Mortlake) substyle still occurs on round-based vessels, but in the final (Fengate) substyle the pots are flat-bottomed and have many features which lead on to the collared urns of the Bronze Age. These vessels were probably intended for everyday domestic use.

**petit-tranchet arrowhead:** a Late Mesolithic western European flint arrow tip with a blade broken into trapezoidal pieces and the broken edges forming long sides with blade edges at either end. [chisel-shaped arrowhead, transverse arrowhead]

**petit-tranchet derivative arrowhead:** a Late Neolithic flint arrowhead of Britain patterned on petit-tranchet arrowhead forms, including triangular and trapezoidal pieces. [PTD arrowhead]

**petraria:** a type of heavy siege engine that hurled stones at castles with the effect of modern shrapnel. The trebuchet was the largest of the petrariae, or siege engines. It consisted of a long beam, up to 15 m (50 feet) long, with massive weights of 8–9 tons at one end. It rested on a crossbeam and the long arm was hauled down by a rope attached to the end and wound on to the windlass. [petrariae (pl.)]

**petrified wood:** agatized wood, sometimes used as a raw material for the manufacture of flaked stone artifacts. It was often banded or laminated and of variable color.

**petroglyph:** any design, picture, or writing carved or chipped into a rock surface. The technique involved in producing a petroglyph usually was incising, carving, pecking, or pounding. [petrogram]

**pewter:** a tin-based alloy used as a material from which domestic utensils were fashioned. The alloy is often 100 parts of tin to 17 of antimony; or 89 of tin, 7 of antimony, and 2 of copper. Tin and zinc, and lead and tin, are sometimes used to make pewter. The use of pewter dates back at least 2000 years to Roman times. Ancient pewter contained about 70% tin and 30% lead. Such pewter, also called black metal, darkened greatly with age, and the lead leached out in contact with acidic foods.

**PF beaker:** abbreviation of protruding foot beaker. [*see* protruding foot beaker]

**Phaistos disk:** a unique clay disk with stamped inscriptions in a spiral on each face of its 16 cm (6-inch) diameter, found in 1908 at Phaistos, Crete. It is made of baked clay and on either side is an inscription, which consists of signs impressed on the wet clay with a punch or stamp. The Phaistos disk is therefore the world's first typewritten document in the words of John Chadwick. There are a total of 242

signs arranged into 61 groups demarcated into boxes by lines. The signs appear to be written from the outer edge and spiral inwards in a clockwise direction. The disk come from a deposit dated c. 1700 BC, which makes it contemporary with the Linear A script. At this time, however, it appears to not be Linear A but may be an Anatolian script. [Phaestos disk]

**phalera:** in ancient Greece and Rome, a bright metal disk worn on the chest as an ornament by men, or used to adorn the harnesses of horses. [phalerae (pl.)]

**phallic:** relating to or resembling a phallus or penis, sometimes erect, used in the decoration of objects. [phallus (n.)]

**Pharaonic period:** the entire history of Egypt from the establishment of the monarchy in 2925 BC to the invasion of Alexander in 332 BC.

**phaskon:** Greek vessel of a flattened ovoid form, with a long spout, and a handle at the top, like the askos.

**phial:** a small cylindrical glass bottle, typically for medical samples or medicines. [vial]

**phiale:** in Greek antiquity, a shallow dish used either for drinking or for pouring libations.

**Phigalian Marbles:** friezes kept in the British Museum, from the Temple of Apollo Epicurius, at Bassae near ancient Phigalia in Arcadia. There are 23 slabs in high relief, 11 representing the battle between the Centaurs and the Lapithae, and the rest the contest of the Greeks and Amazons. It is attributed to the same period as the Parthenon.

**philyra:** strips of papyrus used for making a sheet of writing paper; 10–12 strips of papyrus were first glued together lengthwise and then a sufficient number of strips were fastened crosswise underneath to double the thickness of the surface. [philura]

**Phocaean ware:** Roman red-glossed pottery made from the 4th to 7th century AD on the west coast of Turkey. It was widely distributed in the eastern Mediterranean area.

**phylactery:** general term that includes any kind of amulet worn about the person as a protection against dangers. The name phylactery is derived from the Greek *phylakterion*, meaning “amulet.”

**phyllite:** a soft, laminated, shale-like rock used for the manufacture of decorative objects such as pendants and beads.

**phyllosilicate:** a layered silicate mineral; it is the major category of clay minerals, composed of those with a regular ordering of layers of silica and alumina structural components.

**Picardy pin:** type of bronze pin of northern France and southern England in the Ornament Horizon, Middle Bronze Age, with a tapering shaft, swollen neck (sometimes pierced), an elaborate domed or mushroom-shaped head, and some incised decoration.

**pick:** a heavy iron tool with a wooden handle and a curved head that is pointed on both ends; also, a long narrow core tool, sometimes slightly curved in profile, truncated at one end and pointed at the other.

**pickaxe:** a pick with a point at one end and a cutting blade at the other end. [pickaxe]

**Pictish symbol stones:** Pictish symbol stones are a unique class of sculptured monument of the Pictish people in the post-Roman period. The Picts occupied Scotland north of the Forth and possessed a distinctive culture, seen particularly in their carved symbol stones. The stones are roughly divided into three chronological categories. Class I stones (5th to 7th century AD) are rough-hewn, undressed blocks or pillars, inscribed with pictorial symbols of spiral creatures, such as fishes and birds. They are also decorated with strange geometric shapes as well as inanimate objects like mirrors and combs, grouped together in various combinations. Class II stones (8th to 10th century) are regularly dressed slabs with the same range of carvings but with the addition of new Christian elements and humans in animated scenes. Class III stones (from the 9th century) are, in most cases, free-standing crosses decorated with a combination of a distinctive form of interlace as well as some elements of the older motifs. Some bear Ogham inscriptions from which it has recently been shown that three languages were in use, two Celtic and one pre-Indo-European. From these memorial stones we know something of the Pictish royal succession.

**pictograph:** any design, picture, or drawing painted on a surface (usually rock/stone) and used to represent a thing, action, or event. Pictographs are believed to be the earliest form in the development of writing (pictography). It represents a form of nonverbal communication used by nonliterate people. [petrograph, pictogram]

**picture-stone:** a term used to describe the unique series of engraved memorial stones (bildstenar) that were raised on the Baltic island of Gotland (off Sweden) between the 5th and 11th centuries AD. The Kylver Stone, found in a Gotland tomb, is a limestone slab that bears a 5th-century runic inscription and provides the oldest extant record of the Germanic runic series.

**PIE:** a unit containing as much statistical information as a single complete vessel but based on the sum of completeness indices of sherds. The PIE (pottery information equivalent) values yield unbiased estimates of the proportion of each pottery type in a sampled population. [pottery information equivalent]

**piece esquillee:** a type of flaked stone artifact manufactured by the bipolar percussion technique. It is generally characterized by a lenticular or wedge-shaped cross-section, opposed bifacial crushing, battering, and hinge-fracturing, and frequently relatively long columnar “bladelike” flake scars. [splintered piece]

**piece mold:** a clay mold made of a number of separate pieces fitting together, for casting intricately shaped metal objects.

**piercing:** perforating the wall of a ceramic artifact while still plastic by pushing a sharpened cylindrical tool (like an awl) through it or drilling a hole through a thin stone or fired ceramic. [to pierce (v.)]

**pig:** an ingot of metal, especially lead or iron, from a smelting furnace.

**pig fibula pin:** a pin made from the fibula (bone) of a pig, with a long narrow triangular outline and a perforation at the thicker wider top end, from northern Europe in the later 1st millennium AD.

**pigment:** an organic or inorganic coloring material, usually a mixture of colorants, clay, water, and a binder.

**pike:** a type medieval weapon with a long narrow lance-like head and a very long shaft.

**pila muralia:** a double-pointed wooden stake carried by Roman soldiers for fortifying the ramparts of temporary camps.

**pilgrim bottle:** a ceramic barrel-shaped or cylindrical container, with two suspension lugs, thought to be carried by pilgrims for liquids. [costrel]

**pilgrim's badge:** a small metal plaque given at major shrines to successful pilgrims as a souvenir and proof of their journey. [pilgrim badge, pilgrim's sign]

**pillar-molded bowl:** a type of Roman glass bowl made by casting molten glass, usually brightly colored.

**pin:** one of the simplest artifacts, consisting of a narrow metal or bone shaft with a point at one end and usually some sort of decorative head at the other. Its function was to secure garments (ancestral to the fibula) or, sometimes, the hair. Their decorative heads were highly variable and nonfunctional, and therefore a culturally significant feature.

**pin beater:** a thin rod of wood or bone (occasionally stone) with tapering ends used to compact the weft threads on an upright loom by pushing down between each of the warp threads one at a time.

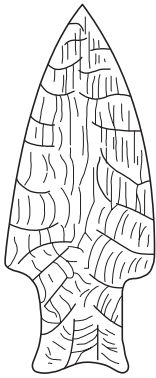
**pincers:** a tool for gripping with, often used to pinch objects together.

**pinching:** the creation of a ceramic item by pinching a ball of paste without using a mold, wheel, slabs, or coils. It is a primary forming technique for producing cups, small bowls, and other small vessels by squeezing the paste between the thumb and fingers. [pinch method, pinch pottery; pinched (adj.)]

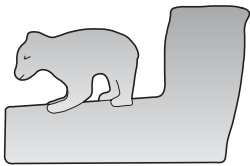
**Pinsdorf ware:** hard-fired pots made in the villages in the Vorgebirge Hills, west of Cologne and Bonn in Germany. The earliest example is the Wermelskirchen coin hoard pot, dated to c. AD 960. Pinsdorf ware is characteristically decorated with red paint and commonly occurs as pitchers with thumb-impressed ring bases; smaller pots, including money-boxes and toys, were also made. The products were exported to all parts of the Rhineland, as well as to Britain and Scandinavia.



Terracotta piece mold of a man on horseback, Mesopotamia, 2000–1600 BC



Pinto Basin point



Bear pipe, Archaic period

**pintadera:** a small object, usually of terra cotta, consisting of a decorative stamp with a knob at the back for holding. The stamping surface is flat, concave, or convex. It has been suggested that they served to apply pigments to the human skin in repeat patterns as an alternative to tattooing. They are found in the Late Neolithic of central Europe and Italy, and pintaderas of both stamp and roller types occur widely in American cultures.

**pinle:** a pin or bolt, especially one on which some other object turns.

**Pinto point:** bifacially worked, chipped stone projectile point characteristic of the Pinto Basin phase of western North America 5000–1900 BC. Triangular in outline, Pinto points are shouldered towards the bottom of the long side to produce a straight stem; they have a hollow base.

**pipe:** a connecting tube with a small bowl at one end, especially used for smoking tobacco, etc., from the Archaic stage in midwestern US from c. 1500 BC.

**pipe clay:** a relatively pure clay with little or no iron, usually fired to a white or pale cream color.

**pipe stem:** the hollow stem or tube of a pipe used for smoking tobacco, etc. [pipe-stem, pipestem]

**pipe-clay figurine:** any small statuette cast or made from fine white pipe clay.

**pipe-stem dating:** a method of calculating the date of American Colonial assemblages based on the variation in hole diameters in clay pipe stems. J. C. Harrington first drew attention to the fact that there was a general reduction in hole size from 1620 to 1800. Lewis Binford then developed a regression equation,  $y = 1931.85 - 38.26x$ , where  $y$  is the mean date for the group and  $x$  is the mean pipe-stem diameter for the sample (*A New Method of Calculating Dates from Kaolin Pipe Stem Samples*, L. R. Binford). The formula works well for the period 1680–1760, but fails to produce satisfactory results for post-1780 assemblages.

**pipestone:** any soft stone used in the manufacture of aboriginal smoking pipes.

**pipkin:** a type of medieval ceramic vessel shaped like a saucepan, with a single hollow handle for holding a wooden extension.

**piquant-triedre:** a bladelet that has been notched and then had a microburin twisted off at the notch; the microburin scar forms as a thin extended point.

**Pirri graver:** an Australian tool type with extensive flaking on one face and an underside curvature as well as retouched cutting edge on the narrow end. They are up to 80 mm (3.5 inches) long and seem to correspond to those of the Tula. [pirri graver]

**Pirri point:** an Australian stone tool type, with a symmetrical leaf-shaped point, up to 7 cm (2.75 inches) long, and unifacially flaked all over its dorsal surface. The striking platform and bulb of percussion are sometimes removed to produce a rounded, thinned butt. Pirri points have been found distributed widely in inland Australia from South Australia to the Northern Territory and northwestern Australia. A component of the Australian Small Tool tradition, the Pirri point dates from about 3000 BC. The aboriginal term *pirri* means “wood-engraving tool.” [Pirri culture, pirri point]

**piscina:** a bowl for the ritual washing of hands.

**pit firing:** a method of firing ceramics using an open or exposed flame as opposed to a kiln.

**pitcher:** a large jug or deep vessel with an open mouth and usually a handle and spout, for collecting, storing, or serving liquids.

**pitchfork:** a long-handled hand tool with sharp, widely spaced prongs for lifting and pitching hay.

**pitchstone:** any of various volcanic glasses distinguished by their dull pitch-like luster.

**Pit-Comb ware:** a coarse pottery with deep, round-based bowls decorated with pits and comb impressions and used in the circumpolar cultures of the forest zone of northeast Europe. The area includes that around the southern Baltic and the glacial outwash of central and eastern Poland. Its makers were probably hunters and fishers, making little use of the techniques of food production, although adopting such Neolithic traits as pot-making and ax-grinding. There are few sites and little data.

**pithos:** a large Greek earthenware storage jar with a narrow neck, used for oil, wine, or grain. They were used on occasion for jar burial in the Aegean area. [pithoi (pl.)]

**pito:** Mexican name for the pipe of the Aztecs, which resembled a flageolet. It was made of red clay, and had four fingerholes.

**Plainview point:** bifacially worked, chipped stone projectile point with parallel sides and a concave base found in central areas of North America c. 8000 BC. The complex was associated with this point and with nondiagnostic stone and bone tools. [Plainview]

**plaited:** basketry made with both a horizontal and a vertical stitch or weft – like a braid. The weave is basically the same in both directions. [plaited basketry]

**plank coffin:** a box of wooden planks fixed together for holding a corpse, usually recognized archaeologically from the pattern of nails found in the grave or by the patterns of grave fill.

**Plano point:** name of projectile points developed out of the Clovis and Folsom points of the Big Game Hunting tradition, after 8000 BC in



Plainview

North America. Unfluted, large, lanceolate stone forms were made by pressure-flaking techniques. The two main types of Plano points are Plainview, of 7800–5100 BC, and Parallel, which are longer, more slender, and more finely made. [Plano projectile point]

**planoconvex:** pertaining to an artifact with one flat and one convex side. [plano-convex]

**planoconvex brick:** a sun-dried or kiln-fired rectangular brick with a flat undersurface and a domed upper surface, used in the Early Dynastic period of southern Mesopotamia. They often had thumb-impressed holes on the domed surface. They were used with mud mortar in vertical courses inclined in alternating directions to create a herring-bone pattern.

**plaster:** a mixture of lime or gypsum with sand and water; it hardens into a smooth solid and is used to cover walls and ceilings.

**plastered skull:** skulls found at Jericho, Israel, which were covered in plaster and painted as well as decorated with cowry shells in the orbits. They were found in Pre-Pottery Neolithic B contexts at several sites in Syro-Palestine.

**plastic limits:** range in the amount of water that may be added to a dry clay in order to develop a satisfactorily plastic mass.

**plasticity:** property of a material that enables it to be shaped when wet and to hold this shape when the shaping force is removed.

**plate:** a shallow dish in which food is served or from which it is eaten; household articles, such as hollow ware, covered with a precious metal, such as silver or gold. [platter]

**plate armor:** protective armor in the form of sheet iron fittings (metal plates) tailored to the shape of the body and strapped in position, common in 15th to 16th-century AD Europe. The knights of the European Middle Ages wore this armor, composed of large steel or iron plates that were linked by loosely closed rivets and by internal leathers to allow the wearer maximum freedom of movement. [plate armour]

**platform:** the place on a core or flake where it was struck by a hammer. [striking platform]

**platform angle:** angle between the plane of the platform and the exterior (dorsal) surface of a flake or core.

**plating:** a process of coating a metal or other material such as plastic or china with a hard, nonporous metallic surface to improve durability and beauty. Gold, silver, stainless steel, palladium, copper, and nickel are formed by dipping an object into a solution containing the desired surface material, which is deposited by chemical or electrochemical action. While much plating is done for decorative purposes, still more is done to increase the durability and corrosion-resistance of softer materials.



**platter:** large shallow dish or plate.

**Pleistocene:** a geochronological division of geological time, an epoch of the Quaternary period following the Pliocene. During the Pleistocene, large areas of the northern hemisphere were covered with ice and there were successive glacial advances and retreats. The Lower Pleistocene began c. 1.8 million years ago, the Middle Pleistocene c. 730,000 years ago, and the Upper Pleistocene c. 127,000 years ago; it ended about 10,000 years ago. Most present-day mammals appeared during the Pleistocene. The onset of the Pleistocene was marked by an increasingly cold climate, by the appearance of Calabrian *Mollusca* and Villafranchian fauna with elephant, ox, and horse species, and by changes in foraminifera. The oldest form of man had evolved by the early Pleistocene (*Australopithecus*), and in archaeological terms the cultures classed as Paleolithic all fall within this period. By the mid-Pleistocene, *Homo sapiens* had evolved in Africa and Europe. *Homo sapiens* spread to Asia and the Americas before the end of the epoch. There were mass extinctions of large and small fauna during the Pleistocene. In North America more than 30 genera of large mammals became extinct within a span of roughly 2000 years during the late Pleistocene. Of the many causes that have been proposed by scientists for these faunal extinctions, the two most likely are changing environment with changing climate, and the disruption of the ecological pattern by early humans. The Pleistocene was succeeded by the Holocene or present epoch.

**Pleistocene series:** a division of the Quaternary system defined by its deposits. It is a worldwide division of rocks deposited during the Pleistocene epoch (1,600,000–10,000 years ago). It overlies rocks from the Pliocene epoch (5.3–1.6 million years ago) and is itself overlain by rocks of the Holocene series; together these two latter divisions make up the Quaternary system. These deposits contain evidence of humans and their development throughout glacial and interglacial conditions. By international agreement, the global stratotype section/point for the base of the Pleistocene series is in the Vrica section in Calabria, Italy. The Pleistocene's boundary with the Pliocene occurs just above the position of the magnetic reversal that marks the Olduvai normal polarity subzone, thus allowing the worldwide correlation of Pleistocene rocks with reference to the magneto-stratigraphic time scale.

**Pliocene:** the latest geological epoch of the Tertiary period dating between c. 5 million years ago (mya) and the beginning of the Pleistocene (c. 1.8 mya). During the Pliocene, mammals such as the elephant, horse, ox, and deer appeared, in addition to ancestors of man. It followed the Miocene. There was a separation of the *Homo*

genus and the *Australopithecus* genus, with the first worked tools and the first camps appearing. It is often divided into the Early Pliocene epoch (5.3–3.4 mya) and the Late Pliocene epoch (3.4–1.8 mya). The Pliocene is also subdivided into two ages and their corresponding rock stages – the Zanclean and the Piacenzian.

**Plio-Pleistocene:** the later part of the Pliocene and the early part of the Pleistocene, c. 5 to 1 million years ago. The early Plio-Pleistocene *Homo habilis* appears to be more closely related to *Homo sapiens* than is *Homo erectus*.

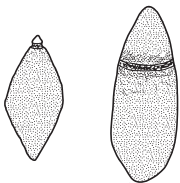
**plow:** a tool designed to be drawn through the ground to break it up for cultivation, often powered by a yoke (or more) of oxen, other animals, or men. The earliest type of plow, developed from the hoe and digging stick, is the ard or scratch plow, which stirs the soil without turning it. Cross-plowing, the result of a second plowing at right angles to the first, is usually necessary. This type was of Near Eastern origin c. 4th millennium BC. The later plow, heavier and wheeled, did not appear until the early centuries AD. It is more suited to the heavier soils of Europe. Prehistoric America, lacking suitable draft animals, did not have a plow. The 18th-century addition of the moldboard, which turned the furrow slice cut by the plowshare, was an important advance. The plow is considered the most important agricultural implement of history, used to turn and break up soil, to bury crop residues, and to help control weeds. [plough]

**plow beam:** a wooden or metal bar that connects the blades, shares, and their mountings to the yoke of a plow, then attached to the harnesses fitted to the draught animals that provide the power. [plough beam]

**plowshare:** part of a plow that goes into the ground to disturb or turn the soil. [ploughshare]

**Plumbate ware:** a fine pottery made on the Pacific coast of Mesoamerica, near the Mexico–Guatemala border, during early Post-Classic and pre-Columbian times. It was traded over a wide area, from Nayarit in northwest Mexico to Costa Rica in the south, and was present in all but the lowest levels in the Toltec center at Tula. The glazed appearance of the surface of Plumbate ware is due to the unusual composition of the clay from which it is made and to carefully controlled firing conditions. There was a high percentage of iron compounds and, upon firing, the ceramic surface acquired a hard, lustrous, vitrified surface often with a metallic shine. Its original point of manufacture was on the Pacific coast of Mesoamerica in the vicinity of Izapa.

**plummet:** a stone artifact resembling a carpenter's plumb bob, usually made of basalt, slate, or hematite. Marked by a single groove around it toward one end or the middle, it was possibly a sinker for fishing or of ceremonial or ritual use.



Plummet

**plunging termination:** a distinct curvature of the distal end of a lithic flake towards the center of the core. [overshot; plunging (adj.)]

**ply:** the strand(s) of material used in the construction of cordage.

**populum:** a Roman cup or glass for drinking, distinct from the crater for mixing, and the cyathus for drawing wine from a bowl.

**point:** a category of stone artifacts consisting of pointed tools flaked on one or both sides; a weapon or tool having such a part and used for stabbing or piercing, e.g., an arrowhead or spearhead. [projectile point]

**point of percussion:** point at which a core is struck with a hammerstone in order to remove a flake. The point of percussion is a visible excrescence on the core, a small scar on the struck flake. The bulb of percussion surrounds it.

**point provenience:** location (provenience) of a specific object at an exact point on a site. [piece plotting]

**pointillé:** a type of decoration by marking with dots.

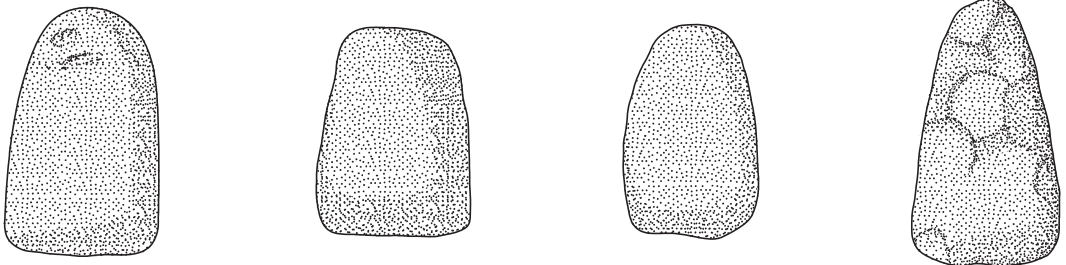
**poison point:** an arrowhead used not only to pierce the hide of an animal, but also to poison it; most were notchless and triangular so that the shaft of the arrow could detach easily and remain in the wound after being soaked in snake venom or decayed meat, etc.

**poker:** a bar or rod, usually of metal, used to push another object into place, e.g., to push coals within a fire.

**pole ax:** a long shaft topped by an axhead. It differs from a battle ax by the length of the shaft. [pole axe]

**polish:** a shiny surface that often occurs macroscopically or microscopically near the used edges of lithic flakes or blades as a result of use on particular materials. [polishing (n.)]

**polished axhead:** an axhead of flint or other stone, commonly used in the Neolithic period.



**polished stone adze:** a chopping or cutting tool, beveled on one side and characteristic of the Neolithic in Southeast Asia. It appeared as early as 6000 BC in some places and continued in use into the 1st millennium AD in places with little metal. They were generally flaked to shape from a large core, and then ground and polished. Traded forms were

roughed-out blanks that would be polished later. The form was a simple quadrangle. By the Late Neolithic a decrease in the proportion of stone axes to adzes suggests the increasing dominance of permanent agriculture.

**polished tool:** any artifact made by the pecking or grinding of hard stones. During the Neolithic period was the first widespread use of polished rock tools, notably axes, with the adoption of a new technique of stone-working. The revolutionary method used to create polished tools was essentially a finishing process that slicked a chipped tool by rubbing it on or with an abrasive rock to remove the scars of the chipping process that had produced the rough tool. Not only was the edge keener, but the smooth sides of the edge also promoted deeper penetration, with the added advantage of easier tool extraction from a deep wedged cut. [ground stone tool]

**polisher:** polished bone used to burnish objects, e.g., pottery.

**polissoir:** 1. A polishing or grinding implement, especially for stone axes.  
2. A tool consisting of a flat wooden block with a long iron handle, used for flattening out split cylinders of blown glass.

**polychrome pottery:** pottery that is decorated in more than two colors, but the term is also applied to pottery with more than one color.

**polyhedron:** a six-sided pebble or piece of stone that has been totally or partly reshaped by chipping of the surface in a number of directions; it resembles a ball. They were first created in pre-Acheulian, Acheulian, and Middle Paleolithic times and were used as percussion tools, throwing weapons, and nuclei for flakes. [polyhedral core]

**polypod bowl:** a bowl that stands on two, three, or four small legs – found especially in Middle American archaeology. The form was also popular among the southwestern groups of the Beaker folk and in related central European wares.

**Pompeian red ware:** a type of colored Roman pottery from France and exported to the Roman world c. late 1st century BC and 1st century AD.

**Pontic ware:** black-figured pottery made in Etruria during the Archaic period, possibly influenced by techniques from Attica, Corinth, and Ionia.

**pontil scar:** the characteristic mark left on the base of glass vessels by breaking off the glass-blower's rod.

**poppy head beaker:** a beaker in the shape of the head of a poppy, in gray or black, with a polished surface, everted rim, and body decorated with barbotine or rouletting.

**porcelain:** vitrified pottery with a white, fine-grained body that is usually translucent, as distinguished from earthenware, which is porous, opaque, and coarser. Porcelain is a fine form of pottery that is fired to a very high temperature in order to vitrify the clay. The name is derived from the Portuguese *porcellana* ("little pigs," the name given

to cowrie shells by early traders). Porcelain was developed by the Chinese from a long tradition of making stoneware in white clay. In the T'ang dynasty (AD 618–906] came proto-porcelains, followed by true porcelain in the Sung dynasty (AD 960–1279). The three main types of porcelain are: true, or hard-paste, porcelain; artificial, or soft-paste, porcelain; and bone china.

**porphyry:** a rock containing relatively large, conspicuous crystals, especially feldspar, in a fine-grained igneous matrix, used for statues and sculptures.

**porringer:** a small bowl, often with a handle, used for soup or similar dishes.

**portable art:** artifacts or pieces of art that can easily be moved.

**positive painting:** direct application of a design by use of pigments, as in painting pottery.

**Post-Classic period:** final pre-Columbian period in New World cultural history, following the collapse of the Classic period civilizations, starting in AD 750/900 until 1520. The period is characterized by metal-working, complex urban societies, advanced commerce, militarism, imperialism, and secularism. It is traditionally dated from the fall of the Classic Maya in 900, but the collapse did not occur simultaneously throughout Mesoamerica. [Postclassic period]

**post-Deverel-Rimbury ware:** pottery of southern England from about the first half of the 1st millennium BC, replacing the previous Deverel-Rimbury traditions. The wares were fineware, thin-walled plain jars, bowls, and cups, along with coarseware including large storage vessels. Starting c. 8th century BC, there is more decoration, especially incised lines, fingertip impressions, and cordons.

**postglacial period:** a period occurring after a glacial episode, especially one from the end of the Pleistocene Ice Age c. 8300 BC to the present. The substages in northern Europe are: Pre-Boreal (c. 8300–7700 BC), Boreal (7700–5550 BC), Atlantic (5550–3800 BC), Sub-Boreal (3800–1200 BC), and Sub-Atlantic (1200 BC to present).

**Postpalatial:** in Minoan Crete, the period after the destruction of the palaces, a part of the chronological system for the area devised by Platon. It is the same as Late Minoan IIIA2–IIIC, c. 1375–1100 BC, in traditional chronology.

**pot:** a container, usually round and deep.

**pot boiler:** name given to stones, often flint, that have been heated in a fire and have a white or grayish cracked appearance. They are thought to have been used to heat water for cooking purposes.

**pot lid:** a small portion (flake) of stone that may pop off a core during heat treatment due to rapid heating or excessive temperature, creating many small flake scars on the surface. Pot lid marks are conical depressions in flint that prove the item was once in a fire; heat caused

the moisture in tiny hollows to expand and blow out a section of flint.  
[pot lid mark, pot-lid mark]

**potash-lead glass:** glass based on potash as a flux with high concentrations of lead. It is heavy, lustrous, and more refractive than other forms of glass.

**potash-lime glass:** glass made using potash derived from burning wood.

**pothunting:** illegal artifact collecting.

**potlid fracture:** a crater-like pit that sometimes occurs on the surface of lithic raw material that has been heated or frozen and thawed.  
[pot-lid fracture]

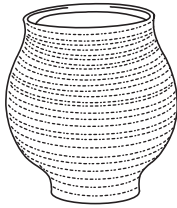
**potsherd:** any pottery fragment – piece of broken pot or other earthenware item – that has archaeological significance. Often abbreviated to sherd, potsherds are an invaluable part of the archaeological record because they are well preserved. The analysis of ceramic changes recorded in potsherds has become one of the primary techniques used by archaeologists in assigning components and phases to times and cultures. [shard, sherd]

**potter's comb:** an implement with a serrated edge capable of producing an impressed decoration on pottery. A marbled effect was sometimes achieved (as in Chinese pottery of the T'ang dynasty) by mingling, with a comb, slips of contrasting colors after they had been applied to the vessel. Potter's combs were made of stone, bone, shell, or wood.

**potter's stamp:** a small block used by a potter to mark the base of a vessel while it was still soft, to personalize it, especially on Samian, Arretine, and Gallo-Belgic wares.

**potter's wheel:** a wheel rotating horizontally which assists a potter in shaping clay into vessels. The development of the slow, or hand-turned, wheel as an adjunct to pottery manufacture led to the kick wheel, rotated by foot, which became the potter's principal tool. The potter throws the clay onto a rapidly rotating disk and shapes his pot by manipulating it with both hands. By the Uruk phase in Mesopotamia, c. 3400 BC, the fast wheel was already in use. It spread slowly, reaching Europe with the Minoans around 2400 BC, and Britain with the Belgae in the 1st century BC. Its presence can be taken to imply an organized pottery industry, often also using an advanced type of kiln.

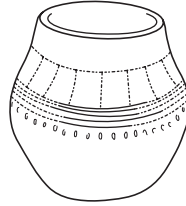
**pottery:** one of the oldest of the decorative arts, consisting of objects made of clay and hardened with heat. The objects are commonly useful. Earthenware is the oldest and simplest form of pottery; stoneware is a pottery compound that is fired at a sufficiently high temperature to cause it to vitrify and become extremely hard; and porcelain, finer than stoneware and generally translucent, is made by adding feldspar to kaolin and then firing at a high temperature. The raw material of pottery is common, shaping and baking it are simple, and it can be



Barrel



Collared urn



Globular urn

given an infinite variety of forms and decorations. Pottery sherds, almost indestructible, are one of the commonest finds and are very important to archaeologists. Pottery is often one of the clearest indicators of cultural differences, relationships, and developments, and its techniques of manufacture can be comparatively easily recovered by ceramic analysis. It can be shown whether it was modeled, coil-built, or wheel-made. The nature of its fabric, ware, or body can be identified, as can any surface treatment such as slip, paint, or burnish. The wide range of methods of decoration can also be studied. As the date of manufacture can usually be fixed, pieces of pottery give clues to archaeologists as to the date of other finds at the site. Petrological analysis of inclusions has been used to trace the source of pot clays and thus reconstruct ancient trade in pottery. Archaeologists usually call fired pot clay the “fabric” of a piece of pottery. Texture, mineralogy, and color of fabric may be used to describe and classify pottery.

**pounder:** a tool used to pound, crush, or beat an object.

**Poverty Point projectile point:** a projectile point, especially one with a narrow stem-body juncture. Poverty Point site is located just west of the Mississippi River in northeastern Louisiana. The site is significant because its earthworks are the oldest, large aboriginal constructions known in mainland North America. They were built between 1730 and 1350 BC by Terminal Archaic hunter-gatherers.

**prayer bead:** a bead or group of beads used in prayer.

**preaching cross:** a class of monumental sculpture unique to the British Isles, developed from the 7th century AD onwards. The tall, tapering cross shaft rested on a plinth or base, and carried a three-armed cross head. Both the cross and the shaft were usually ornamented with Christian figures and other decorative motifs. They may be Celtic interpretations of Mediterranean crosses and Iron Age stelae. [standing cross]

**Pre-Boreal:** a division of Holocene chronology which began about 10,000 years ago and ended about 9500 years ago. The Pre-Boreal climatic interval preceded the Boreal climatic interval and was a time of increasing climatic moderation. Birch-pine forests and tundra were dominant. It is a subdivision of the Flandrian interglacial and represents the start of the Flandrian.

**preceramic:** before ceramics; referring to a period antedating the use of ceramics or pottery.

**Preceramic Period:** the earliest of a seven-period chronological construction used in Peruvian archaeology, c. 9000–1800 BC, starting with the first human occupation and ending with the introduction of ceramic artifacts. The Preceramic Period is usually subdivided into six periods and is characterized by a variety of subsistence patterns and by a lack of ceramics. The first two periods (up to 8000 BC) represent a subsistence based on hunting. The third period, c. 8000–6000 BC, is seen as transitional from hunting to hunting and gathering. Period IV, c. 6000–4000 BC had cyclical, seasonal migration. In Preceramic V, c. 4000–2500 BC, the lomas dried up and people tended to be sedentary and agriculture supplied an increasing part of the diet. Large habitation sites, ceremonial centers, and agriculture appear increasingly in Preceramic VI, c. 2500–1800 BC. There are lithic complexes in the Early Preceramic, followed by an Archaic period with foraging populations and the beginning of domestic and ceremonial architecture. The Preceramic was followed by the Initial Period.

**Pre-Classic period:** a period in Mesoamerican archaeology during which agriculture formed the basis of settled village life, c. 2000 BC to AD 250. The earliest writing – glyphs – in Mesoamerica began in this period. The Olmec was the first culture to appear in the Pre-Classic period. A similar level was attained in Peru at about the same time (the Chavín culture). In many other areas life remained on a Formative level until the Spanish conquest. The final phase of the Pre-Classic cultures of the central highlands forms a transition from the village to the city, from rural to urban life. [Preclassic period]

**pre-Columbian:** a term used to describe the period in the Americas before European contact. Pre-Columbian civilization refers to the aboriginal American Indian cultures that evolved in Mesoamerica and the Andean region prior to Spanish exploration and conquest in the 16th century AD.

**Predynastic period:** the period before recorded history in Egypt and before it became a unified state in c. 3100 BC. The term “predynastic” denotes the period of emerging cultures that preceded the establishment of the 1st dynasty in Egypt. In the late 5th millennium BC there began to emerge patterns of civilization that displayed characteristics deserving to be called Egyptian. The accepted sequence of predynastic cultures is based on the excavations of Sir Flinders Petrie at Naqadah, al-'Amirah (el-'Amra), and al-Jazirah (el-Gezira). Another, somewhat earlier, stage of predynastic culture has been identified at al-Badari in Upper Egypt. Until recently, most of our knowledge of predynastic Egypt was derived from the excavation of graves. Predynastic communities appeared in the section of the Nile Valley



immediately south of Asyut. Large settlements were established, notably that at Hierakonpolis. Some time after 5000 BC, the raising of crops was introduced, probably on a horticultural scale, in small, local cultures that seem to have penetrated southward through Egypt into the oases and the Sudan. The food-producing economy was based on the cultivation of emmer wheat and barley and on the herding of cattle and small stock, together with some fishing, hunting, and use of wild plant foods. Highly specialized craftsmen emerged to build vessels, make copper objects, weave linen, and make basketry and pottery. A series of small states arose until around 3100 BC the unified kingdom of Ancient Egypt came into being. [pre-Dynastic period]

**preform:** a bifacially flaked piece of stone that exhibits both percussion and pressure flaking, and which usually is triangular in shape, indicating that it was being fashioned into a projectile point or knife.

**prehistoric:** time period before the appearance of written records.

**prehistory:** any period for which there is no documentary evidence, and the study of cultures before written history or of more recent cultures lacking formal historical records. In the strict sense, “history” is an account of the past recovered from written records, but such an account can be prepared from other sources, notably archaeology. The term “prehistory” was coined by Daniel Wilson in 1851 to cover the story of man’s development before the appearance of writing. It is succeeded by protohistory, the period for which we have some records but must still rely largely on archaeological evidence to give us a coherent account. Prehistory differs from history in dealing with the activities of a society or culture, not of the individual; it is restricted to the material evidence that has survived.

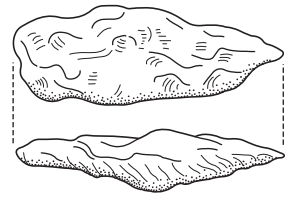
**Prepalatial:** in Minoan Crete, the period before the construction of the palaces, a part of the chronological system for the area devised by Platon. It is the same as Early Minoan I–III, c. 3000–2000 BC, in traditional chronology.

**prepared core:** a nodule of chert, flint, or obsidian that has been shaped to easily produce blades.

**prepared-core technique:** a method of stone-tool production whereby cores themselves are shaped in order to produce flakes of a desired form, instead of the flakes being shaped after their removal from the core.

**pre-projectile point complex:** a term applied to a complex consisting of the earliest archaeological evidence of humans on the North American continent. It is characterized by the lack of stone projectile points, which can be dated.

**preservation:** the protection of artifacts and archaeological sites through activities that minimize deterioration and damage and that prevent loss of context and content.

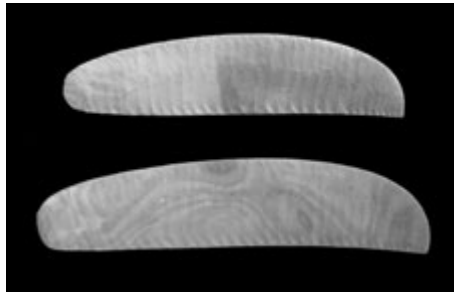
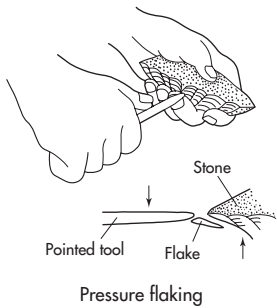


Preform

**press mold:** a mold used to shape the exterior of a glass item while a plunger shapes the interior of the item.

**pressure flake:** tiny, extremely thin flakes pinched or pushed off a tool to finish shaping it or to resharpen or reshape it. [retouching flake]

**pressure flaking:** a method for the secondary working of flint tools involving the use of a hard object against a stone core or mass to remove flakes. The roughed-out form of the tool is sharpened and finished by exerting pressure with a bone, antler, stone, or stick on the edge in order to remove small thin chips. By using a short, pointed instrument to pry, not strike, the tiny flakes leave only the smallest scars. As the least violent and most advanced of the methods of working stone, it gave the craftsman the ultimate in control for the removal of materials in the shaping of an implement. Fine-edged weapons, such as daggers, arrowheads, and spearheads, can be produced using this technique. This technique was first widely used in the Solutrean, c. 18,000 BC, and is associated with some New World points. [pressure method, pressure technique, pressure-flaking]



Pressure flaked blade

**prestige goods:** exchange goods, often limited in range, to which a society ascribes high status or value. Examples are amber, copper, glass beads, and marine shells. High-prestige goods served to enhance the political value of the trade to local elites who directed and controlled it. [prestige goods chain]

**previous scar:** a blade or flake scar seen on the face of a blade or flake resulting from the initial removal of a blade or a flake from a core or nodule.

**primary context:** an undisturbed association, matrix, and provenience; the condition when they have not been disturbed since the original deposition of the archaeological data.

**primary flake:** an unretouched flake of stone from which smaller flakes are removed during knapping; a flake with its dorsal aspect completely covered by cortex. [cortical flake, decortication flake]

**primary flaking:** initial flaking, usually broad, shallow, random percussion, that is used to roughly shape a preform into a desired outline for a tool or projectile.

**primary forming:** in ceramics manufacture, the technique used to build up the overall shape of the vessel. Secondary forming techniques are used to refine this shape and thin the walls.

**primary product:** the material gained by killing an animal, e.g., skin.

**primary refuse:** unwanted objects or materials found in the context where they were used and discarded.

**prismatic blade:** a flake struck from a polyhedral core, at least twice as long as it is wide, with steep, parallel sides and trapezoidal (prismatic) in cross-section. [prismatic flake]

**prismatic core:** a block of flint prepared for the removal of long narrow blades by creating a striking platform at either end so that blades could be removed in alternate directions.

**projectile point:** general term for the stone, bone, or wooden tip of a projectile – the point that is attached to a weapon such as an arrow, dart, lance, or spear. Among such points are arrowheads, which are usually of small size, and darts and spearpoints, which may be quite large. These tools are valuable in the reconstruction of culture history. [point]

**promontory peg:** a type of carved wooden artifact, probably used as the trigger for a snare, and first recognized at the Promontory Caves, northwest of Salt Lake City, Utah.

**prondnik:** a type of stone artifact that is an asymmetrical scraping tool flaked on both sides and found on some late Middle Neolithic sites of central Europe.

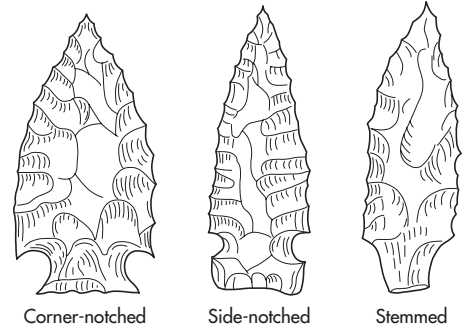
**prong:** point or tine of a fork or forklike tool.

**proto-:** indicating an early developmental stage of the main root word, e.g., prototype, proto-Villanovan, protohistoric, etc. It means “beginning” or “giving rise to.”

**Proto-Classic period:** in Mesoamerica, the period at the end of the Pre-Classic and immediately before the Classic period, c. 50 BC to AD 250. It refers to the cultures of the Maya area which were transitioning between the Pre-Classic and Classic.

**protogeometric, Protogeometric:** a type of Greek painted pottery and the period of its making, c. 1050–900 BC, which succeeded the Mycenaean. The style emerged at Athens and then other regions. Decoration was severely geometric and included concentric circles and the use of zigzags and triangles. [Proto-Geometric]

**protohistoric:** transition period between the prehistoric and historic eras.



Projectile points

**protohistory:** the period in any area following prehistory and preceding the appearance of coherent history derived from written records. It is a transitional time period between prehistory and recorded history, for which both archaeological and historical data are employed. There are several more detailed definitions, such as: (1) a time when nonliterate aboriginal peoples had access to European goods but had not had face-to-face contact; (2) periods during which historical documentation is fragmentary or not directly from the society being studied; and (3) the period of AD 1250–1519 in Mesoamerica, which followed the Post-Classic period and ends just before the Spanish conquest (there are historical documents for this period).

**proto-majolica:** a type of tin-glazed ware made in Sicily and southern Italy from shortly before 1200 until the 15th century. The appearance of these wares coincided with the importation of tin-glazed pottery from North Africa, particularly Maghreb. The jugs and bowls were usually painted with various animals or coats-of-arms in a variety of colors before glaze was applied. The best-known proto-majolicas are from northern Apulia; they were traded extensively to local villages and across the Adriatic to Yugoslavia. [proto-maiolica]

**protome:** decorative motif in the form of a human or animal head.

**Proto-Neolithic:** a transitional period between the hunting and gathering cultures of the Epipaleolithic and the farming cultures of the Aceramic Neolithic (c. 9300–8500 BC). The term is used variously but here it includes the Pre-Pottery Neolithic A of the Levant and the early stages of the adoption of characteristic Neolithic traits such as animal and plant domestication and the manufacture of pottery.

**Protopalatial:** in Minoan Crete, the period of the Old or First palaces, a part of the chronological system for the area devised by Platon. It is the same as Middle Minoan I–II, c. 2000–1700 BC, in traditional chronology.

**Protosesklo:** a term used for the Greek Early Neolithic period or the Early Neolithic in Thessaly.

**Proto-Three Kingdoms:** the protohistoric period of the Korean peninsula, c. AD 1–300, which preceded the Three Kingdoms period of Koguryo, Silla, and the Paekche. Archaeological finds of the period are mainly from Lelang and Koguryo in the north and Samhan in the south. Bronze and iron were used and iron was made at shell midden sites on the southern coast. In actuality, the Three Kingdoms period was from c. 57 BC to AD 668.

**prototype:** a prototype is the first in a series of artifacts, the earliest form of some type which later develops (e.g., the first of a new type of pottery). A prototype is also a model after which objects are copied: the prototype for a clay wine jar could be a metal wine jug of similar shape.

**protruding foot beaker, Protruding Foot Beaker:** typical vessel of the Late Neolithic in the Netherlands with radiocarbon dates from c. 3200 to 2400 BC. The basic form had a splayed neck, S-shaped profile, and flat everted base. It had cord ornament, dentate spatula impressions, or herringbone incisions. The vessel also defines the culture, which had burial in either a single flat grave or a pit under a barrow, and used the battle ax. The culture represents the Dutch branch of the widespread Corded ware–Battle-ax complex, or Single Grave cultures. In the Netherlands, there is some hybridization between the Protruding Foot Beaker culture and the Bell Beaker culture. [PF beaker]

**provenience:** source, origin, or location of an artifact or feature and the recording of the same. It is the position of an archaeological find in time and space, recorded three-dimensionally. The horizontal reference system is usually some form of grid tied to a reference datum; the vertical dimension is reference to a vertical datum. That is, it is the three-dimensional position of an archaeological find in time and space and recorded from a known datum point at an archaeological site. [provenance]

**proximal:** the extremity of a stone artifact that has or once had the bulb of percussion. [proximal end]

**proximal corner:** parts of a blade nearest the stem that define the outermost ends of the blade edge if the stem were ignored or removed. [barb]

**proximal portion:** that part of a blade nearest the stem of the hafting area, or the area of a tool nearest the basal edge.

**proximal shoulder angle:** a term describing the shape of the base on a projectile point, based on the angle formed by the hafting notch and the axis of the shaft.

**prunts:** globules of glass that may or may not be molded or cut into shapes but that are attached to an otherwise complete glass object.

**psalia:** ancient accessories of horse bits or cheek pieces, comprising a pair of vertical rods which were attached perpendicularly to the ends of bits and which served for attaching the reins and as a stop piece. Psalia of bone, wood, bronze, and iron were used everywhere there was horse riding. Their shapes are varied and useful for chronological and cultural attributions.

**psephoperibombetrios:** in Greek antiquity, a type of drinking cup with a hollow rim into which pellets were inserted. When it was shaken, it may have attracted attention for more wine or was used to accompany the symposium's music. There are 4th century BC kantharoi examples.

**pseudoartifact:** any object that appears to be a manmade tool, but actually has been molded by natural forces.

**Ptolemaic Egypt:** term describing Egypt during the Hellenistic era, when it was ruled by the dynasty of the Macedonian general Ptolemy I Soter

(reigned 305/304–283/282 BC) and his descendants. The Ptolemaic period was a large-scale experiment in bureaucratic centralism and mercantilism. Egypt was ruled by Ptolemy's descendants until the death of Cleopatra VII on August 12, 30 BC.

**pueblo, Pueblo:** in its capitalized form, a term for a stage in various chronologies of the American southwest, typically spanning the time period from AD 700 to the 1700s and to a specific Native American group, culture, or site of this time. These Native Americans are believed to be the successors of the prehistoric Anasazi, Hohokam, and Mogollon. The lowercased form is a term for village, applied to the sites in the American southwest where the Pueblo lived. Often these were apartment-like complexes of rectangular living rooms, built close together and often arranged in several stories or terraces, and made of wattle and daub. This building style is especially associated with the Anasazi tradition. The chronological period followed the Basketmaker and was divided into five stages at the 1927 Pecos Conference: Pueblo I (700–850/900), Pueblo II (900–1100/1150), Pueblo III (1100/1150–1300), Pueblo IV (1300–1600), and Pueblo V (1600–1700s).

**pulley:** a wheel with a groove in it for a rope or cord, used to raise heavy objects.

**punch:** a pointed tool, usually of bone, stone, or wood, used to perforate a material such as hide or shell. [punching (n.)]

**punctate decoration:** decorations made using a pointed implement to press designs into ceramics, sometimes making holes in an object. [punctate decorated pottery]

**punctating:** impressing pottery repeatedly with the end of a stick, bone, quill, cane, or other narrow tool. [punctate (adj.)]

**Purron phase:** in the Tehuacán Valley, Mexico, a phase from c. 2300 to 1500 BC, with food collecting and plant cultivation. The dates fall between the end of the Abejas and start of the Ajalpan phases. In the Purron phase, the first pottery was produced in vessel forms that duplicated earlier stone vessels.

**Puuc:** a region in the north central region of the Yucatán, Mexico, with a distinctive Maya architectural style of 600–900 AD, the last variant of the Classic Maya culture. The main characteristic of this style was the use of veneer masonry to cover rubble and concrete walls, and the prefabrication of sculpted elements which were assembled to form patterns and masks. The style was florid, with alternating zones of plain and elaborately decorated carving; fret- and lattice-designs and round columns were common; and there were many low, single-story residential buildings. Mosaics have been found at Uxmal, one of the best-known Puuc centers. Puuc architecture has also been found at

Labná, Kabah, and Sayil. The style spread all over the northern Yucatán and there are some structures at Chichen Itza. Puuc sites are thought by some to represent a lowland Maya New Empire with its apogee in the 9th to 10th centuries, a time during which the great Petén, or central subregion, centers were in decline or had collapsed.

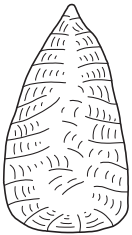
**puzzle jug:** a style of ceramic jug or pitcher from the 15th and 16th centuries AD in Europe, pierced in several places as a challenge for the user.

**pygmy cup:** a very small ceramic vessel in a range of shapes of Early Bronze Age burials in northwestern Europe, usually in association with an urn of some kind. [accessory vessels, incense cups]

**pyramidal core:** a single platform core that tapers away from the platform as a result of flake removals.

**pyxis:** in Greek antiquity, a cylindrical canister-like vessel with a flat shoulder and lid, used to hold trinkets. The name is more loosely applied to lidded boxes in Greek archaeology.

# Q



Quarry blank

**quadrantal:** an ancient square vessel used as a measure, the solid contents of which were exactly equal to an amphora.

**quarry blank:** a rather small or medium-sized, thin, leaf-shaped piece of flint that could be mistaken for a small knife, scraper, or triangular notchless arrowhead.

**quartz:** a hard mineral of many varieties that consists primarily of silica or silicon dioxide. Quartz has been important from the earliest times; crystals of it were known to the ancient Greeks as *krystallos*. It is typically colorless to white, with some types having minor impurities making it many different colors. Quartz has great economic importance. Many varieties are gemstones, including amethyst, citrine, smoky quartz, and rose quartz. Sandstone, composed mainly of quartz, is an important building stone. Large amounts of quartz sand are used in the manufacture of glass and porcelain and for foundry molds in metal casting. Quartz is the second most abundant mineral in the Earth's crust after feldspar.

**quartz crystal:** pure silicate rock crystal that is usually perfectly clear with six crystal surfaces. It may be used as a raw material for lithic tool manufacture.

**quartzite:** metamorphic rock based on sandstone and consisting mostly of quartz; it is dense hard rock that fractures conchoidally. Flaked tools were made of quartzite when there was no chert or flint, and it was important for heavy monumental building stone. Pebbles of it were made into hammerstones and hand axes. [sugar quartz]

**Quaternary:** a major geochronological subdivision that includes the Pleistocene (c. 1.8–2.45 million years bp) and Holocene (c. 10,000 BC) epochs and was marked by the appearance of near-humans and *Homo sapiens*. It is the second period of the Cenozoic geological era, following



the Tertiary, the youngest of the 11 periods in Earth history. These terms may also be applied to groups of deposits, which are described as the Quaternary “system” and the Pleistocene or Holocene “series.” The base of the Quaternary system is defined by basal deposits that overlie Pliocene deposits. The Quaternary was marked by repeated invasions of vast areas of mid-latitude North America and northwestern Eurasia by ice sheets, so the period is frequently referred to as the Great Ice Age.

**quenching:** in metalworking, rapid cooling, as by immersion in water, brine, or oil, of a metal object from the high temperature at which it has been shaped. The resulting metalwork is softer than when allowed to cool slowly; this is important for iron and steel as quenching produces a different structure, which is much harder and more brittle. Quenched steel can then be made less brittle by heating gently.

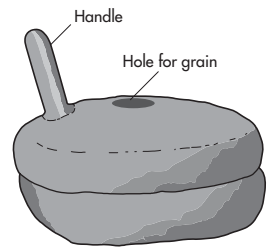
**quern:** large ancient grinding stone for grain or corn. A rough but hard stone was necessary to avoid grit in the flour. Its earliest (Neolithic before 5600 BC) form was the saddle quern, where material was ground with a handstone (or muller) on an immobile concave stone. It was later replaced by the rotary quern (by Roman times), where one stone is rotated on another by hand, animal, or wind power. Lava was widely traded for this purpose. [rotary quern, saddle quern, true quern]

**quillwork:** a type of decoration for clothing and possessions characteristic of certain North American Indian peoples, using softened and dyed porcupine quills to make elaborate applied designs.

**Quimbaya:** a late prehistoric culture of western Colombia, South America, dated AD 300–1600. It is known for its fine goldwork – flasks, helmets, jewelry, pins, etc. It represents some of the most advanced metallurgical techniques in the prehistoric New World. Pottery with negative painting and incision, and sometimes modeled, belongs to the final centuries before the Spanish conquest. The Coclé region in Panama was strongly influenced by the Quimbaya style. It is particularly known for its striking gold pieces set with precious stones, including emeralds, quartzes, jaspers, opals, agates, and green serpentes.

**quinquereme:** a Roman and Hellenistic warship which was larger and more powerful than its predecessor, the trireme. The quinquereme is a galley with five banks of oars.

**quipu:** a mnemonic device used by the Inca for keeping accounts and records. It consisted of a number of thick cords of various thicknesses and colors, on which numbers and other data were indicated by knots of different sizes and positions on the strings. Based on a decimal system, the color of the cord, as well as the size, configuration, and placement of each knot, had a special meaning. So complex was the system that a special class of workers, quipu-camayoq (quipucamayoc), kept



Rotary quern

the imperial records on quipus. The Incas did not have writing, but quipus could also be used as aids in recording historical or liturgical information accumulated by government. A modified form is still used by some Andean herdsman.

**quiver:** a holder for arrows.

**quoit bead:** a doughnut-shaped Early Bronze Age faience bead. [quoit-shaped bead]

**quoit brooch:** an ornate circular Anglo-Saxon brooch of c. early 5th century AD; a penannular brooch with a wide decorative plate with a hole in the middle.

**quoit-headed pin:** Middle Bronze Age pin typical of the Ornament Horizon in northwest Europe (British Taunton phase) comprising a thin shank with a point at one end and a large, rather ostentatious, ring cast onto the shank at the other.

# R

**rabotage:** the process of carefully scraping a horizontal surface to reveal features in it distinguished by color differences. It is particularly useful in sandy soils and gravels, revealing surprising detail.

**racloir:** a large scraper that has the retouched working edge along the long edge of the flake. The racloir is one of the most characteristic Mousterian implements and may have served as both knife and (side)scraper. [sidescraper]

**radial fissure:** tiny fracture lines that sometimes radiate away from the point of percussion around the bulb on the ventral surface of a lithic flake.

**radial plane:** the plane that radiates from the vertical axis of a pot's (radial or bilateral) symmetry or from the longitudinal axis of a tree or branch.

**radiate:** an imperial Roman coin on which the emperor is shown wearing a radiate or pointed solar crown, especially in the 3rd century AD.

**radiate brooch:** a bow brooch with a semicircular headplate decorated with a row of radiating knobs, found in Britain.

**random flaking:** removal of flakes with no regard to the resulting aesthetic alignment of flake scars.

**random sampling:** a technique in which a sample is drawn at random from a population, each member of it having an equal or other specified chance of inclusion. This sampling technique is based on a totally random selection of sample units to be investigated, with each unit having an equal chance of being selected.

**rapier:** a long, pointed, two-edged sword used for thrusting or cutting; an offensive weapon of bronze distinguished from the sword by the slenderness of its blade. It developed in the Middle Bronze Age by lengthening of the dagger, and was replaced by the slashing sword in the Late Bronze Age of central and northwest Europe. In its later form, it was a light, slender, sharp-pointed sword for thrusting only. [tuck]

**rasp:** a tool for smoothing objects.

**rattle:** any shaken instrument. Some are vessels containing pellets (maracas) or with external pellets (cabaza), some slide to and fro (sistrum), others clatter together (jingles) or whirl round cogs (ratchet), while some swing in the breeze.

**raw clay:** extremely fine particles, less than 0.002 mm across, forming constituent components of natural and anthropogenic sediments and deposits. The plastic raw material from which pottery, daub, bricks, and other forms of terra cotta are made, comprising mainly clay-sized particles of the principal clay minerals kaolinite, illite, and montmorillonite. Potting clay is a relatively abundant and widespread resource, although the quality and characteristics of different outcrops vary greatly, the best being highly sought-after.

**razor:** a sharp-edged cutting instrument used especially for shaving the face or other body parts; early razors were made by the Bronze Age.

**reamer:** a blacksmith's tool of tapered square-sectioned rod, used to expand a hole in a piece of metal.

**reaping hook:** an iron tool shaped like a long, slightly curved knife, usually with a single blade on the inner face of the curve, and used for harvesting.

**Recent:** the epoch of geological time in the Late Quaternary following the Pleistocene, referred to as the Holocene in several European countries. It is the present geological epoch, which began some 10,000 years ago (8300 BC). The Recent epoch is marked by rising temperatures throughout the world and the retreat of the ice sheets. During this epoch, agriculture became the common human subsistence practice. During the Recent epoch, *Homo sapiens* diversified his tool technology, organized his habitat more efficiently, and adapted his way of life. The Recent stage/series includes all deposits younger than the top of either the Wisconsinian stage of the Pleistocene series in North America and the Würm/Weichsel in Europe.

**reclamation process:** transition of cultural materials from the archaeological record back into the systemic context; archaeological excavation itself is reclamation.

**recycle:** to convert (waste) into reusable material.

**red ocher:** powdered iron ore placed in a burial area. [red ochre]

**red polished ware:** a fine red ware with red or orange slip that is highly burnished. It was made in southern Asia in the first three centuries AD. It is often thought to be an imitation of the Roman Arretine ware. The characteristic and most widely dispersed type of pottery of the Roman Empire was the red, polished Arretine ware. Most Inca pottery is also red polished ware.

**red slipped:** any pottery to which a slip, a thin layer of fine clay, is applied to pottery before firing by dipping the pot into a thick liquid mixture

of clay and water. Slip decorates the fabric, is often chosen to bake to a color such as red, yellow, or black, and makes the pot more water-tight by clogging the pores of the earthenware.

**red-figure:** a technique of decorating pottery in which the area of the figure is left empty (reserved) and the detail is painted in. The red of the clay contrasts with the black. It is an important phase in Greek vase painting, the inverse of black-figure style, and it started in Athens in the late 6th century BC and was popular to the 4th century BC. Other local schools also developed in the late 5th century, especially in southern Italy, and continued until c. 300 BC. It was also produced at Corinth. [red-figure ware; red-figured (adj.)]

**reduced ware:** a pottery fabric fired in a “reducing” atmosphere or one in which oxygen is denied, so that the iron in the fabric tends to form magnetite rather than hematite. [reduced (adj.)]

**reducing atmosphere:** a term for pottery firing conditions in which the supply of air is limited or the fuel is damp. The fuel does not totally burn under these circumstances and the gases contain carbon monoxide rather than oxygen. This generally results in black-surfaced pottery as opposed to the red produced in an oxidizing atmosphere, though shades of color may vary if the conditions during firing are not stable. Native Americans and Mesoamericans understood the effect of a reducing atmosphere, so that gray and black pots are found as well as the red and brown ones fired in an oxidizing flame. [reduction]

**reduction sequence:** the various stages that a stone tool goes through from the point at which it is first struck to the point at which it is worked for the last time.

**reductive technology:** a technology where an artisan acquires material (usually stone), and then shapes it by removing flakes or other fragments until it is fashioned into the finished product.

**redware:** earthenware pottery made of clay containing considerable iron oxide.

**reeding:** regular horizontal grooving on the flange of some types of mortaria and on the rim of some types of bowl; a small convex molding or one of several set close together to decorate a surface; also, decoration by means of reedings, the reverse of fluting.

**refitting:** the reassembling of stone debitage and cores to reconstruct ancient lithic technologies. It is any attempt to put stone tools and flakes back together again, which provides important information on the processes involved in the knapper’s craft. The refitting or conjoining of artifact or ecofact fragments, especially those of struck stone flakes, to recreate the original core, allows the definition of cumulative features, such as the lithic artifact and debitage scatters. The technique may allow reconstruction of ancient manufacture and use behavior. [conjoining, rejoining, retrofitting; to refit (v.)]

**reflex bow:** a small but powerful bow made such that, until strung, the ends of the bow project forwards rather than backwards. The simple bow, made from a single piece of wood, was known to Neolithic hunters; it is depicted in cave paintings by 30,000 BC. The first improvement was the reflex bow, a bow that was curved forward, or reflexively, near its center so that the string lay close against the grip before the bow was drawn. This increased the effective length of the draw since it began farther forward, close to the archer's left hand.

**refractory:** ceramic materials, usually high in alumina and silica, that can withstand high temperatures and are slow to melt.

**refuse:** any materials or remains left behind or discarded by humans. [garbage, trash]

**Regional Development period:** a term used in Ecuadorian archaeology for the period 500 BC to AD 500, when local adaptation led to the proliferation of regional cultures. The continuum of the Formative, Regional Development, and Integration periods has also been applied to neighboring parts of South and Central America. Some of the Ecuadorian coastal variants produced fine pottery, elaborate figurines, and many small art objects. There are hints of Asiatic influence in the cultures of Bahía and Jama-Coaque, which occupied the coastland from La Plata island to Cape Francisco. The period is characterized by changes in sociopolitical organization and art styles and technology, which gave rise to region-wide rather than purely local cultures.

**regional sequence:** a chronological series of phases within the limits of a region, arrived at by correlating (not combining or conflating) local sequences.

**regional system:** any system of time divisions such as those used in the Americas, based on major technological or social changes that produced regional cultures rather than local ones.

**regnal year:** a year reckoned from the date or anniversary of a monarch's accession to the throne, e.g., "in his eighth regnal year." At times, documents were dated by a king's regnal year. Before the time of Alexander the Great, the first regnal year was the new year following the king's accession.

**regular flaking:** removal of closely aligned flakes of similar lengths and widths which results in an aesthetically pleasing flake scar design.

**reject:** preforms that, because of some unsuitable flaking qualities of the stone or breakage, were discarded without being completed.

**rejuvenated core:** a core that has been given a new platform once it has become difficult or impossible to remove flakes or blades from the previous one.

**rejuvenated platform:** cores are rejuvenated by removing the platform to decrease the platform angle to allow blade production to continue.

The core is struck on the platform and blades removed to create a new platform and to increase the angle between the platform and the face of the core; a “core tablet” is struck off from the side of the core.

- rejuvenation:** restoring to an original or new state. [to rejuvenate (v.)]
- relative chronology:** a time scale developed by the law of superposition or artifact ordering. It is the establishment of a chronology in which occurrences can be placed in the correct sequence relative to each other or to some known succession of events. Stratigraphy is the study of the relative chronology of the Earth’s strata.
- relative dating:** dating methods where phases or objects can be put into a sequence relative to each other, but which are not tied to calendrically measured time. It is the sequencing of events or materials relative to another but without linkage to ages in years before present (bp) or calendar years. A relative date is a date which can be said to be earlier than, later than, or contemporary with an event but which (unlike an absolute date) cannot be measured in calendar years. When archaeologists say that event A occurred before or after event B, they have a relative date for A. Before the advent of chronometric dating techniques, all dating was relative except where links with historical events could be proved. Some of these techniques, mainly stratigraphy and seriation, are still useful where chronometric dates cannot be obtained. Theoretically, floating chronologies which cannot be tied to an absolute date (e.g., certain dendrochronological sequences) are relative chronologies even though the techniques are essentially chronometric.
- relative time:** temporal relationship between any two events or objects – either later than, earlier than, or contemporaneous with.
- relic:** any object surviving from an earlier culture, especially a valuable or symbolic object. In religion, a relic is the mortal remains of a saint and includes any object that has been in contact with the saint. Christianity was governed throughout the Middle Ages by the belief that spiritual virtue could be transmitted through relics of a person who in life was blessed with miraculous powers. Coffins and small objects such as combs, jewelry, and clothing were commonly sanctified and subsequently housed in beautiful reliquary caskets or shrines. Ecclesiastical centers with a collection of relics would be visited by large numbers of pilgrims, especially on saints’ days, when the objects were put on special display and sometimes paraded.
- relief:** any sculpture in which the figures project from a supporting background or flat surface. Reliefs are classified according to the height of the figures’ projection or detachment from the background. In a low relief, or bas-relief (basso-relievo), the design projects only slightly. In a high relief, or alto-relievo, the forms project at least half or more

of their natural circumference from the background. Middle-relief, or mezzo-relievo, falls roughly between the high and low forms. A variation of relief carving, found almost exclusively in ancient Egyptian sculpture, is sunken relief (also called incised relief), in which the carving is sunk below the level of the surrounding surface and is contained within a sharply incised contour line. Intaglio, likewise, is a sunken relief but is carved as a negative image like a mold instead of a positive (projecting) form. [raised bas-relief, relievo]

**relief-bank amphora:** a distinctive large storage jar made in the Rhineland in the 7th century AD, mainly at Badorf pottery centers. Each was strengthened with clay straps or bands and often used to carry Rhine wine to other countries. As a result, there are many amphorae sherds at sites in Britain, the Netherlands, and Scandinavia. The Badorf amphorae were probably made only until the 11th century, but similar forms were by then being produced in the new pottery centers at Andenne and Limburg.

**reliquary:** a portable shrine, box, or casket in which the relic(s) of a saint or other holy person were kept. A reliquary made to be worn around the neck was called an encolpium or phylacterium.

**Renaissance:** the period in European civilization immediately following the Middle Ages, conventionally held to have been characterized by a surge of interest in classical learning and values. It was the period of rebirth of European intellectual curiosity about the natural world and the role of humans in it, originating in the 15th century in Italy. Changing social, political, and economic conditions, as well as the rediscovery of classical texts, were basic to this rebirth.

**repoussé:** a jewelry-making and metalworking technique whereby a design is raised or embossed by hammering or punching out the metal from behind. Repoussé is usually done on bronze, but also on gold and silver. It consists of hammering up the design from the back of the object using round-edged punches. The surface of the raised design can then be decorated. Further work on the design can be done using chisels and punches on the front of the sheet – a technique known as chasing.

**reserve head:** a type of funerary sculpture of the Egyptian Old Kingdom, found mainly in tombs at Giza, and considered by some to be true portraits of the deceased. They consist of a limestone human head, usually with excised (or unsculpted) ears and enigmatic lines carved around the neck and down the back of the cranium. [portrait head]

**residual clay:** a clay weathered in place, remaining in association with its parent rock; a primary clay as distinguished from a secondary clay.

**residue:** preserved foreign material, generally on an artifact such as pottery or basketry.



**resist:** a material that a potter applies to the surface of a vessel to prevent the adhesion of slip, paint, or glaze, so that the uncoated regions will contrast with the coated ones.

**reticulated work:** in masonry, it is a type of facing used on ancient Roman concrete or mortared rubblework walls. It appeared during the late Roman Republic and succeeded the earliest type of facing, which was an irregular patchwork called *opus incertum*. Reticulated work looks like a diagonal checkerboard with its square stones set lozenge fashion, separated by relatively fine joints. In porcelain production, it is a technique in which the outer side is entirely cut out in geometric patterns – such as honeycomb or intercrossed circles – and superimposed onto a second vase of similar or of cylindrical form. [*opus reticulatum*, reticulated porcelain]

**retort:** a glass vessel with a long tapering neck that is bent down; it is used for distillation.

**retouch:** the working of a primary flint flake after its preliminary roughing-out, usually by the removal of small fragments, to form a functional tool; to thin, sharpen, straighten, or otherwise refine an existing stone tool for further use. In the case of a core tool, such as a hand ax, retouch may consist of roughly trimming the edge by striking with a hammerstone, but on smaller, finer flake or blade tools it is usually carried out by pressure flaking. It is done two ways, either by blows that knock small flakes off an edge (percussion retouch) or by pressure to force the flakes off (pressure retouch). The different types of retouch are also described as backing or blunting retouch, and invasive or normal retouch. Invasive retouch can be steep or shallow, depending mainly on the kind of edge being retouched; this retouch can also be scaly in character. Backing is most often applied to blades and may have been done to blunt the back or to bring its end to a stout point. Evidence suggests that it may have been done to regularize the blade edge to facilitate fixing by resin “mastic” to a bone or wood shaft. Such a strip of mastic was found in Lascaux, France. Notching or toothing is another form of retouch, and the removal of spalls or slivers as in the burin technique could be regarded as a further form of retouch or modification. Retouch is one of the most obvious features distinguishing a manmade from a naturally struck flint. [secondary flaking, secondary working]

**retouched flake:** a flake that has had small flakes removed to blunt, sharpen, refine the outline, or prepare the edge of the tool.

**re-use process:** transformation of materials through successive states within the behavioral system. Potsherds, for example, are sometimes ground up to be used as temper in making new vessels.

**reverse:** the back of a medal or coin.

**reverse face:** on a fluted projectile, it is the face from which the secondary flute was removed.

**reworking:** flaking applied to a broken or dulled tool so as to reclaim it for additional use. Reworking was the characteristic means by which an implement was resharpened. Alternate and bifacial beveling, serration, and other diagnostic features of blade renewal are very important to age determination, as well as for the purpose of assembling attribute clusters for typological analysis. Typically, reworked blades or points have a different outline than their former pristine outline. The reworking of lithic objects was employed by early humans due to the general lack of high-quality lithic materials. [lateral rejuvenation]

**Rhenish ware:** pottery imported into Britain from Gaul and the Rhineland during the late 2nd century AD onward, having a thin red paste and a black metallic color coat, sometimes decorated with scrolls, indented rouletting, or words in white paint.

**rhyolite:** a fine-grained, light-colored volcanic rock, chemically identical to obsidian. Its color may range from white, through gray, and yellow to reddish-pink. It was sometimes used as a raw material for lithic tools.

**rhyton:** a Greek vessel of earthenware, metal, or stone, and sometimes in the form of an animal head. It was a deep vessel with a single handle intended for the pouring of libations or liquid offerings to gods, spirits of the dead, etc. The mouth at the upper end is often balanced by a hole at the lower end. It is presumed that the covering of this aperture by the celebrant would control the pouring of the libation until the right moment in the ceremony. Rhytons were often made of precious materials and of elaborate form. They are typical of the Minoans, Mycenaean, and Classical Greeks, and of the Achaemenid Persians. It is technically a ritual vessel, found from the Bronze Age onward.

**ribbing:** a rib-like structure or pattern.

**ribbon torc:** a gold neck ornament of the Middle Bronze Age c. 1200–900 BC of northwestern Europe. It is a cirlet of twisted metal with hooks and balls at the terminals to fasten the ends together.

**ridge:** a raised, angular band, line, or strip about the neck of a vessel.

**ridge tile:** stone or ceramic tiles set along the ridgeline of a roof, usually shaped to sit over the ridge itself to make a watertight seal.

**riemchen:** a rectangular, square-sectioned brick used in the late Uruk period of Mesopotamia. It was used to build bonded walls and make patterns on the facades of public buildings. [Riemchen]

**Rillaton:** a gold cup found in a Wessex culture grave in Cornwall, southwest England, from the Bronze Age. It is one of the finest pieces of Wessex culture craftsmanship found – made of sheet gold, strengthened with corrugations, and with an S-shaped profile and a single handle.

The burial was a stone cist beneath a burial mound. The cup is dated to c. 1650–1400 BC. [Rillaton cup]

**rilling:** the nearly horizontal, spiral ridges or striations around the interior or exterior surface of a vessel thrown on a wheel, formed by finger pressure in “lifting” the clay. [throwing marks]

**rim:** portion of a vessel closest to its orifice and usually near the top of the vessel, between the lip or margin and the side wall or neck of a vessel; also, a sherd from this vessel part. Types of rim include simple or plain, hooked, upright, everted, bead, flange, and grooved cornice.

**rim and lip stance:** shape of the rim and lip of a ceramic vessel relative to the rest of the object.

**rim edge treatment:** treatment of the rim edge that includes angular flattening, horizontal flattening, horizontal and vertical flattening, pushing, squeezing, and pinching.

**rim sherd:** a fragment of the rim of a pottery artifact. [rim shard]

**rim stance:** this can be everted, flared, horizontal, incurving, inverted, pendant, T-shaped, vertical, or thickened.

**rind:** deeply patinated or weathered surface of a nodule or other piece of stone, flint, chert, or other material.

**ring:** a small circular band, typically of precious metal and often set with one or more gemstones, worn on a finger as an ornament or a token of marriage, engagement, or authority.

**ring building:** a type of coiling in which individual coils or annular rings are placed as separate “courses” to build up a vessel.

**ring neck:** a flagon neck of a series of superimposed horizontal rings.

**ring-headed pin:** slender shaft made of bronze or iron with a point at one end and the other end bent to form a loop or ring, from the Middle and Later Iron Age in the British Isles.

**Rinyo-Clacton:** name formerly used for a Late Neolithic pottery style of Britain now known as Grooved ware. It was so-called after two widely separated findspots (Clacton in Essex and Rinyo in the Orkney Islands). [Grooved ware]

**ripple:** a wavelike undulation visible on flakes that results from the transmission of a shockwave through glass or chert.

**ripple flaking:** a style of secondary flaking of flint and stone tools in which a series of small elongated flakes are removed from the surface of the tool being made so that each new flake scar cuts into the edge of the last one, producing a corrugated or rippled surface.

**rippled decoration:** a technique of pottery burnish in which the whole surface is worked into ripples, in extreme examples it approaches fluting. [ripple burnishing]

**Riss glaciation:** the third major glaciation of the Pleistocene in Alpine Europe and the penultimate Alpine glacial advance. It started 250,000

years ago and lasted over 100,000 years. The Riss, during which mountain glaciers descended from the highlands, followed the Mindel-Riss interglacial stage and preceded the Riss-Würm interglacial stage, both periods of relatively moderate climatic conditions. The Riss is correlated with the Gipping glacial stage of Great Britain and the Saale glacial stage of northern Europe. Like the Saale, the Riss glacial stage included two major phases of ice advance separated by a period of more moderate conditions. It is roughly contemporaneous with the Illinoian glacial stage of North America.

**Riss-Würm interglacial stage:** a major division of the Pleistocene in Alpine Europe and a period of relatively moderate climatic conditions, that followed the Riss glacial stage and preceded the Würm glacial stage – both periods of deteriorating conditions. The Riss-Würm is correlated with the Eemian interglacial stage of northern Europe and the Ipswichian interglacial stage of Great Britain. It is broadly equivalent to the Sangamon interglacial stage of North America.

**ritual vessel:** any object made and intended for the worship of ancestors, who are often named in inscriptions on the object, and usually made of bronze. Many were specially cast to commemorate important events in the lives of their possessors. The vessels were also meant to serve as heirlooms. Although ritual vessels are found in many parts of the ancient world (e.g., rhytons or libation vessels of the Greek Bronze Age), they were particularly important in China – where they were used for sacrifices of food and wine offered to ancestors. The bronze ritual vessel is the characteristic artifact of the Chinese civilization. Many are found in the tombs of Shang and Zhou/Chou dynasties, made almost exclusively by casting. Beginning in the Anyang period (c. 1300–1030 BC), vessels were often cast with inscriptions dedicating them to the service of deceased ancestors; hence the sacrificial offerings of wine and food presented in the vessels were connected with the ancestral cult known also from the Anyang oracle bone inscriptions. The practice of providing imposing vessels as mortuary gifts, and perhaps even the ancestral cult itself, originated in the east-coast Neolithic tradition, where some of the Shang vessel shapes have precursors in pottery and where important Shang cultural traits are foreshadowed as early as the 4th millennium BC. The vessel types are known today either by names given to them in Shang or Zhou/Chou times that can be identified in contemporary inscriptions, such as the *li*, *ting*, and *hsien*, or by names, such as *yu*, *chia*, and *kuang*, given them by later Chinese scholars and antiquarians. The vessels may be grouped according to their presumed function in sacrificial rites.

**rivet:** a small metal rod used to attach a metal blade to its haft (such as the handle of a bronze dagger) or to fasten two sheets of metal together. Each end of the rivet is burred over (spread and flattened) by hammer-

ing after it has been passed through the two elements to be joined. Riveting is also a method of making joints in metalwork. In antiquity, riveting was used to make such artifacts as helmets or *situlae*.

**rock:** an aggregate of one or more minerals that can be defined by both physical properties and mineral content. The three forms are: (1) igneous, rock that has cooled from a molten state; (2) sedimentary, rock that has formed through the accretion of sediments; and (3) metamorphic, rock formed from pre-existing rocks subjected to extreme heat, pressure, or chemical change.

**rock art:** painting and engraving on rock or cave surfaces, done for decoration, the depiction of narratives, or for religious purposes. There are petroglyphs (carvings on rock faces), engravings (incisions), and pictographs (paintings on rock surfaces). A great deal of rock art occurs throughout the African continent. In contrast to the painted caves of Europe, the African art takes the form either of paintings in rock shelters (not in caves) or engravings on open rock outcrops or boulders.

**rocker pattern:** a type of pottery decoration in which a straight or curved edge is moved across the soft clay by pivoting on alternate corners, the result being a zigzag of curved lines. The technique was discovered and employed in a number of different times and places – Neolithic Impressed ware of the central Mediterranean, the Iron Age of the Sudan and of Manchuria, in North America (Hopewell), and widely in the Pre-Classic cultures of Middle and South America.

**rod:** term applied to a type of Mesolithic microlith found especially in northwestern Europe. Rods are rounded forms of microliths retouched along the edges.

**rolled:** the battered, abraded condition of flint or stone tools that have been moved by water or glacial action and have then been incorporated into terrace gravels or glacial tills.

**roller-stamping:** a pottery technique in which a cylinder-shaped roller with an incised pattern is rolled over the surface of the vessel while it is leather-hard. A repeating pattern of the design on the roller is produced in “negative.” [rouletting (adj.)]

**Roman period:** period of Roman political and military control, generally between 200 BC and AD 400, but varying for different regions depending on the date of conquest.

**Romano-Saxon ware:** wheelmade Roman pottery in coarse or color-coated fabrics with stamped or bossed decoration, as well as Saxon pottery imitating Roman forms, of eastern England; the former around the late 3rd and 4th centuries.

**roof furniture:** any decorative and functional features of a roof such as finials on gables, antefixes for hollow tiles at the eaves, chimney pots, *louvres*, or smoke turrets.

- roof slate:** a thin rectangular piece of stone of a type that splits into a thin flat piece, used as a roofing material.
- roofing nail:** a nail with a large, often galvanized, head, used to hold composition roofings.
- rope:** a length of cord usually made from twisting fibers together which increases the strength of the rope.
- rosary:** a string of beads used to aid the memory in reciting a set of devotions.
- Rosegate series point:** a bifacially worked chipped stone projectile point of Archaic people in the Great Basin of North America, c. AD 700–1300. This point had a triangular outline, small corner notches, and a basal tang. [East Gate, Rose Spring]
- Rosetta Stone:** a basalt stela discovered at Rosetta, at the western mouth of the Nile, during Napoleon's occupation of Egypt, in 1799. This trilingual inscription on stone, a decree of King Ptolemy V (196 BC), was carved in Greek, Egyptian demotic, and Egyptian hieroglyphic. It provided Jean-François Champollion with the key to the decipherment of the ancient Egyptian hieroglyphs, thus paving the way to modern Egyptology. The Rosetta Stone is now in the British Museum.
- rosso antico:** a salt-glazed red stoneware (red porcelain) produced by Josiah Wedgwood in the 18th century.
- rostrum-carinate:** a term for an eolith shaped like a bird's beak.
- rotary quern:** a small handmill used to grind grain into flour, consisting of two circular stones, dating from the Roman times. Grain was poured into a central hole in the top stone, which was then turned with a wooden handle. The grain would get crushed between the two stones as the upper stone was turned, and emerge from between the two as a coarse flour.
- roughcast ware:** a type of pottery decoration created by small particles of dried clay or gritty material being dusted over the surface of a vessel, often under a slip coating.
- roughout:** an early stage in the making of bifacially chipped stone tools. Roughouts were often manufactured in quarry areas and later reworked into finished artifacts elsewhere.
- rouletting:** a technique used to decorate pottery. In Greek pottery making, it began in the early 4th century BC. A strip of metal was applied to the pot as it was turned on the wheel, leaving a band of even decoration on the inside; this is more accurately called chattering. Alternatively, a cogged wheel was rotated over the soft clay of a pot to leave a series of impressed dashes at right angles. This method was used especially on Roman pottery and is found on the exterior of vessels, particularly on the rim. In India, the technique was used on pottery of rougher fabric and on forms derived from Northern Black

Polished wares, possibly beginning in the late 1st millennium BC. The pre-Columbian civilization of the Chavín also used rouletting on its pottery. [chattering, roller-stamping, roulette]

**rounded:** a term used to describe a basal edge that has a rounded stem outline; also used to describe a point which is not of a sharp or barb type.

**roundel:** a circular panel containing a design, as on a mosaic.

**rounding:** in pottery, rounding terms used are: angular “convex shape, sharp corners;” subangular “convex shape, rounded-off corners;” rounded “convex shape, no corners;” irregular “convex/concave shape;” or flat “two-dimensional shape.”

**rove:** a small metal ring through which a nail or rivet is passed and fixed.

**rune:** an angular script for carving on wood or stone developed by Germanic peoples (northern Germany, Scandinavia) around the 4th century AD through contact with Mediterranean alphabets. The early alphabet, with 24 letters divided into three groups of eight, was mainly used for short commemorative or magic protective formulae. A simplified alphabet of 16 characters was developed in Scandinavia from the 9th century, and this was used for more elaborate inscriptions, continuing for a long period in the Middle Ages. The etymology of the word means “secret,” “mystery,” “counsel,” and “charm.” It is first recorded in Denmark and Schleswig and spread widely across northern Europe. The voyages of the Vikings later carried it as far as Russia and Iceland, where it remained in use into the Middle Ages. There are no substantiated runic inscriptions from the New World. A rune stone is a freestanding memorial stone with an inscription in runes. Runes are also associated with ceremonial artifacts, but can also be seen as graffiti.

**rune stone:** a freestanding memorial stone with an inscription in runes, developed by Germanic peoples around the 4th century AD. Rune stones from the Viking period are found throughout Scandinavia. [rune-stone, runestone]

**Rustic ware:** a pottery type made principally in northern Britain using a technique still occasionally used on flower pots today. Barbotine is applied to the ware and a finger is put on the wet clay and lifted off, so the clay has finger forms in ridges and then a point. The term also refers to pottery made by Frenchman Bernard Palissy, who from about 1548 produced large earthenware dishes decorated with naturalistic pictures in high relief. The wares were colored with lead glazes and Rustic ware was imitated by potters in France, Portugal, and England. [rustic ware, rusticated ware]

**rustication:** in pottery decoration, the roughening of the surface of a pot which may or may not have an applied slip. The roughening may be

achieved using fingers, fingernails, twigs, etc., and though it may be pure decoration, in most cases it is probably a device to prevent a greasy pot slipping through the fingers. On some pieces, a grit such as flint may actually be added to the roughened clay to give additional grip. [rusticated]

**Ruthwell Cross:** a cross with an important English-language runic inscription, from the Dumfries region of Scotland. The cross, an example of Northumbrian art of the early 8th century, stands more than 5.5 m (18 feet) high. It is carved with Gospel scenes and twining vines, as well as 18 verses of *The Dream of the Rood*. The inscription has linguistic significance because it contains six runic symbols indicating guttural sounds, whereas the Scandinavians employed only one or two. Much of the inscription is also copied in Latin. It is now preserved in the interior of the parish church at Ruthwell in Northumberland, northeast England.



# S

**Saale:** a division of Pleistocene deposits and time in northern Europe which followed the Holstein interglacial stage and preceded the Eemian interglacial stage. It was the penultimate cold stage in northern Europe, c. 200,000–125,000 BP. The extensive and complex Saale deposits are correlated with the Wolstonian (or Gipping) glacial stage of Britain and the Riss glacial stage of the European Alpine region. The Saale is roughly contemporaneous with the Illinoian glacial stage of North America. The Saale has three complex phases: the Drente, Treene, and Warthe substages. The Drente and Warthe represent periods of glacial advance, or maxima, whereas the Treene represents an interstadial period of glacial retreat between the early Drente and the late Warthe. In the region of central Europe, the Saale is represented by three glacial maxima separated by two periods, or interstadials, of moderating climatic conditions. One of the main features is a complex series of end moraines, demarcating the maximum extent of ice sheets. These ice sheets flowed out from centers in Scandinavia, across the Baltic Sea and into northern Europe and Russia. The end moraines are split into two sets: the Drenthe moraines (or Dnieper) and the Warthe moraines (Moscow in the USSR). These formations are complex and each seems to represent several “pulses” of the ice-sheet edge. The Saale glacial stage was named for the German river, a tributary of the Elbe.

**saber:** a curved sword designed to cut with, and used by the cavalry. [sabre]

**saddle quern:** ancient device for milling by pounding, using a round stone rolled or rubbed on a flat stone bed. It is the earliest known example, along with the mortar and pestle, of milling equipment and was invented in Neolithic times (before 5600 BC). It consisted of a large, slightly concave, lower stone and a smaller upper stone. Grain spread on the

surface of the lower stone was ground by being rubbed over with the upper stone.

**saex:** a single-edged knife or cleaver, found in Saxon and Anglo-Saxon graves in the late 6th century AD onward.

**saggar:** a container made of refractory clay that was used to protect clay articles and glazes from flames and gases during firing. [sagger, seggar]

**Saintonge ware:** major pottery industry in the region of Saintes in western France from the 13th century until recent times. The best known of these wares are the tall jugs with polychrome glazed decoration which appear to have been traded with western French wine to the English. The jugs exported were only one of the variety of wares made at centers like La Chapelle des Pots, where kilns and workshops have been excavated. Saintonge was originally the territory inhabited by the Santones, a Gallic tribe.

**Saladoid series:** a group of related pottery styles found along the Orinoco River in Venezuela and named after the type site at Saladero. Saladoid pottery is thin and fine, painted with white or red designs, especially white-on-red. The utilitarian wares include flat plates or griddles for making manioc bread. The everted bell, often with tabular lugs, is the favored vessel form. The Saladoid tradition may have begun before 2000 BC and lasted in some areas up to c. AD 1000. Some Saladoid groups migrated to Trinidad, the Virgin Islands, and the Antilles during the early centuries AD, and this movement may represent the Arawak colonization of the West Indies. [Salader, Saladero]

**Salinar:** a pottery style that followed Cupisnique in the Chicama and Virú Valleys of north Peru, c. 200 BC to AD 200. It is distinguished by modeled vessels, pots with stirrup spouts, and whistling jars. Some vessels have simple white patterns over a red slip. The transition from Cupisnique is evidenced in a shift from reduced-fired to oxidized-fired ceramics and the introduction of new forms and decorative techniques. Salinar introduced the handle-and-spout vessel, although the Chavinoid stirrup-spout form continued. The characteristic decoration was broad, white, painted bands and dots, sometimes outlined with incision. Salinar gave way to the Gallinazo and then Mochica styles.

**salt-glazed stoneware:** stoneware affected by the addition of salt to the kiln gases during firing. The bodies of the vessels are fluxed with the silicas to form a soda-glass glaze. A brown-colored surface can be created by coating the vessels in a thin iron wash before firing.

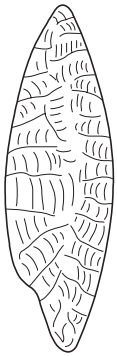
**Samian ware:** a distinctive Roman pottery produced mainly in south and central Gaul and the Moselle Valley in the first century BC and first three centuries AD; later it was made in Britain (Colchester). It was copied from Italian Arretine ware and was itself widely imitated. It is a red ware with a bright glossy surface, plain or elaborately decorated

by means of molds. The decorations, shape, and fabric, as well as the potter's stamp, all help in dating and tracing its origin. The shapes come from metal prototypes. The forms, decorations, and stamps have allowed a detailed chronology to be established, which has provided a valuable means of dating the other archaeological material found with them. [Roman Samian ware, terra sigillata, terra sigillata ware]

**sand:** a term describing the size of sediment or soil particles 0.06–2 mm in diameter (British Standard 1377). The term has no implications of color, organic content, or any property other than particle size or texture.

**sand glass:** a reversible device for measuring time by the transfer of sand from an upper to lower glass bulb. [hourglass]

**Sandia point:** type site for a tanged and unfluted projectile point in New Mexico's Sandia Mountains. This cave has yielded artifacts of the so-called "Sandia Man" (25,000 BC). In Pueblo mythology the Sandias were sacred, marking the southern boundary of the Tiwa-speaking Indian territory. Sandia points are stratified below Folsom points but the radiocarbon dates of before 20,000 BC are often discounted, the true date probably falling in the range 12,000–8000 BC, overlapping with the Clovis. Associated fauna of bison, mammoth, and mastodon suggest contemporaneity with the Llano complex. Sandia type I has a lanceolate blade without fluting and without the concave base of Clovis/Folsom and a shoulder to one side of the base of the blade, suggesting knife use. Sandia type II has a rounded base. [Sandia projectile point]



Type I



Type II



Type III

Sandia points

**sandshaker:** a container for sand which was used to stop ink from spreading.

**sandstone:** sedimentary rock consisting of sand or quartz grains cemented together, typically red, yellow, or brown in color.

- sandwich glass:** any of various forms of glassware manufactured at Sandwich, Massachusetts, from 1825 to c. 1890.
- Sangamonian:** as an “age,” the Sangamon is a major North American geochronological subdivision of the Pleistocene epoch, from c. 125,000 to 75,000 bp. The Sangamon comprises a range of sediments, including organic sediment, but is represented mainly by a warm climate palaeosol, the Sangamon geosol, which overlies Illinoian-age tills and is covered by Wisconsinian-age loess and tills. It appears to represent one single interglacial. As a “stage,” it is a chronostratigraphic subdivision of the Pleistocene.
- sanukite:** type of andesite produced by now-extinct volcanoes in the Inland Sea area of Japan. It was used extensively during the Paleolithic and postglacial periods (Jomon, Yayoi) for stone tools.
- sarcophagus:** a coffin or sepulchral chest of stone, wood, lead, or terra cotta, typically carved or inscribed and intended to be exposed to view. In Egypt it was the outermost container, with one or more wooden coffins and a mummy case within. Greek for “flesh-eater” or “flesh swallowing,” it is also the term for a kind of limestone reputed to consume the flesh of dead bodies. In the Classical world, the term was used for a clay or marble container holding a corpse. Many were elaborately painted and, in the Roman period, elaborately carved.
- Sarka style:** a variant of the Linear pottery of western Bohemia, c. 3900 BC, parallel to the Zeliezovce in Slovakia and southern Poland. The vessels were painted in black spirals on buff before firing.
- Satsumon:** a type of Haji-like, incised-motif pottery made in early Hokkaido and northern Honshu, Japan, from around the 4th to 14th centuries AD; also the culture characterized by this pottery. Satsumon houses were very much like late Kofun houses; iron tools were used and cloth was woven. The Satsumon culture is seen as the transformation of a Jomon-type culture, which continued late in northern Japan, as the result of contacts with Haji-using people to the south. The people are thought to be the ancestors of the historic Ainu.
- sauceboat:** a drinking vessel of clay or metal made on mainland Greece or in the Cyclades in the mid to late 3rd millennium BC.
- saucer brooch:** a circular concave brooch, often decorated in chip-carving, of the north German lowlands and in England, c. 5th and 6th centuries AD.
- Savernake ware:** a Roman pottery made from the time of the Roman conquest through the 2nd century AD, typically light gray, flint-tempered, and with clay pellets and grog visible in the fabric of jars, bowls, flagons, butt beakers, and platters.
- Saxo-Norman pottery:** British pottery made c. AD 850 through to 1150, including Thetford ware, Stamford ware, and Winchester ware.

**scabbard:** a sheath for a sword or the like.

**scale armor:** a form of armor made up of overlapping squares of protective material.

**scaphium:** a Greek vessel, small in size and in the form of a boat (scapha), which was used as a drinking cup and was also sacrificial.

**scapula saw:** an artifact made from the shoulder blade of a bighorn sheep or antelope.

**scapula shovel:** a tool made from the shoulder blade of a large mammal such as a cow, ox, or horse, especially created and used by Neolithic communities in northern Europe.

**scar:** in stone tools, this is the negative impression left after the removal of a flake.

**scar ridges:** the boundaries of individual stone flake scars.

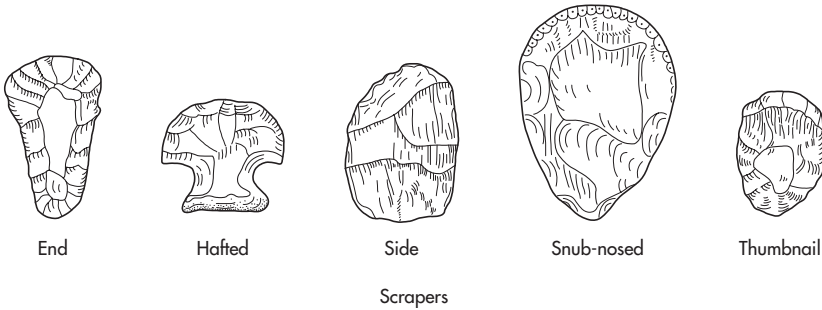
**scarab:** an image or representation of a dung beetle (*Scarabaeus sacer*), which was very common in ancient Egypt, especially on the Egyptian stamp seal. It was in use from the Middle Kingdom (1938 to c. 1600 BC). The dung beetle was held sacred by the ancient Egyptians as a symbol of the motive power of the sun, which was equated with the beetle's ball of dung. It figured frequently in jewelry and other art forms but is best known as the standard form of Egyptian stamp seals. These are made of stone or faience in the shape of a beetle resting on a flat base, the underside of which is carved with a distinguishing inscription in hieroglyphs and the name and titles of the owner. The back of the seal was the dung beetle form. Scarabs were perforated lengthwise and were worn around the neck or as a finger ring, serving as an amulet as well as seal.

**Scarlet ware:** a type of red-and-black painted pottery used in the early 3rd millennium BC in the plains of eastern Mesopotamia, of the Early Dynastic period. It was derived from Jemdet Nasr ware. Geometric designs in black on buff, separated by large areas of red paint, became progressively more elaborate, in later stages including animal and human figures in red outlined in black. There are hints of connections with the wares of Baluchistan, especially in the elongated bulls.

**sceatta:** a small silver coin minted when the Anglo-Saxons reintroduced currency into England in the 7th century AD. The earliest identifiable ones are of Eorpwald of East Anglia (625–627) and Penda of Mercia (625–654). The penny may owe its name to the latter. With this change of name it remained the standard coin from the reforms of Offa of Mercia (757–796) until the 12th century. Sceattas are distinctive because they were made from pellets that were hammered between two dies, not minted from a flattened piece of metal (as after c. 790 in England). The kings of Kent imitated these silver coins in about 690, and issued them with a variety of designs which are collectively known as the

- primary series of sceattas. The primary series is virtually confined to Kent and ended about 720. The secondary series includes a wider variety of designs which occur over a larger area. [sceat]
- scepter:** in antiquity, a long staff similar to the shaft of a spear, carried to lean on when walking. It eventually became the truncheon, a weapon. Ornament was then added to the upper end of the staff, as the scepter became a staff or baton borne by a sovereign as an emblem of authority. [sceptre]
- schist:** a coarse-grained metamorphic rock that consists of layers of different minerals and can be split into thin irregular plates.
- schist hones:** whetstones made of mica schist from the distinctive Eisdorg rocks of southern Norway. They were widely distributed on sites around the North Sea throughout the medieval period. A 9th-century boat carrying these hones was found near Kaupang.
- scissors:** an instrument used for cutting cloth and paper, consisting of two crossing blades pivoted in the middle and operated by the thumb and fingers inserted in rings at each end.
- scorper:** a small, steel, metalworking tool with a broad sharp edge used for removing the background from designs on metalwork to allow the pattern to stand out. The tool could also be moved forward or backward through the metal on alternate corners – thus producing a zigzag or tremolo line. It is likely that scorpers had to be made of iron or steel to work on bronze, and therefore they may belong to later stages in the development of metalworking than tracers. In ancient minting, engraving of the details was carried out by the use of scorpers. In wood engraving, scorpers were used for cutting away large spaces after outlining and engraving, so as to leave only the drawing in relief.
- scramasax:** a single-edged knife often accompanying male Anglo-Saxon burials; it was a cross between an iron hacking sword and a dagger, with an angled back. It apparently served as a general purpose knife or dagger. They commonly occur in Migration period and Anglo-Saxon contexts until about the 10th century. They tended to become increasingly elaborate: many were finely inlaid with a variety of metals and some had very distinctive pommels.
- scrape:** to move a hard or sharp edge across (a surface), especially to make something smooth; to apply (a hard or sharp edge).
- scraper:** a retouched flake tool with a thick working edge; a flake tool that has been sharpened on one edge and left blunt on other edges to allow grasping, probably used to scrape (dress) animal hides. It is called a side scraper (racloir) or end scraper (grattoir) depending on the sharpened edge – side scrapers utilize the long side and end scrapers have the scraping facet on one end. Thumbnail scrapers are very small; some cultures used scrapers as big as a fist. Scrapers were also used in wood-

working and in shaping bone or ivory. Other types were snub-nosed, round, or horseshoe. Side scrapers are typical of the Middle Paleolithic, while end scrapers are typical of the later Paleolithic. [end scraper, end-scraper, scraping tool, side scraper, sidescraper]



**scraping:** 1. Thinning the walls of a pottery vessel with a tool, such as a mollusk shell or lithic flake, held almost perpendicular to the surface when the clay was nearly leather-hard. 2. Removing fat from the interior of an animal hide using a stone tool.

**scratch hardness:** a measure of the relative hardness of pottery, obtained by comparison with minerals of known hardness (Mohs scale): a mineral harder than the pottery will scratch it, but it will be unmarked by a mineral that is less hard.

**scratched decoration:** pottery decoration in which lines are drawn with a hard point, probably of flint, on a burnished surface after the pot has been baked. A thin but characteristically ragged line results, providing for the inlay of ocher or plaster. The technique was used widely, notably in the Neolithic of Italy (Matera and Lagozza) and France (Chassey).

**screw:** a spirally grooved object used to join two or more materials together.

**screw neck:** a flagon or bottle with a continuous spiral groove around the top for a stopper or seal.

**scriber:** a sharp-pointed metalworking tool used for outlining designs on metalwork prior to chasing, engraving, or repoussé work. Occasionally traces of this preliminary work can be seen where subsequent tooling has not completely obliterated it.

**scroll:** a roll of paper or parchment, especially with writing on it.

**sculpture:** an art form including all carved work in wood, ivory, stone, marble, metal, or other material and those works formed in a softer material not requiring carving, such as wax or clay. It includes statuary, carved ornaments, glyptics, incised gems, and cameos. The most ancient specimens are carved of the hardest stones (basalt, granite, porphyry) and done before the introduction of steel tools. [plastic art]

**seal:** a device for impressing characteristic marks into a soft surface, such as wet clay or wax, to indicate ownership or authenticity. Seals were made of bone, ivory, stone, or wood and had an intaglio design and were in the form of stamps or cylinder seals. Stamps can have a very wide range of shapes, and give single impressions. Cylinder seals, characteristic of ancient Mesopotamia, are rolled across the surface to yield a frieze of repeat designs. Their social and linguistic significance is great. They were fundamental in the development of writing systems and were a status symbol of authority and sometimes accorded talismanic properties. The use of seals and writing on clay tablets appeared together in Mesopotamia, towards the end of the 4th millennium BC.

**seal matrix:** an object used to make impressions in wax as seals.

**sealing roofing nail:** a nail with a lead or plastic washer under the head to provide a watertight seal, used on metal roofing.

**sealing wax:** wax used to seal letters, envelopes, documents, etc.

**Second Intermediate Period:** the time (1630–1540 BC) when groups of Asiatic people appear to have migrated into the Egyptian delta and established settlements. The Second Intermediate Period began with the establishment of the 15th dynasty, called the Hyksos (c. 1630–1523 BC), with its capital at Avaris (Tell ad-Dab'a), and ended with the 17th dynasty (c. 1630–1540 BC), ruling from Thebes. The Second Intermediate Period was the consequence of political fragmentation and immigration and the time may have been somewhat impoverished.

**secondary context:** context of an archaeological find that has been disturbed by subsequent human activity or natural phenomena. The provenience, association, and matrix of such archaeological data have been wholly or partially altered by transformational processes after their original deposition.

**secondary flake:** a stone flake removed from a larger flake, as in the process of refining for a new use; a flake possessing some cortex on its dorsal aspect. The flakes are removed from an existing stone tool in order to thin, sharpen, blunt, or otherwise modify it for a specific use. Secondary flaking is the trimming which gives a chipped stone tool its final shape after the primary flaking has produced a blank (blade, flake, or core) of roughly the required form. [partially cortical flake, reduction flake, retouch, secondary flaking, secondary retouch]

**secondary flaking:** following the primary flaking, this flaking technique was applied to remove medium-sized pressure or percussion flakes in shaping the blade and basal edges, forming notches or producing serrations.

**secondary forming techniques:** in ceramics manufacture, techniques used to complete or refine the shape of a vessel after primary forming either the roughed-out vessel shape or the vessel's components.



- secondary prehistory:** time when literate peoples came in contact with, and wrote about, nonliterate peoples.
- secondary refuse:** unwanted objects or materials that were removed from the site at which they were used and were disposed of at a different location. This often included artifacts, bone, shell, and other habitation debris, discarded away from the immediate area of use.
- secondary retouch:** finishing or resharpening flaking done after the basic shape of a lithic tool was completed.
- sedimentary rock:** rock that is the result of consolidation of sediments.
- seed beater:** an instrument usually made of wood or reeds that is formed into a racket-like shape and used to strike seeds from bushes.
- segment:** small stone tool made on a blade or bladelet and shaped like part of a circle; the backing is along a curved arc opposite a straight unretouched edge. It was hafted, possibly as a projectile tip or as part of a cutting tool. Segments occur in some sub-Saharan African Howiesons Poort and Later Stone Age assemblages and are widespread in North Africa. [crescent]
- segmentation rule:** a section of a snapped blade. A proximal segment is where it preserves the striking platform; a distal segment includes the distal end; and a medial segment lacks both ends.
- self pipe:** a stone or clay smoking pipe in which a stem is inserted into the mouth of the smoker. It differed from stone or clay pipe bowls into which a reed or wooden stem was inserted.
- self-slip:** a thin slurry of clay left on the surface of a pottery vessel as a result of wetting the body during the vessel's manufacture.
- septal slab:** an upright stone slab set across the floor of a megalithic chambered tomb to divide it into separate compartments (e.g., in a court cairn). They vary in height from low kerbs to the full height of the chamber; in the latter case they are sometimes provided with port-holes.
- sequence:** a series of periods of time in the history of a particular culture, each characterized by recognizably different material remains. The term also applies to the arrangement of material culture into a time framework.
- seria:** a type of earthenware vessel used mainly for holding wine and oil – larger than the amphora, and smaller than the dolium.
- seriation:** a temporal ordering of artifacts based on the assumption that cultural styles change and that the popularity of a particular style or decoration can be associated with a certain time period. [seriation technique]
- serpentine:** a magnesium-rich silicate mineral occurring in a number of forms and used for decorative work as they vary widely in color and take on a high polish. Sources are known in the British Isles, Ireland, Canada, US, New Zealand, and Afghanistan. Serpentine minerals were

also used in making fine stone tools and vessels as well as jewelry and architectural decoration.

**Serra d'Alto:** Neolithic village in Basilicata, Italy, on a hill defended by three concentric ditches. It has yielded a distinctive painted pottery of the same name, c. 4500–3500 BC. Geometric designs with diagonal meanders and solid triangles were painted in black or purple-brown on a buff surface. A frequent motif is a zigzag line between parallels (*linea a tremolo marginato*). Jars and handled cups are the standard forms and the elaborate handles are horizontal, tubular, and with zoomorphic additions on the top. In the later phase, a thin and markedly splayed trumpet lug was adopted from the Diana ware of Lipari. The high quality of the ware and the fact that it most often occurs in graves and other ritual contexts suggests that it was produced for special purposes. It was traded over a wide area, occurring in Sicily, Lipari, Lake Garda, Malta, and in central Italy. [Serra d'Alto pottery]

**Serraferlicchio pottery:** a site near Agrigento in southern Sicily which has given its name to a style of pottery of the Copper Age (3rd millennium BC). It is found mainly in rock-cut tombs and consists of a bright-red slipped ware decorated with black paint in geometric designs. Characteristic forms are open bowls and a variety of jug and cup shapes.

**serrated:** possessing a notched or saw-tooth edge. [serration (n.)]

**serrated point:** an arrowhead with a serrated point, the edges with uniform small indentations in a sawtooth-like pattern.

**serration:** consecutive small teeth or barbs on the edge of a blade formed by removing pressure flakes. Biface serrations have flakes removed from both sides of the blade edge while uniface serrations have flakes removed from only one face of an edge. [serrated (adj.)]

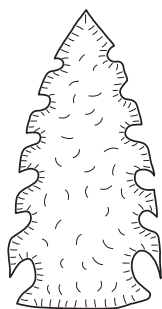
**sestertius:** a Roman bronze coin, four equaling a denarius.

**Severn Valley ware:** burnished bowls, jars, tankards, and other wares from creamy buff to orange-red made at various centers along the Severn in Great Britain.

**Sevso treasure:** a hoard of Roman silver treasure found in Yugoslavia and Lebanon, named for the owner's inscription on a dish.

**sextant:** an instrument for measuring the angular distance of objects, and particularly used for navigation by noting the position of the stars.

**sgraffito ware:** 1. Glazed vessels prepared first by incising decoration in the surface and then by adding paint in the incisions prior to the application of glaze. There is a contrast between the brightly colored decoration and the overall color of the glazed vessel. Byzantine sgraffito wares date to the 11th to 12th centuries in western Europe. It was not until the 16th to 17th centuries that the technique was established in northern Europe. Sgraffito ware was produced by Islamic potters



Serrated point

and became common throughout the Middle East. The 18th-century scratch blue class of English white stoneware is decorated with sgraffito patterns. Sgraffito ware was produced as early as 1735 by German settlers in colonial America. 2. A form of fresco painting for exterior walls, done in Europe since the Middle Ages. A rough plaster undercoat is followed by thin plaster layers, each stained with a different color. These coats are covered by a fine-grain mortar finishing surface. The plaster is then engraved with knives and gouges at different levels to reveal the various colored layers beneath. 3. A glass-decorating technique.

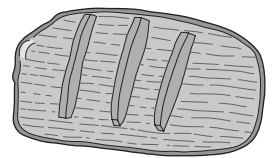
**shabti:** funerary figurine of Egyptian tombs from the Middle Kingdom, usually mummiform in appearance and carrying agricultural tools. It developed out of the funerary statuettes and models provided in tombs of the Old Kingdom. The shabti was intended to serve as a replacement if the deceased was called upon to perform manual labor in the netherworld. The finest examples are from the New Kingdom, some of Saite date. Made of wood, stone, terra cotta, or faience, such statuettes were placed in the tombs often in large numbers. [shawabti, ushabti]

**shackle:** a restraining ring usually linked to another.

**shaduf:** an irrigation tool invented in ancient times, consisting of a long wooden pole with a receptacle at one end and a counterbalancing weight at the other, for transferring water out of a river or canal. This hand-operated device is still used in India, Egypt, and some other countries to irrigate land. The pole is mounted like a seesaw, with a skin or bucket hung on a rope from one end, and a counterweight hung on the other. The operator pulls down on a rope to fill the bucket and allows the counterweight to raise the bucket. To raise water to higher levels, a series of shadufs are sometimes mounted one above the other. [denkli, paecottah, shadoof]

**shaft hole:** a hole in an implement or weapon to hold the haft. A shaft-hole ax has an axhead of metal or stone with a hole through it for hafting. Bronze axes and adzes from Mesopotamia of at least 2700 BC are shaft-hole types, the hole for the handle being formed in a mold. This method eliminated lashing the blades and permitted a heavier head than the thin-bladed Egyptian models. Shaft-hole axes and adzes were also being cast in Crete in about 2000 BC. The Beaker folk, Late Neolithic/Early Bronze Age people living about 6000 years ago in Europe, also used the shaft-hole battle ax. [shaft-hole axe]

**shaft straightener:** an artifact made from a coarse, often volcanic, stone, with a groove used as a rasp to finish spears and arrowshafts. The Mousterian industry used denticulate (toothed) instruments produced by making notches in a flake, which were perhaps used as saws or shaft straighteners. [shaft-straightener]



Shaft straightener

- shale:** fine soft rock that splits easily and can be worked into ornaments and trinkets. In northern Europe during prehistoric times, dark-colored black and grey shales were sought after and used for making pendants, rings, bracelets, etc. Sources include Kimmeridge, Dorset, and Whitby, North Yorkshire. Kimmeridge shale was also widely used in Romano-British times for ornaments and inlays. [jet]
- shaman's bundle:** a parcel of sacred objects, often used in magic and/or curing by a shaman, who is a person regarded as having healing powers derived from supernatural sources.
- shaping:** in wheel-throwing pottery, a vessel that involves changing the vessel diameter anywhere along its profile without significantly altering its height.
- shatter:** all angular waste resulting from stone toolmaking activities that are not otherwise diagnostic. [angular shatter]
- shave:** to use a tool to remove thin slices of material from the floor or face of an excavation unit.
- shawabti:** funerary figurine of Egyptian tombs from the Middle Kingdom, usually mummiform in appearance and carrying agricultural tools. It was developed out of the funerary statuettes and models provided in tombs of Old Kingdom. The shabti was intended to serve as a replacement if the deceased was called upon to perform manual labor in the netherworld. The finest examples were from the New Kingdom, some of Saite date. Made of wood, stone, terra cotta, or faience, such statuettes were placed in the tombs often in large numbers. [Egyptian ushabti, shabti]
- shear:** a type of stress or force in which parts of a pottery body slip or slide relative to each other.
- Sheffield plate:** copper plated with silver, especially as produced in Sheffield from 1760 to 1840.
- shell:** a hard, rigid, usually calcareous, covering or support of an animal such as a mollusk. Many varieties of shell were used in antiquity, apart from the use of their contents as food. Some were used for tools (oyster, conch) and others were made into jewelry or used for decorative inlays. Others, such as ostrich eggshell and smaller seashells, were used to make beads. Shells were perforated and strung on necklaces since at least the Upper Paleolithic. It is frequently found in tombs, probably symbolizing the resurrection. Shell was traded widely to areas where it was not locally available.
- shell tempering:** addition of small pieces of crushed shell to the paste used in creating a ceramic object.
- shell-gritted ware:** any pottery made from a fabric tempered with crushed marine or fossil shell.

- shengwen:** pottery of early postglacial Cina, predating the Neolithic Cishan and Hemudu wares. It is coarse with a textured surface decoration. [sheng-wen]
- sherd:** any pottery fragment – piece of broken pot or other earthenware item – that has archaeological significance. Often abbreviated to sherd, potsherds are an invaluable part of the archaeological record because they are well-preserved. The analysis of ceramic changes recorded in potsherds has become one of the primary techniques used by archaeologists in assigning components and phases to times and cultures. [shard, potsherd]
- shield:** a piece of armor carried in the hand or on the arm, usually the left, to ward off weapons. Examples from the Bronze and Iron Age come from bogs and rivers of northwest Europe. In the Bronze Age, shields were circular and made of wood covered with bronze. They had a raised, dome-shaped boss in the center into the back of which the hand fitted, holding the grip. In the Iron Age, shields were sometimes called bucklers, and had become long and rectangular. They were made of bronze and were embossed. Some were enameled in La Tène style and lined with wood or leather. Leather shields, with few surviving, are functionally more efficient, and wooden ones are also known, notably in Mexico, where they were decorated with feather mosaic.
- shield-pattern palstave:** a type of bronze palstave of the Industrial phase of the British Bronze Age c. 1500–1250 BC, having a raised triangular-shaped area cast below the stop ridge.
- shingle:** a rectangular tile of asphalt composite, wood, metal, or slate used on walls or roofs.
- shipwreck:** remains of sunken ships, which are often investigated by underwater archaeologists.
- shivering:** a pottery defect caused by compressive stress, resulting in incomplete coverage or peeling of the glaze.
- shoeing nail:** a nail of distinctive form, specifically used in the shoeing of animals, e.g., horses, donkeys, and oxen.
- shoe-last adze:** a long, thin, chisel-shaped, ground-stone tool employed by the Danubian farmers of the Early Neolithic, possibly as a hoe for cultivating their fields. It is a common stone tool found in Early Neolithic Linear pottery contexts throughout Europe. It might also have been used as an adze for carpentry. [shoe-last celt]
- shoulder:** 1. The part on a vessel above the body's maximum diameter but below the neck or rim. 2. A notch on one side of a blade, creating an asymmetrical outline; the area of an artifact that divides the blade from the stem or hafting area.

**shouldered adze:** a polished stone adze of the Neolithic period, distributed along the coastal area of China from Shantung southwards and in central southern China. It was also prominent in Southeast Asia.

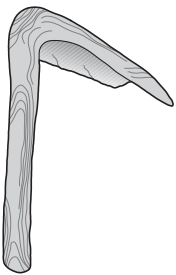
**shouldered point:** type of stone point made on a blade, with a notch on one side of the base and flaked partly or wholly on both sides. Shouldered points are characteristic of some Upper Paleolithic cultures of Europe, such as the Solutrean, Magdalenian, and Eastern Gravettian.

**shrine:** innermost element of a temple where the cult image or bark of the deity was placed, or an elaborate box containing funerary statuary. It was a repository for relics – either fixed, as a tomb, or movable, as a feretory. A shrine can be a case, box, or receptacle, especially one in which sacred relics (such as the bones of a saint) are deposited – or a place in which devotion is paid to a saint or deity (sanctuary). A shrine can also be a niche containing a religious image, a receptacle (such as a tomb) for the dead, or a place or object worshipped in association. [naos, per, sanctuary]

**shroud:** a sheet-like garment or covering used to wrap a corpse prior to burial.

**Shroud of Turin:** a sheet of twill-woven linen cloth on which appears a pale sepia-tone image of the front and back of a naked man about 6 feet tall, alleged to be the actual cloth in which Christ's crucified body was wrapped. The images contain markings that allegedly correspond to the stigmata of Jesus, including a thorn mark on the head, lacerations (as if from flogging) on the back, bruises on the shoulders, and various stains of what is presumed to be blood. Since emerging in 1354, it has been purported to be the burial garment of Jesus Christ. It has been preserved since 1578 in the royal chapel of the Cathedral of San Giovanni Battista in Turin, Italy. [Holy Shroud]

**Si Mu Wu fang ding:** a late Shang bronze ritual vessel that is a tetrapod weighing 875 kg (1925 pounds), the largest metal casting surviving from Chinese antiquity. Late Shang ritual vessels reveal high technological competence and large-scale, labor-intensive metal production. Said to have been found in the Anyang royal cemetery, the vessel is inscribed with a dedication to an empress and dates probably from the 12th century BC. It is now in the Historical Museum, Beijing. [Ssu Mu Wu, Ssu Mu Wu fang-ting]



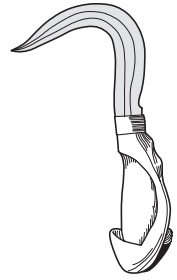
Flint sickle

**sica:** a curved dagger or scimitar, different from a pugio (which is a straight dagger).

**Sicilian pottery:** south Italian pottery using the red-figured technique of the late 5th century BC. Production centers included Syracuse, Himera, and Centuripe.

**sickle:** a knife for reaping corn, first used by Neolithic man, made of flint and shaped like a banana. These flint blades were mounted in a

wooden or bone haft, as in the Natufian of Palestine. Later sickles were of bronze, and some of terra cotta were found in Sumer. In the Bronze Age, a socketed sickle appeared. Since the introduction of iron, the balanced sickle has become the standard form – a deeply curved blade bent back from the handle. Its modern form is a curved metal blade with a short handle fitted on a tang.



Sickle

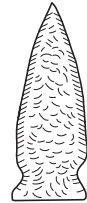
**sickle element:** a component of a composite reaping or harvesting knife, often made from the medial and distal segments of a backed blade or from a long backed blade.

**sickle gloss:** distinctive gloss that occurs on the edge of flint sickle blades, caused by the wear of the blade against the phytoliths in the cereal grasses being reaped. The polish comes from the abrasive action of silica present in the stems of both wild and cultivated cereals, so the occurrence of reaping tools with sickle gloss need not by itself imply agriculture. [sickle sheen, silica gloss]

**side blade:** a narrow flaked stone, bone, shell, or metal artifact with a sharp edge on one side inserted in the side of a shaft or projectile point to provide an extended cutting edge. [sideblade]

**side scraper:** a retouched flake tool with a thick working edge; a flake tool that has been sharpened on one edge and left blunt on other edges to allow grasping, probably used to scrape (dress) animal hides and for working hard materials. It is called a side scraper (*racloir*) because its sharpened edge is the long side. [*racloir*, scraper, sidescraper]

**side-notched point:** type of stone point that is chipped on both faces with notches on both sides near the base. They are characteristic of the Northern Archaic tradition in North America. It is a bifacially worked, chipped stone, projectile head with shallow and wide notches worked into both side edges near the base. These notches were presumably to assist attachment to the shaft on which the point was set.



Side-notched point

**sieve:** a container with a perforated bottom through which material is shaken or poured.

**sign:** nonfigurative representations found engraved or painted in Paleolithic parietal art, including tectiforms (hut shapes) and claviforms (club shapes) which may be ethnic markers.

**silica:** silicon dioxide, a hard, unreactive, colorless compound that occurs as quartz and in sandstone and many other rocks.

**silica gloss:** the sheen or polish that occurs on flint when it is used to cut grass.

**silk:** thread that can be drawn off the cocoon spun by the grub of the moth *Bombyx mori* and used for weaving fine cloth, originating in China in the Neolithic period. The silk industry was established by the Anyang period, c. 1300–1030 BC. The Anyang oracle bones

include characters for silk, silk fabrics, the silkworm, and the mulberry tree, and traces of silk fabrics are occasionally found preserved. Silk fabric was used as a writing surface at least as early as the 5th century BC. Both manuscripts and paintings on silk have come from Chu tombs of the 5th century BC and later. Elaborate methods of weaving were developed by the Han dynasty (206 BC to AD 220), and textiles were exported in large numbers along the “silk route” to the Roman world and later to Byzantium. The silk route is the collective name for several overland and ocean routes for the silk trade from the 1st to 8th centuries AD. From Chang’an, capital of the Han dynasty, the main route went west through the Gansu corridor.

**silver:** a white, lustrous metal valued for its decorative beauty and electrical conductivity. It is found nearly as early as copper and gold, in the form of beads, trinkets, and display vessels. The main source of this metal in antiquity was the lead ore galena, in which silver sulfide occurs as an impurity. After smelting the ore, silver was recovered by the process of cupellation, where the lead is oxidized, leaving the silver unaltered. Silver is soft and could be cold-worked but it was too soft for most purposes and was often alloyed with other metals, even in antiquity.

**silver-figured:** a technique used to decorate Greek and Etruscan bronze and gold in which silver figures were attached to the other metal or silver foil was placed over the relief decoration.

**simple tool:** an artifact consisting of a single part.

**sinew:** thread or cord made from uncured animal tendon.

**sinew frayer:** a tool similar in shape to a scraper but with serrated edges, which may have been the forerunner of the saw. Early tribes today use similar stones to stroke sinews into fibers for sewing.

**sinewstone:** a rare stone artifact with several incised lines of indentations on one edge where sinew material was drawn across it to prepare the material for use as bow string, thread, or string.

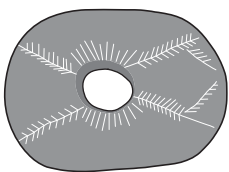
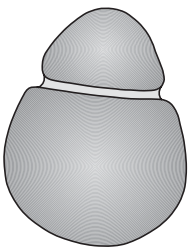
**single fluting:** projectiles or tools which have one flute per face.

**single-facet platform:** a platform on a biface or core with a single plane of detachment.

**sinker:** a weight that sinks (to hold nets or fishing lines under water).

**sintering:** a process in which the edges of the clay particles soften and adhere to one another. This process begins at about 350°C and is completed by 700°C.

**sistrum:** ancient Egyptian percussion instrument – a rattle consisting of a wood, metal, or clay frame set loosely with crossbars (often hung with jingles) that sound when the instrument was shaken. A handle was attached to the frame. It was sacred to Hathor and used in the ceremonial worship of Isis and at funerals. Open-topped, U-shaped



Sinkers



sistrums existed by 2500 BC in Sumer. They are still used in Coptic and Ethiopian churches, in western Africa, among two Native American tribes, and in Malaysia and Melanesia. [seistron]

**situla:** a bucket-shaped, Classical vessel of pottery, silver, or sheet bronze, with a swinging handle across the rim. Examples of bronze vessels from the north Italian Iron Age were particularly elaborately decorated; the style of decoration found on these situlae and other sheet bronze objects is known as situla art. A situla had a short vertical neck, a shallow shoulder, and sloped downward to a narrow base; there were two handles and a lid. It would be used for drawing water from a well. [situlae (pl.)]

**situlate:** pertaining to vessels with wide mouths, short everted necks, high shoulders, and straight sides tapering down, from the Iron Age onward.

**Six's technique:** technique of decorating Athenian pottery in the 6th century BC, as described by J. Six. The pottery's black surface was painted in red or white, with the detail cut through, showing the black surface.

**skeuomorph:** an object whose shape or decoration copies the form it had been when made from another material or by another technique. For example, a pot might be decorated to make it look similar to a vessel of basketry, skin, or other material. In some cases, it is an artifact that represents in decorative form a feature which was originally functional. A decorative bow attached to a shoe is a skeuomorph of the laces once used to tie it; triangular shapes drawn below handles on pottery are skeuomorphs of the metal plates by which the handles on metal prototypes were attached; and the semicircular mark on the back of a teaspoon represents the broadening of the handle where it was soldered to the bowl when it used to be made in two pieces. Frequently, a skeuomorph may yield important information about extinct types, especially when organic materials like basketry are recorded in this way. [skeuomorphic (adj.)]

**skewer pin:** long thin bone pins, sometimes with elaborate heads, of the later Neolithic in the British Isles.

**skillet:** a frying pan; also, a small metal cooking pot with a long handle, typically with legs.

**skyphos:** Greek drinking vessel, usually a deep cup with two horizontal handles mounted near the rim.

**slab construction:** a method of producing ceramics in which large flat slabs of clay are made and then joined and shaped into the desired item. [slab building, slab forming, slab method]

**slag:** partially vitrified waste material created by industrial processes such as smelting, welding, glassmaking, and pottery making. It is the glassy material made up of impurities of metals and ores which are removed

during such processes. It is difficult to distinguish between slags of copper and iron smelting.

**slashed cup:** a type of miniature cup or accessory vessel of Early Bronze Age graves in southern England, with a narrow base and mouth and expanded body with vertical slots in the side.

**slate:** a fine-grained gray, green, or bluish-purple metamorphic rock (slate, sandstone, limestone) that is easily split into smooth, flat plates.

**slicker:** a knife used to rub grease into a hide and to force dirt out of it. The knife is symmetrical with a handle at each end.

**sling:** a weapon consisting of two thongs attached to a pouch, and one of the first missile weapons used in warfare. The weapon was whirled and a thong released, hurling a stone from the pouch with considerable velocity. Except in desert areas, such as the Peruvian coast, the sling itself does not survive but sling bolts or shot of stone, terra cotta, or lead are present as artifacts. It is rarely found in the same cultural contexts as the bow and arrow. In another type, the sling was attached to a short staff that was held in both hands; it was used for heavier missiles, especially in siege operations during the European Middle Ages.

**sling shot:** a usually spherical stone, clay, or lead projectile for use with a sling. [slingshot]

**slip:** a form of surface finishing applied to pottery, where a mixture of clay and water is applied before firing to improve the pot's smoothness and to decrease porosity (it makes it more watertight by clogging the pores of the earthenware). Slip often contains the pigment which imparts, after firing, the ground color of the vessel. The slip, being clay based, is subject to the same color variation through different firing conditions (oxidizing or reducing) as the clay itself. Hematite slips, intended to be red, occasionally fire to a shiny black finish in a reducing atmosphere. Slips may or may not be polished after drying, and all sorts of decorative techniques may be used to alter this coating. Used as a decoration, slip is applied fairly thickly to form white or tinted patterns; this technique is called "slip painted." The extent of slip is described as either all-over or zone. The finish of slip is described as continuous, sparse, smooth, lumpy, thin, micaceous, or iron-rich. [slurry]

**slipped:** a surface finish in pottery obtained after firing, termed color-coated when a slip is made darker than the paste of the vessel which it covers.

**slipware:** a type of pottery decorated with slip before firing. The earliest English examples were made at Wrotham in Kent in the early 17th century and some of the most decorative by Thomas Toft in Staffordshire.

**slow wheel:** a flat-topped horizontal turntable that can be rotated to assist a potter in shaping a ceramic vessel. Slow-turning wheels or tournettes were used from the 5th or 6th millennia BC in the Near East to help true up handmade vessels. From the early 4th millennium BC, fast wheels began to be introduced.

**slub:** soft lump or unevenness in a yarn, which is either an imperfection or created by design.

**slug knife:** type of later Neolithic and Early Bronze Age flint tool found in the British Isles, particularly associated with burials in northeastern England. Planoconvex knives have a leaf-shaped outline and slightly elongated form, worked on large thick flakes with retouch around and sometimes all over the convex dorsal surface but a plain untouched ventral surface. [planoconvex knife]

**small find:** a term used to define artifacts that can be picked up and transported, as opposed to features. In different areas, however, the term means different things. In the New World, all artifacts of this sort can be called small finds, while in Britain there can be a distinction between “finds” and “small finds.” On a site producing few artifacts, any find may be dealt with as a small find, while on a site producing large quantities of material, a small find will comprise something special, unusual, or unclassifiable.

**smectite:** a group of clay minerals with a three-layer structure (two of silica, and alumina in between), characterized by expandability.

**smelt:** to separate metal from ore, usually by heating in a hearth or furnace. [smelting (n.)]

**smith's hoard:** any collection of Bronze Age metalwork that appears to be the tools, etc. of a metalworker, e.g., broken tools and weapons cut up for recycling, ingots, molds, and tools for working metal. [founder's hoard]

**smoking:** a process used at the end of the firing of pottery in which materials that produce a thick smoke are burnt in the kiln or hearth. Smoking alters the appearance of the pottery, coloring it deep black, and making the objects less porous.

**smoothing:** a technique used to finish the surface of a ceramic piece in which potters use a spatula of wood or ceramic, a flat tool, or their bare hand to smooth the surface of the object.

**smudged:** pottery that has been exposed to smoke during firing to generate black surface features.

**snake-thread glass:** a series of glasses decorated with serpent-like lines or colored threads of glass of Roman date from the east, probably in Syria, and the west, at Cologne and other places.

**snap:** a purposeful break that was a step in the manufacture of a stone tool.

**snapped base:** a term used to describe points that have a part of the base intentionally removed or fractured off as part of the design by the original knapper.

**snare:** loops of material (vine, fiber, leather, etc.) used for catching animals.

**snarling iron:** a Z-shaped rod used to create repoussé work on metal vessels.

**snuffer:** a small hollow metal cone on the end of a handle, used to extinguish a candle by smothering the flame; an implement resembling scissors with an inverted metal cup attached to one blade, used to extinguish a candle or trim its wick.

**soaking period:** the time during which the highest temperature of firing is sustained.

**sociofact:** 1. Archaeological data resulting from past human social activities. 2. An object whose primary function is to express or establish social rank, rather than to serve practical or ideological needs. An example is an ax that is used as a symbol of chieftdom rather than as a weapon.

**sociofunction:** use of an object for social purposes, to express social status or organization, such as the wearing of a certain garment to convey high social status.

**sociotechnic:** a category of material culture in which items are inferred to have served social roles, such as identity marking.

**socket:** a hole made in an object to take a haft. It is usually closed at one end, in contrast to a shaft hole which is open at both ends. The term also refers to a bronze or iron weapon or tool cast so that it was hollow and open at the butt end to allow a haft to be inserted. [socketed implement]

**socketed ax:** a type of tool in which the body of the tool is hollow so that it can receive a shaped projection at the end of the haft in order to secure the haft to the metal axhead. They were made in molds in the late European Bronze Age. [socketed axe, socketed axhead]

**socketed spearhead:** a type of spearhead in which an elongated hollow was cast into the base of the blade to receive the shaped end of the wooden spear shaft, of the middle and later stages of the European Bronze Age.

**soda-lime glass:** glass produced using soda derived by burning seaweed and kelp.

**soft hammer technique:** use of a hammer that is softer than the material being hammered or struck. The hammer would be made of antler, bone, wood, or other soft material and used to remove flat flakes from flint. These flakes have a characteristic appearance – long, thin, and with a diffuse bulb of percussion. [bar hammer technique, cylinder hammer technique, soft-hammer percussion]

**soft paste:** artificial porcelain, made in Europe before the discovery of kaolin, one of the ingredients necessary for true, or hard-paste, porcelain. It was manufactured from white clays, mixed with ground glass to give it translucency. It was first produced at the Medici factory in Florence between 1575 and 1587 and then in France in the early 18th century. The Sèvres factory made only soft-paste porcelain for its first 30 years and it was the main type of porcelain produced in England in the 18th century.

**solar boat:** in Egyptian mythology, a high-prowed boat in which the sun god was believed to navigate the heavens. Some Pyramid Texts refer to the deceased pharaoh going to join the gods in such a boat. There were two different types: day/mandet, night/mesektet. [solar bark, sun boat]

**soldering:** a method, used since the Bronze Age, of joining pieces of metal by melting an alloy of tin and lead into the joint to fuse the two edges together. The application of a flux to the surfaces to be soldered is generally required. A soldered joint will not withstand much stress. [to solder (v.)]

**Somme sequence:** the valley in France that was one of the first places where the great antiquity of man was recognized, and which includes the type site of the Acheulian (St. Acheul) and the Abbevillean (Abbeville).

**South Italian pottery:** pottery type made by the Greek colonies of southern Italy and Sicily, mainly from the late 5th century BC, with many centers of production.

**spacer plate:** a specialized flat bead with several parallel perforations intended to hold apart, in regular order, the threads of a multiple-strand necklace. Sometimes, as in the amber multiperforated spacer plates of the central European and British Bronze Age and the Mycenaean, the perforations themselves are used decoratively. They were also made of jet or faience. Similar examples found in distant regions are often taken as indicators of long-range trade. [spacer-plate]

**spade:** a tool with a sharp-edged, rectangular, metal blade and a long handle, used for digging.

**spall:** a small, usually long and thin, flint piece removed from a burin.

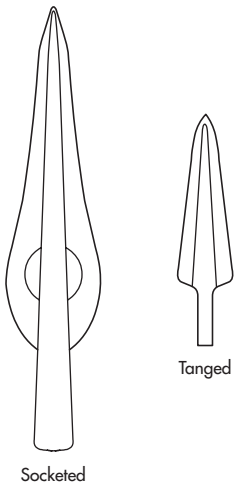
**Spanish Levant art:** a series of rock shelters in the arid region of the Spanish Levant (Mediterranean Spain) with paintings in red and black from the Mesolithic. The scenes were quite unlike Paleolithic art and the depictions offer information about the character of everyday life.

**spatula:** a tool, usually of bone, lime, wood, ebony, turtleshell, etc., consisting of a broad but thin blade. It served many general purposes – spreading, mixing, scooping, lifting – including burnishing pottery, working pelts, spooning flour, etc.

**spatulate:** a flared celt, usually 20–25 cm (8–10 inches) long with a smooth, slender handle, used mainly like a chisel or knife. [spud]

**spear:** a pole weapon with a sharp point, either thrown or thrust at an enemy or prey, one of the earliest weapons created by people and dating back to Paleolithic times. They were originally a sharpened stick and some had heads made of stone, shaped and fixed to the shaft by thongs and possibly resins. In the Bronze Age, the heads were made of bronze and had a tang for riveting the head to the shaft. Later, the tang was replaced by a socket into which the shaft fitted. The Iron Age spears retained this feature and were sometimes decorated with La Tène designs.

**spear thrower:** a device that increases the power with which a spear can be hurled; a long stick with a hooked end which holds the butt of a spear. The implement usually has finger grips at one end. The device thus becomes an artificial extension of the thrower's arm, giving him increased leverage and range and allowing the thrower to hurl a spear accurately a much greater distance than he could unaided. Spear throwers were used in Europe during the Paleolithic and throughout the New World in pre-Columbian times, where they were known as atlatls. Spear throwers made of reindeer antler are characteristic of the Magdalenian period in Europe. Similar devices were used in the Arctic, and in Australia, where they are often called woomeras. [atl-atl, atlatl, spear-thrower, spearthrower, throwing stick, woomera]



Spearheads

**spearhead:** bifacially flaked points, or a thrusting blade mounted on a long shaft (spear) as a weapon for war or hunting. Early examples in flint were usually leaf-shaped, and hafted simply in a cleft in the spear shaft. In the Early Bronze Age, bronze dagger blades were made and ferrules added. The socketed spearhead came when these were cast in one piece with the blade.

**spearpoint:** a larger arrowhead used to hunt larger game such as deer, antelope, elk, buffalo, etc. It is the tip of a projectile, used for throwing, thrusting, or stabbing. [spear point]

**spectrographic analysis:** method for quantitative analysis of small samples of various compounds which has high accuracy. It involves passing the light refracted from a sample through a prism or diffraction grating that spreads out the wavelengths of trace elements into a spectrum. This enables the identification of different trace elements and depends on the fact that light emitted by any element on volatilization shows a characteristic pattern when split by a prism into its spectrum. The elements present can be measured by the intensity of the lines in comparison with control spectra of known composition produced under the same conditions. A small sample can be used, less than 10 mg, making the method particularly suitable for archaeological material. The method has been used especially for metal analysis, giving useful

information on technology and sources of the raw materials, and also for glass, faience, pottery, and obsidian.

**spherical:** shaped like a sphere.

**sphinx:** a mythical beast portrayed with the crouched body of a lion and the head or face of a man. It is especially known from Egyptian art as a symbol of royal power and only the pharaoh was depicted in this form. Originally considered by the Egyptians to represent the guardian of the Gates of Sunset, the statues were usually erected to guard tombs or temples from intruders. The largest and most famous of the sphinxes is that of Giza, carved from a knoll left by the quarrying of stone for the Great Pyramid. Its features are those of the pharaoh Chephren (Khafre) of the 4th dynasty, reigning in c. 26th century BC; it is 73 m long and 20 m high (80 × 22 yards). Human-headed lions, usually female, were also portrayed by the Hittites and Greeks; the Romans adopted them and placed them in the pronaos of their temples. Representations of ram-headed lions are called crio-sphinxes and were associated with the god Amon (Amen); they are of the New Kingdom and are found along the roads between the Temple of Luxor and Karnak.

**sphyrelaton:** 1. A type of bronze hammered statue, made by hammering bronze plates over a core, which were secured by nails. It is an early form of art manufacture in metal, the precursor to the lost wax (cire perdue) technique. The temple of Apollo on Crete (8th century BC) has three statues of this type. The technique was also used to produce colossal statues. 2. Repoussé work in Minoan or Etruscan art. [sphyrelata (pl.)]

**spiculum:** barbed head of an iron arrow or lance. [specula (pl.)]

**spigot:** a form of stopper used to regulate the flow of liquid, often used in a barrel.

**spindle whorl:** a circular object with a central perforation intended to act as a fly wheel on a spindle, giving momentum to its rotation – an artifact providing evidence of the spinning of thread. It maintained the momentum of the spindle rotated by the spinner while he/she teased more fibers out of a fleece. They may be of stone, bone, or pottery, varying from flat disks to spherical or pyriform, and ranging from 2.5 to 10 cm (1–4 inches) in diameter.

**spinning:** extrusion of liquid fiber-forming material, followed by hardening to form filaments; also, this is a technical process by which fibers are twisted together to make continuous threads. The wool was fixed as a mass on the distaff. A thread was drawn out by one hand and fixed on the spindle. Attached to this last was a stone spindle whorl. As the spindle was spun around, the whorl gave momentum on the flywheel principle. The thread from the distaff was twisted and then wound on to the spindle. The threads, or cloth woven from them, are

rarely found in archaeological contexts, unless preserved by desiccation, waterlogging, or metal corrosion products. Proof of spinning comes more commonly from the discovery of a spindle whorl, loom weight, or comb. Spinning was engaged in during Neolithic times.

**spiral:** a widely popular artistic motif, consisting of a curve of constantly increasing diameter; any motif which is coiled or curling. A double spiral is one in which two spirals are conjoined at the center. A running spiral is a series of regularly interconnected spirals. [spira]

**spiral nail:** a nail that tends to turn into the wood like a screw as it is driven home, used in flooring to assure a tight and squeak-proof joining.

**spirit path:** rows of stone sculptures facing up the path to Chinese mounded tombs, created from the Han dynasty to guard or honor the deceased. They are often sculptures of people or animals, from close to life-size to double life-size.

**spit:** a device to hold and rotate food against a heat source during cooking.

**spit-shaped currency bar:** wrought iron bars found in the Middle and Late Iron Age of central and midland parts of England.

**split pin:** a metal pin with two arms which is passed through a hole and held in place by the springing apart of the arms.

**spokeshave:** a stone tool with a semicircular concavity used for smoothing spears or arrowshafts; a drawknife or small transverse plane with end handles for planing convex or concave surfaces.

**sponge finger:** a type of stone object of later Neolithic and Early Bronze Age graves in northern and western Europe, often associated with Beaker pots, elongated with a D-shaped cross-section and rounded ends.

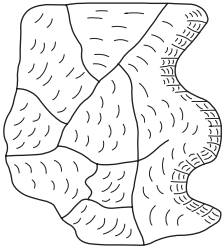
**spoon:** an implement consisting of a small, shallow oval or round bowl on a long handle, used for eating, stirring, and serving food.

**spout:** a neck-like appendage that restricts a secondary orifice occurring to one side of a vessel's vertical axis, and typically on the vessel's upper body or shoulder.

**spout and bridge pot:** a distinctive closed vessel with two spouts connected by a strap handle, popular in southern coastal Peruvian cultures with antecedents in the Initial Period ceramics of the Hacha complex. Typically it is a closed kettle-shaped vessel, but its defining characteristic is a pair of vertical tubular spouts joined to each other by a strip or bridge. Sometimes, however, one spout terminates as a whistle or as a modeled life figure. It was particularly popular with the Nasca and Chimú but has been found in many other New World contexts (e.g., Paracas). [spout-and-bridge vessel]

**spouted strainer:** a type of bowl, often biconical, with a projecting tubular spout and internal strainer.

**spud:** a tool, possibly for cleaning mud from parts of a plow.



Spokeshave



**spur:** kiln furniture consisting of triangular supports placed to prevent glazed ware from sticking to shelves of the kiln during firing. [cockspur, stilt, trivet]

**square-mouthed pot:** a vessel type in which the circular mouth was pinched into a squarish form while the clay was still soft, characteristic of the Middle Neolithic of northern Italy, especially at Arene Candide. It is thought to show influence from the Danubian culture of central Europe. There are scattered examples from as far as Crete, Sicily, and Spain. [bocca quadrata, square-mouthed pottery]

**square-shank concrete nail:** a nail used to fasten furring strips and brackets to concrete walls and floors.

**St. Albans point:** bifacially worked chipped stone projectile points with corner notches, made by the Early Archaic stage in eastern parts of North America c. 7500 BC.

**St. Remy ware:** fine pottery, often having relief decoration, in a white fabric with a green or yellow (lead) glaze, made at St-Remy-en-Rollat, near Vichy, c. 1st century AD.

**stadial:** a period during a glaciation when the temperature was at its lowest and the ice sheets and glaciers were most extensive. They are separated by warmer interstadial periods. These cold episodes are of relatively short duration.

**stage:** a level of cultural development characterized by a technology and its associated social and ideological features; a large-scale archaeological unit consisting of a well-defined level of development attained by a particular culture area. The adoption of agriculture, for instance, had profound cultural and social consequences, raising people to a higher stage. This technological subdivision of prehistoric time has little chronological meaning beyond the regional (as it may be continental or global), an example being the Stone Age, though stages are integral parts of the chronological sequencing of culture history.

**stain:** a prepared, fritted compound of coloring oxides, alumina, and a flux used as a glaze colorant or for overglaze and underglaze decoration.

**stained glass:** colored glass used for making decorative windows and other objects through which light passes, created since early Christian times. It was not an important art until about the 12th century.

**Stamford ware:** an Anglo-Saxon pottery industry centered around Stamford in Lincolnshire, England, that produced fine glazed ceramics in the 9th to 13th centuries. The buff wares included characteristic spouted pitchers and jugs which were much in demand in England and were sometimes traded abroad.

**stamnos:** a type of Classical Greek vase, similar in size to the amphora, and likewise used typically for the storage of wine. The stamnos,

however, is more squat in form, with two horizontal handles and a round mouth. The shape was popular with Athenian red-figure vase painters in the period from about 525 to 400 BC and in Etruria in the 4th century BC.

**stamp:** a tool that produces a mark on an object through the application of percussive force through the stamp.

**stamp seal:** a small, hard block that has a flat surface engraved with a design that can be transferred to soft clay or wax as a mark of ownership or authenticity. Stamp seals appear in Mesopotamia from the Halafian period in the fifth millennium BC, when they were used to impress ownership marks on lumps of clay which were then attached to goods. In the Bronze Age, it was differently shaped for different cultures: square in the Indus, round in the Persian Gulf (Barbar), and compartmented in central Asia (Bactrian). Stamp seals preceded cylinders and developed over a period of about 1500 years until largely replaced by the cylinder in the 3rd millennium BC. Seals came into use before the invention of writing for the securing of property and the method was either to shape clay over the stopper or lid or to make a fastening with cord and place clay around the knot and then impress it with the seal. The sealing of written documents, mainly clay tablets and papyrus scrolls, became regularly established in the latter part of the 3rd millennium BC.

**stamped decoration:** a technique of ornamentation on the soft clay of a pot by repeatedly impressing a simple design previously carved on a bone or wooden tool. Figured stamps were also used. It also refers to using an implement or paddle to impress designs on a ceramic surface; a stamp, seal, or die especially made for the purpose is used to displace pottery fabric near the surface of a plastic or nearly leather-hard vessel and create a pattern or design. [stamped, stamping (adj.)]

**stamping:** a kind of impression where a stamp, seal, or die especially made for the purpose is used to displace pottery fabric near the surface of a plastic or nearly leather-hard vessel and create a pattern or design.

**stance:** the position that orients a vessel the way it would typically be when resting on a surface, usually with the rim horizontal.

**stance line:** line representing the horizontal plane in the illustration of pottery.

**staple:** a fastener made in many forms to hold wire fencing, bell wire, electric cable, screening, etc.

**stater:** a Greek coin of electrum and silver, a standard unit which was equivalent to the Near East shekel and the silver didrachm.

**statue:** a three-dimensional representation.

**statue menhir:** a standing stone carved to represent the human form, sometimes with details of clothing or weapons. Most examples in

Europe seem to belong to the Late Neolithic/Copper Age period and they are concentrated in southern and western France, Iberia, Liguria, Corsica, Sardinia, and Italy (Apulia, northwest Tuscany, and near the Swiss and Austrian borders). Northern Italy also has a more recent group of statue menhirs set up by Ligurian peoples during the Iron Age. Bronze Age examples are also known. Most statue menhirs are of men. [statue-menhir, stela menhir]

**stave bow:** a simple bow made from a single piece of wood, such as yew.

**steatite:** a soft magnesian mineral or white to green massive rock composed mainly of talc. The softness of the stone made it very popular for the carving of artifacts: figurines, vessels, jewelry, decorative stone works, and stamp seals. Its resistance to high temperatures made it particularly suitable for mold making for metal casting. In the Indus civilization seals of this material were whitened by heating with lime, a process called “glazing.” [soapstone]

**steep bevel:** a bevel of a blade edge or stem edge that was flaked at a steep angle (> 40 degrees) to the plane of the face.

**steepness of retouch:** angle between the flat plane of a flake and a retouched surface. Very steep retouch is close to 90 degrees.

**stela:** an upright, freestanding stone monument, often inscribed or carved in relief, and sometimes painted. These pillars or tablets of stone were often used to mark a grave or erected as a monument. Inscriptions may commemorate a victory or a major event, or proclaim a formal decree. Stelae are frequently encountered in Maya and Olmec sites of Mesoamerica (often carved with calendrical and hieroglyphic inscriptions), in the Buddhist civilizations of Asia, and in early Greece. The earliest funerary stelae are from a cemetery of 1st- and 2nd-dynasty kings at Abydos, and are located in publicly accessible superstructures of the tombs. Commemorative stelae were erected in temples. Votive stelae recorded an individual’s veneration of a particular deity(ies). [stela; stelae (pl.)]

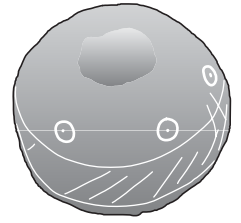
**stem:** extension of the base of a projectile point or knife that was designed for hafting or gripping. Stems can occur in various shapes.

**stemmed point:** a projectile or blade that has a stem that was designed for hafting or holding. [notchless point, shouldered point]

**step fracture:** a vertical upstep where the distal end of a blade or flake broke from the parent material. Such a flake scar is indicative of a well-executed form of percussion flaking.

**step termination:** a blunt fracture at the distal end of a lithic flake that appears stairlike in cross-section. [step fracture; stepped (adj.)]

**stepped adze:** polished stone adze of the Chinese Neolithic, roughly rectangular in shape, and flat on one side with a step on the other. It is also found in Southeast Asia.



Steatite bead



Stemmed point

**stirrup:** each of a pair of devices attached at either side of a horse's saddle, in the form of a loop with a flat base to support the rider's foot.

**stirrup jar:** ceramic jar of medium size with a flat knob connected to the shoulder by two handles, in place of the central mouth. A separate spout was added elsewhere on the shoulder. It was much used by the Mycenaean and in Minoan Crete for storing or transporting perfume, oil, etc. [false-necked amphora]

**stirrup spout:** semicircular tub set vertically, like a croquet hoop, on top of a closed vessel. The lower ends open into the body of the pot, and a single vertical spout rises from the apex of the curve. From the side, it looked like a stirrup. It was common in many Peruvian cultures (Moche, Chimu, Chavín, Cupisnique, Nazca) and in other parts of the New World, with precursors in the Initial Period. In Chavín pottery, for example, the earliest stirrup spouts were relatively small, very thick, and heavy, and the spout had a thick flange. As time went on, the stirrups became lighter and the spouts longer; the flange was reduced and finally disappeared. The necks of the flasks underwent similar changes. The Cupisnique stirrup-spouted vessels, some of which were modeled in the form of human beings, animals, or fruits, were the beginning of a north-coast tradition of naturalistic modeling. [stirrup-spout vessel]

**Stone Age:** the oldest and longest division of the Three Age System, preceding the Bronze Age and Iron Age. It is the oldest known period of human culture – characterized by the use of stone tools. This prehistoric age embraces the Paleolithic (Old), Mesolithic (Middle), and Neolithic (New). These three separate periods are based on the degree of sophistication in the fashioning and use of tools. Metals were unknown, but tools and weapons were also made of wood, bone, and antler. The dates for the Stone Age vary considerably from one region to another, and some communities were still living a Stone Age life until very recent times. In sub-Saharan Africa, the Stone Age is equivalent to the term Paleolithic, and spans from c. 2.5 million years ago until the 19th century AD.

**stone tool:** a tool made of stone, either ground stone or chipped stone; a lithic artifact.

**stoneware:** distinctive pottery that has been fired at a high temperature (about 1200°C) until glasslike and impervious to liquid. It is usually opaque, and because it is nonporous, it does not require a glaze. When a glaze is used, it is decorative only. Stoneware originated in China as early as 1400 BC (Shang dynasty). The technique made possible the production of durable tablewares.

**stopper:** a plug for sealing a hole, especially in the neck of a bottle.

**stop-ridge:** transverse ridges added to the faces of a flat ax mounted in a right-angled cleft haft to transfer some of the impact from the base of

the cleft to the tips. Axes with stop-ridges form an intermediate step in development between the flanged ax and the palstave. The term also refers to a ridge on a celt or pipe which prevents one part from slipping too far over another. [stop ridge]

**storage jar:** large jars used for storing grain or other materials.

**strangled blade scraper:** a long blade tool with a retouched notch on one or both sides, of the Aurignacian.

**strap end:** a sometimes decorated metal reinforcement for the end of a strap.

**strap handle:** for ceramics, a handle made from a strip of clay and attached to the body of the pot at two points before firing.

**stray find:** an object of some kind – pottery, metalwork, a coin, etc. – which has not been found in an archaeological context. Stray finds are useful if the total distribution of a particular type of object is required, but the absence of associated material or structures makes their interpretation difficult.

**stress:** an applied force, measured per unit area; in pottery, it includes tensile, compression, transverse, and impact stresses.

**stria:** a linear mark, ridge, or groove, especially one of a number of similar parallel features. [striae (pl.)]

**striation:** microscopic scratches, grooves, or channels on stone tools, which often reveal the direction of force and the nature of tool use.

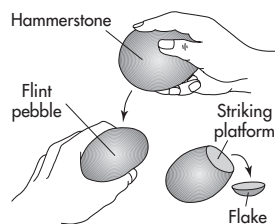
**strigil:** a narrow curved scraper, made of horn or metal (bronze, silver), used by Roman and Greek bathers for the cleansing of the skin. A strigil was used to remove olive oil applied after bathing or exercising. Romans used them particularly in the hot room (caldarium) and the task was often performed by slaves. On Athenian pottery, strigils are shown in the hands of athletes. The term comes from the Latin *strigilis*.

**strike-a-light:** a type of rod- or bar-shaped flint tool with a slightly pointed end, used with stone such as iron pyrites for making sparks to start a fire.

**striking platform:** the area on a stone core that is struck to remove a flake or blade in toolmaking. Part of the original platform is removed with the detached flake. The platform itself is prepared by the removal of one or more flakes, and in the latter case is described as a faceted striking platform. [platform]

**string mark:** marks on the base of a vessel caused by the potter detaching the pot from the wheel with a wire or string.

**Stroke-Ornamented ware:** pottery with zigzag patterns made by a series of distinct jabs rather than continuous lines. The culture of this name was an Early/Middle Neolithic culture of west central Europe, that developed directly out of the Linear Pottery culture, c. 4000–3800 BC. Bohemia, southwest Poland, Bavaria, and central Germany were its locale. The culture had longhouses which were slightly trapezoidal. [Stichbandkeramik, Stroke-Ornamented Pottery culture]

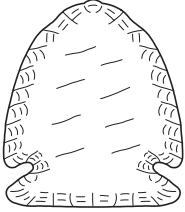


Striking platform

**strop:** a leather strap for sharpening a razor.

**structured deposition:** material entering the archaeological record through specific activities or behavior patterns, and not randomly.

**studded:** pertaining to pottery decorated by adding pellets of clay to its surface. [studded pottery]



Stunner

**stunner:** an arrowhead with a rounded tip rather than a point, named for the speculation that it was shot with a bow and arrow to merely stun or daze an animal rather than to penetrate or kill. [bunt]

**stupa:** a Buddhist monument consisting of a circular or hemispherical mound with a domelike casing of stone, often tiled, and intended to contain relics of the Buddha or a Buddhist saint. Existing in China, Japan, Korea, India, Java, and Southeast Asia, stupas are often the focus of a monastery. They are surrounded by a decorative railing showing the Buddha's life and mythological figures. The Mauryan emperor Asoka is said to have built 84,000 stupas, including the most famous at Sanchi (Madhya Pradesh, c. 2nd century BC). Hindus of the Jainist sect built stupas commemorating saints.

**S-twist:** cordage ply twisted to the maker's right.

**style:** any distinctive and therefore recognizable way in which an act is performed and made. In archaeology, stylistic areas are area units representing shared ways of producing and decorating artifacts.

**stylistic analysis:** artifact analysis focused on form and function as well as the decorative styles used by the makers, used very often for ceramics.

**stylistic attribute:** well-defined local variations in artifacts that may reflect territorial boundaries; characteristics/attributes of an artifact that relate to its surface appearance, such as color, decoration, and texture – leading to stylistic classifications. [stylistic boundary marker]

**stylistic seriation:** organization of artifacts or other data by sequence according to changes over time in their stylistic attributes; a relative age determination technique.

**stylistic type:** an artifact type based on stylistic distinctions.

**stylus:** pointed writing instrument made from a variety of materials: reed stem, bone, ivory, or metal (iron, bronze, silver). The sharpened implement is shaped like a pen with a wedge-shaped tip and one end flattened like a spatula; the latter served either to spread the wax on a writing tablet or to erase by smoothing. The stylus was used in ancient times as a tool for writing on parchment or papyrus. The early Greeks incised letters on wax-covered boxwood tablets using a stylus. A stylus was also used for impressing cuneiform writing into wet clay tablets, which were then baked. [stilus; styli, styluses (pl.)]

**subassemblage:** a grouping or association of artifacts, based on form and functional criteria. A subassemblage is assumed to represent a single occupational group within a prehistoric community. [sub-assemblage]

**Sub-Atlantic:** last of the five postglacial climate and vegetation periods of northern Europe, beginning c. 1500 BC (according to pollen analysis, though radiocarbon dating gives a date of c. 225 BC). It is a division of Holocene chronology (10,000 years ago to the present). The Sub-Atlantic interval followed the Sub-Boreal climatic interval and continues today. It is a subdivision of the Flandrian, which was thought to be wet and cold, a trend started in the preceding Sub-Boreal period. At the beginning of the period there was a dominance of beech forests and the fauna was essentially modern. During the Iron Age, pollen analysis shows evidence of intensified forest clearance for mixed farming. Sea levels have been generally regressive during this time interval, though North America is an exception.

**Sub-Boreal:** one of the five postglacial climate and vegetation periods of northern Europe, occurring c. 3000–1500 BC or, according to some, to AD 1, based on pollen analysis. The Sub-Boreal, dated by radiocarbon methods, began c. 5100 years ago and ended about 2200 years ago. It is a division of Holocene chronology (10,000 years ago to the present). The Sub-Boreal climatic interval followed the Atlantic and preceded the Sub-Atlantic climatic interval. It was characterized by a cooler and moister climate than that of the preceding Atlantic period. It is a subdivision of the Flandrian, starting with the elm decline. The frequencies of tree pollen fall and herbaceous pollen rises, representing man's invasion of the forest in the Neolithic and Bronze Age. It is correlated with pollen zone VIII. The Sub-Boreal forests were dominated by oak and ash and show the first evidence of extensive burning and clearance by humans. Domesticated animals and natural fauna were abundant.

**Submycenaean:** a phase between the late Helladic and the Protogeometric periods on mainland Greece, known from its pottery found in cemeteries in Attica and from sites in central Greece and the Peloponnese. It is dated c. 1050–1020 BC. Pottery was the first art to recover its standards after the Dorian invasion and the overthrow of Mycenae. Athens escaped these disasters and in the ensuing dark age became the main source of ceramic ideas. For a short time Mycenaean motifs survived on new shapes – the Submycenaean ware. It gave way to the Protogeometric (c. 1020–900 BC) style by converting the decaying Mycenaean ornament into regular geometric patterns.

**subtractive technology:** any manufacturing process in which artifacts take form as material is removed from the original mass. Flint knapping is a subtractive technology.

**Sue ware:** bluish-gray, high-fired pottery of the Kofun, Nara, and Heian periods in Japan (5th to 14th centuries AD), derived from Kaya pottery of the Old Silla period in Korea. A large number of vessels were

made on a mechanical wheel, and fired in a kiln at about 1100°C; the blue-gray color resulted from the oxygen-reduced atmosphere in the kiln towards the end of the firing process. By the 6th century, Sue pottery was mass produced at many centers, with the emphasis on specialized ceremonial vessels, then on utilitarian pots and dishes for the elite, and finally on storage and cooking pots for the general population. When it was first imported from Korea, it was deposited in mounded tombs of the Kofun period.

**sumatralith:** uniaxially worked discoid stone tool, often made from a thin slice of the cortex of a large pebble. It is found in Southeast Asia and northern Sumatra, and is characteristic of some Hoabinhian assemblages.

**sun disk:** decorative symbol for the sun; an ancient Near Eastern symbol consisting of a disk with conventionalized wings emblematic of the sun god (as Ra in Egypt). It was also used frequently throughout the European Bronze Age. [sun disc]

**sunbaked:** of pottery, baked or hardened by exposure to sunlight and not fired. [unfired]

**superimposition:** application of glass on top of other glass surfaces, including methods such as threading, banding, quilting, and casing.

**superposition:** principle that artifacts found at a lower level of a site pre-date those at a higher level; the order in which sedimentary layers are deposited, the highest being the youngest.

**sur enclume:** bipolar or bidirectional backing of a stone tool; backing produced by force from two directions.

**surface find:** an artifact found on the surface of the ground.

**surface finish:** in the study of ceramic artifacts, the mainly decorative outer elements of a vessel.

**surface survey:** a method of data collection in which archaeological finds are gathered from the ground surface of sites and then evaluated. Also, the study of the distribution of surviving features, and the recording and possible collecting of artifacts from the surface. Surface surveys help to establish the types of activity on the site, locate major structures, and gather information on the most densely occupied areas of the site that could be most productive for total or sample excavation. There are two basic kinds of surface survey: unsystematic and systematic. The former involves fieldwalking, i.e., scanning the ground along one's path and recording the location of artifacts and surface features. A systematic survey is less subjective and involves a grid system that is walked systematically, thus making the recording of finds more accurate. A surface survey usually includes the mapping of features. [site surface survey]

**surface treatment:** any modification made to the surface of pottery for either technological or functional purposes. The terms used are: wiped,



smoothed, burnished, knife-trimmed, fingered, throwing marks, tin glazed, salt glazed, copper-stained glaze, mica slipped/dusted, slipped white, wheelmade, or molded.

**Surrey white ware:** a style of medieval pottery made in Surrey from c. 1300 AD, with an off-white or buff-colored fabric, possibly with a patchy green glaze, though later on thick green and yellow glazes were used. The main forms were cooking pots, cauldrons, skillets, pipkins, jugs, jars, and pitchers.

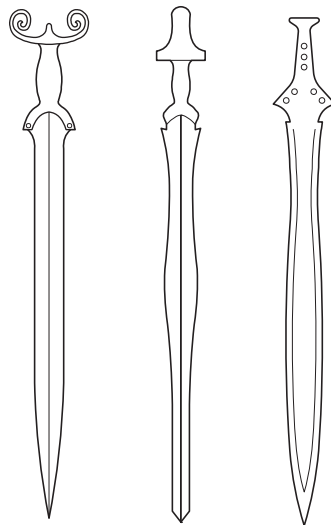
**Suswa:** an early pastoral Neolithic pottery tradition found only in highland Kenya, dating to 4860 bp at Enkapune ya Muto. [Salasun]

**swan's neck pin:** style of bronze or iron pin of the 1st millennium BC British Isles, with three bends in the upper part to make an S-shaped head.

**Swiderian point:** type of stone point made on a blade and having a stemmed base flaked on both sides. It is characteristic of the Swiderian industry of Poland (Upper Paleolithic, c. 11,000–9000 BP).

**Swieciechow flint:** a variety of flint from the Holy Cross Mountains of central Poland. It is dark gray to black with flecks of white or light gray. It was exploited primarily by communities of the Funnel Beaker culture and distributed over a broad area in the Bug, Vistula, and Oder drainage basins. Commonly found in the form of very large blades (up to 30 cm or 1 foot long) and axes.

**sword:** a weapon evolved from daggers in the Bronze Age, becoming longer and made with different kinds of grips. The sword was used for slashing and thrusting and has a broader blade than a rapier, plus a flanged hilt. Single-edged swords are rare and they are more often called sabers or falchions. Sword classifications are based on the form



Antenna

Hallstatt

V type

of the hilt and the shoulder. Swords probably developed in Hungary and then spread to the Aegean, where they are found in shaft graves at Mycenae c. 1650 BC, and the rest of Europe and western Asia. From then until the development of firearms it remained one of the main weapons of war.

**symbol:** one item used to stand for or represent another – as in the case of a flag, which symbolizes a nation.

**Symbolkeramik:** pottery ware of the Spanish Copper/Early Bronze Age of Almeria, as at Los Millares, decorated with stylized designs, especially oculi (rayed sun) motifs. The designs are thought to hold symbolic meanings.

**symmetry:** a property of design based on the spatial position of the geometric figure(s) constituting the fundamental part of the design, and on the movement of the figure(s) across a line or around a point axis.

**symmetry analysis:** a mathematical analytical approach to the decorative style of symmetry. Patterns are divided into two distinct groups or symmetry classes: 17 classes for those patterns that repeat motifs horizontally, and 46 classes for those that repeat them horizontally and vertically. Such studies suggest that the choice of motif arrangement within a particular culture is very important.

**synchronic:** pertaining to phenomena at one point in time, occurring simultaneously or at the same time; referring to a single period of time. This approach is not primarily concerned with change and often refers to the correlation of events or surfaces of stratigraphic units. [*see* diachronic]

# T

**taap knife:** a type of saw knife used in Western Australia. It was made of small stone chips mounted in a row on a wooden handle.

**tablet:** any flat surface for inscriptions, especially those on which cuneiform inscriptions were written. Tablets were normally of clay but were also made of stone or metal. The shape and size varied according to the nature of the inscription and the period when the tablet was inscribed. An impressed tablet is one bearing notations impressed with tokens or the blunt end of a stylus. These tablets were referred to in literature as numerical tablets as they noted units of goods. Incised and pictographic tablets bear notations traced with the sharp end of a stylus; these two types of tablets had signs in the shape of the things they represented. The earliest known books are the clay tablets of Mesopotamia (and the papyrus rolls of Egypt) dating from the early 3rd millennium BC. [clay tablet]

**tack:** a small nail in cut or round form, used to fasten carpet or fabric to wood and for similar light fastening jobs.

**talisman:** a charm or fetish thought to produce unusual, extraordinary happenings. The object often bears a sign or engraved character and is thought to act as a charm to avert evil and bring good fortune. A talisman may be worn to protect a person from dangers.

**Tana ware:** pottery of early Swahili communities of the late 1st millennium AD, found from the Lamu Archipelago off the Kenyan coast as far south as Vilanculos Bay in Mozambique, as well as on the islands of Zanzibar, Pemba, Comoros, and Madagascar. [Early Kitchen ware, Swahili ware]

**tang:** narrow projection or prong from the base of a tool or weapon that could be used to secure it to a handle or shaft.

- tanged point:** a projectile point, typically triangular or leaf-shaped, with a small projection at the base for attachment to a shaft.
- tank:** a large container or reservoir for liquids or gases.
- tankard:** a large drinking cup, usually with a single handle and a hinged cover and slightly angled side walls. [mug]
- t'ao t'ieh:** Chinese term for a Neolithic design put on jade objects of the Liangzhu culture and then used on bronze in the Shang period. In the Shang (18th to 12th century BC) and Zhou/Chou (1111 to c. 900 BC) dynasties, it was a zoomorphic monster mask seen full face with a gaping mouth and no lower jaw, and the eyes, ears, and horns placed symmetrically on either side of a vertical frontal line. The t'ao t'ieh often consisted of two kui (dragons facing each other, also symmetrical, with the body in profile, a winding tail, and clawed feet). The t'ao t'ieh is the most important of a number of such patterns used to decorate the bronze vessels. [t'ao t'ie, taotie]
- tap:** an object inserted into a barrel to allow liquid to be drawn from it.
- tapa:** paperlike bark cloth of the Pacific Islands made by soaking and then beating the inner bark of the paper mulberry tree. It was used for paintings in Oceanic arts.
- Tassilo Chalice:** copper-gilt chalice of Kremsmünster Abbey, Austria, which has survived from c. AD 778–788. It is an outstanding and original object, possibly made by Northumbrian craftsmen, decorated with a combination of Hiberno-Saxon ornament typical of the period. The chalice is cast in bronze overlaid with gilt and silver Niello engravings.
- Tating ware:** distinctive type of ceramic pitcher probably made in the Rhineland during the 8th century AD. It is readily recognizable because it was decorated with applied tin foil. Tating ware was widely traded to sites along the North Sea and English Channel coasts and beyond.
- tazza:** a cuplike vessel with a stem and foot, light-colored fabric, and decorated with bands of frilling – possibly used as lamps or in rituals. [tazzae (pl.)]
- teapot:** a pot with a handle, spout, and lid, in which tea is prepared.
- technofact:** an artifact that was used for a practical function, such as providing food, shelter, or defense, rather than connected to social or ideological activity. The term is also more generally applied to archaeological data resulting from past technological activities.
- technofunction:** the use of an artifact for practical purposes; e.g., garments offering warmth or protection. [technofunctional, technomic (adj.)]
- technological analysis:** study of technological methods used to make an artifact.
- technological attribute:** characteristics of an artifact that are the direct result of how it was made (manufacturing methods) or due to the

raw material used (constituents) – which lead to technological classifications. [technological style, technological type]

**technology:** one of the three basic components of culture; the systematic study of techniques for making and doing things. It is the means by which humans have developed things to help them adapt to and exploit their environment. By virtue of his nature as a toolmaker, humans have been technologists from the beginning, and the history of technology encompasses the whole evolution of humans.

**technomic:** a category of material culture inferred to have served principally technological ends, such as cutting or piercing.

**technomic artifact:** a tool used primarily to cope with the physical environment.

**tegula:** any flat rectangular roof tile with flanges running down the longer sides.

**tegula mammata:** a rectangular tile with conical projections or flanges at each corner on one side, fixed to walls with clamps in order to form cavities through which hot gases from a hypocaust circulated.

**temmoku:** dark brown or blackish Chinese stoneware made for domestic use mainly during the Sung dynasty (AD 960–1279) and into the early 14th century. The stoneware bowls had a lustrous iron or manganese black or brown glaze. This is a Japanese term applied to Chinese bowls used in the tea ceremony until the late 16th century. Some Japanese bowls are called temmoku solely on account of their similarity of shape and do not have the glaze. These bowls were highly valued when the tea ceremony first started (15th century) and were classified according to seven types of glazing decoration. In China, this stoneware is called Chien ware. [Temmoku ware, Tenmoku ware]

**temper:** coarse material such as sand or shell added to fine pot clay to make it bond during firing. [tempering agent; tempering (adj.)]

**tempering:** a process for hardening or strengthening (metal or glass) by the application of heat or by heating and cooling.

**Temple Mound period:** time period from c. AD 800 to European colonization when Native Americans of the Mississippian tradition built large flat-topped earthen structures (platform mounds) designed to function as artificial mountains elevating their temples above the landscape. This period followed the Burial Mound period and is the most recent period of a chronological construction relating to the whole of eastern North American prehistory (formulated by J. A. Ford and Godon Willey). The periods are: Paleoindian, Archaic, Burial Mound, and Temple Mound. The Temple Mound period is divided into two sub-periods: Temple Mound I (AD 800–1200), the establishment and rise of the Mississippian tradition; and Temple Mound II (1200–1700), the peak and then demise of the Mississippian.

**temporal context:** age or date of an archaeological find and its temporal (time) relation to other objects in the archaeological record.

**temporal type:** a morphological (structure, form) type that has been shown to have temporal significance. [time-marker]

**tendrils:** in early Celtic art, a plant motif of running loops or spirals.

**tenoned:** joined by a knob (tenon) fitting into a socket or mortise, and specifically said of the end of a piece of wood shaped to fit into another piece.

**tenoned mosaic:** a mosaic design formed when a series of stone sculptures are set into the exterior facade of a masonry building, such as by the Maya at Copán, in Honduras. The front of the stone was carved with a face or symbol, the middle and rear parts formed a long tenon that anchored the stone in the interior fill of the building. The mosaic design also carried a symbolic message.

**tenterhook:** a hook used to support cloth on a tenter frame, after pulling, to dry the cloth.

**Tepeu:** Late Classic phase dated to AD 600–900, one of two Lowland Maya chronological phases or cultures (the other being the Tzakol, Early Classic, c. AD 250). It is defined by a complex of cultural materials, especially the polychrome vase; the typical shape is a tall, cylindrical vessel with a flat base and decorated with life scenes often involving mythological creatures and a band of hieroglyphs. The Tepeu culture saw the full florescence of Maya achievements. It ended with the downfall and abandonment of the central subregion.

**termination:** cross-sectional shape of the distal end of a flake – which can be feathered, hinged, plunging, or stepped.

**terminus ante quem:** Latin phrase meaning “the end before which” – that is the date before which a stratum, feature, or artifact must have been deposited. The term is used either to define a relative chronological date for artifacts or to provide fixed points in a site’s stratigraphy. Sometimes a deposit can be securely dated by material found in it – for example, coins dating to the 2nd century AD found above a layer would provide that deposit with a *terminus ante quem* of the 2nd century AD. In some circumstances, such a “date” may be combined with a *terminus post quem* from an earlier phase to produce a date range for the intervening deposit. This type of dating is used to show that something cannot be later than, or earlier than, something else.

**terminus post quem:** Latin phrase meaning “the end after which” – that is the date after which a stratum, feature, or artifact must have been deposited. The term is used either to define a relative chronological date for artifacts or to provide fixed points in a site’s stratigraphy. If a deposit contains dateable coins or pottery, then deposits stratigraph-

ically later must be of a later date than that given by such material; the dated layer gives a *terminus post quem* for the undated deposit. In some circumstances, if combined with a *terminus ante quem*, the deposit may be dated securely between the two.

**terra cotta:** literally “baked earth” or “baked clay,” terra cotta is fired clay that is incompletely fired and still porous. It was used to make artifacts such as vessels, figurines, tablets, spindle whorls, loom weights, or net sinkers. Much ancient pottery and other fired clay objects were made of terra cotta. It is also found as a structural material in hearths and kilns, where the clay which was used to build them has been baked in use. A special variety of terra cotta called “daub” was produced only by accidental burning. Today, the term is applied to statuary, building materials, etc. rather than the better fired modern pottery. [terracotta]

**terra nigra:** a black or silver-gray colored Gallo-Belgic ware made in Gaul c. 1st century BC to mid 1st century AD, usually with the name of the potter or workshop stamped on the inner surface of the base. Terra rubra is the same as this, but red in color.

**terra sigillata:** a type of fine, mass-produced Roman pottery of the imperial period, usually red-glazed or red-glossed and moldmade, to which stamps bearing the name of the potter were applied. Made in several centers, it was exported through western Europe and the Mediterranean; it can be a very accurate chronological indicator. The best known is the plain and relief-decorated pottery of the 1st to 3rd centuries AD from southern, central, and eastern Gaul (called Samian ware) and also made in Italy and Germany. Another type is the Arretine of c. 30 BC to AD 50. Generically related or derivative of terra sigillata are the late Roman Argonne or Marne wares, and North African (African red slip) and eastern red wares.

**terret:** a ring through which the driving reins of a chariot or horse-drawn vehicle are passed. [terret ring]

**Tertiary:** the geological period following the Mesozoic (Secondary) era, constituting the first of two periods of the Cenozoic era, the second being the Quaternary. It comprises the epochs Paleocene, Eocene, Oligocene, Miocene, and Pliocene. It extended from the end of the Cretaceous to the beginning of the Quaternary, from 66.4 to 1.6 million years ago (mya). The Miocene and Pliocene epochs were important in hominid evolution. Some prefer not to use the term Tertiary and instead divide the interval into two periods, the Paleogene period (66.4–23.7 mya) and the Neogene period (23.7–1.6 mya). Most of the existing mountain belts and ranges, notably the Andes, the Rockies, the Alps, the Himalayas, and the Atlas Mountains, were formed either partly or wholly during the Tertiary. The emergence and sub-

mergence of land bridges between continents, especially between North and South America, Eurasia and Africa, and Asia and North America, critically affected the migration of faunas and floras. The earliest generally accepted hominid fossils, those of *Australopithecus*, come from rocks of Pliocene age (5.3–1.6 mya) in eastern Africa.

**tertiary flake:** a flake having no cortex. [interior flake, noncortical flake, production flake]

**tessellated:** pertaining to a Roman floor or other surface decorated with tesserae; inlaid or mosaic work composed of tesserae.

**tessera:** a piece of stone, colored glass, or tile used with others to make mosaic patterns on floors, walls, ceilings, etc. The pieces were set in cement by Roman and later craftsmen. Small cubes of up to 2.5 cm (1 inch) in size were used to make the floors. In the Roman period, tesserae, sometimes inscribed, were in circulation for various purposes. These were small tokens of bronze, lead, terra cotta, and bone. The earliest tesserae, which by 200 BC had replaced natural pebbles in Hellenistic mosaics, were cut from marble and limestone. Stone tesserae dominated mosaics into Roman times, but between the 3rd and 1st centuries BC tesserae of smalto (colored glass) also began to be produced. An important variety of glass tesserae, appearing first in Roman mosaics of the 4th century AD, were those made with gold and silver leaf. [tesserae (pl.); tessellated (adj.)]

**tetrastyle:** four columns forming the façade of a Classical building such as Naiskos; also, four columns placed in a square pattern, such as at the four corners of an impluvium within the atrium of a Roman house.

**textile:** fabric produced by spinning and weaving fibers, whether of animal or vegetable origin. Fragments may be preserved by waterlogging and tanning, by desiccation, or by corrosion of copper or bronze lying alongside. More commonly, items such as spindle whorls, weaving combs, and loom weights attest the existence of textile production.

**texture:** 1. Size, shape, and arrangement of grains or crystals in rocks and also a property of soil, sediment, or similar material. Soil texture class names are assigned to indicate specific ranges of percentage of sand, silt, and clay. As with particle size, several different systems of texture classification are in use, including the British Standard 1377 system and the United States Department of Agriculture system. For rocks, there are also classification schemes. The texture of artifacts is one property used to help identify the source material, conditions, and environment of deposition or crystallization and recrystallization, and subsequent geological history and change. 2. In ceramic analysis, the appearance of the ceramic paste as determined by clay particle size.

**Thames pick:** a large, coarsely chipped Mesolithic tranchet ax and other long flint tools with tranchet-shaped points found in the River Thames.



**thatch:** traditional style of roofing used in many parts of the world at different times whereby bundles of organic material such as reed, straw, heather, turf, or ling are tied together over a wooden frame with the long axis of the plant fiber parallel to the slope of the roof to provide good weather-proofing.

**thatch weight:** heavy stone or ceramic object, usually with a perforation or groove so that it can be attached to a rope or net, used to hold roofing thatch in place.

**therianthrope:** depiction in rock art combining aspects of two or more species, especially a human and an animal.

**Thericleian ware:** a type of decoration of the 5th to 3rd centuries BC used on silver, terebinth wood (pistachio), and clay. It is characterized by ribbing and a black color. Therikles, a Corinthian potter, was said to have developed the technique.

**Thetford ware:** a wheel-turned late Saxon pottery made near Thetford in Norfolk, England, from the late 9th century to early 12th century. The fabric is hard, sandy, and gray to buff; the mass-produced wares were cooking pits and jars with limited rouletting and applied thumb decoration.

**thimble:** a small metal, clay, or bone cap to protect the finger while sewing.

**Thin Orange pottery:** a thin-walled, orange-fired ware with a distinctive mica schist temper and a decoration of incised and dotted patterns of Mesoamerica. It was introduced in the late Pre-Classic period and widely traded in Mesoamerica during the Classic period. It has been found in Colima, Jalisco, Nayarit, Kaminaljuyú, Copán, Monte Albán, and Teotihuacán. It is regarded as evidence of central Mexican influence, although its probable point of origin is the Valley of Puebla. It should not be confused with the early Post-Classic Fine Orange ware. [Thin Orange ware]

**thinning:** decreasing the thickness of an artifact, or a portion of an artifact, by extensive flaking. Basal thinning refers to the removal of thickness from the hafting area by means of flake removal.

**Third Intermediate Period:** a chronological phase (1075–656 BC) following the New Kingdom, when Egypt was divided. The north was inherited by the Tanite 21st dynasty (c. 1075–950 BC), and much of the Nile Valley came under the control of the Theban priests.

**Three Age System:** the division of human prehistory into three successive stages – Stone Age, Bronze Age, and Iron Age – based on the main type of material used in tools of the period. The system was first formulated by Christian J. Thomsen in 1819 as a means of classifying the collections in the National Museum of Denmark. The scheme became progressively elaborated by dividing the Stone Age into Old and New (Paleolithic and Neolithic). A Middle Stone Age or Mesolithic

was later added. The further subdivisions Early, Middle, and Late of the Paleolithic (Lower, Middle, and Upper) were introduced, and a Copper Age was inserted between the New Stone and Bronze Ages. The ages are only developmental stages and some areas skipped one or more of the stages. At first entirely hypothetical, these divisions were later confirmed by archaeological observations. It established the principle that by classifying artifacts, one could produce a chronological ordering.

**throat:** base of a neck or collar on a vessel; the point of maximum diameter restriction of a neck or collar.

**throw:** to form a ceramic object on a potter's wheel, making use of the centrifugal force produced by rapid rotation of the wheel. [throwing (n.)]

**thrusting spear:** a handheld spear used for stabbing rather than throwing.

**thumbnail scraper:** a small convex scraper the size and shape of a thumbnail, found in both Pleistocene and Holocene contexts in Australia. Finely worked examples are part of the Australian Small Tool tradition. They are increasingly reported from Pleistocene sites and are a distinctive feature of southwestern Tasmanian Pleistocene and Victoria assemblages from about 24,000 years ago.

**Tiefstichkeramik:** a style of pottery decoration used by the Funnel Beaker culture of Germany and Holland c. 3000–2700 BC. The decoration consists of short, deeply incised bands and zigzags. The style is associated with the hunebed tombs.

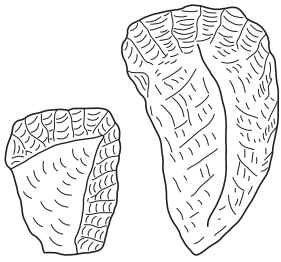
**tile:** thin, flat slab or block used structurally or decoratively in building.

**time-marker:** a temporally significant class of artifacts defined by a consistent clustering of attributes. [horizon marker, time marker]

**tin glaze:** the process of adding tin oxide to other ingredients during the glazing of pottery to produce an opaque, white-enameled effect. It was used from c. 1000 BC by the Assyrians; in the 8th to 9th centuries AD, Persian and Islamic potters rediscovered the technique and it was transmitted to Spain, Italy, France, and Holland. Tin glaze was probably first used to hide faults of color in the body, for most clays contain a variable amount of iron that colors the body from buff to dark red. Tin-glazed wares look somewhat as though they have been covered with thick white paint. [tin-glazed (adj.)]

**tinder box:** a box containing tinder (any dry inflammable material), and usually also flint and steel for lighting fires.

**Ting:** a type of cream-colored Chinese porcelain made in China, mainly in the form of tripod bowls, during the Sung (AD 960–1279) and Yüan (1280–1368) dynasties. Ting ware may be either plain or decorated with incised, molded, impressed, or carved designs. Characteristic forms include bowls, cups, and dishes. Fired upside down, many pieces, especially bowls, have an unglazed rim banded with metal. [Ding, Ting ware]



Thumbnail scrapers

**tint:** a variation of a color produced by adding white to it, characterized by low saturation.

**tip:** top and bottom of a point or blade.

**toggling harpoon:** a type of detachable harpoon head attached to shaft by a line and float.

**Togolok:** Late Bronze Age sites in the Murghab delta, Turkmenia, with a material culture similar to the Bactrian Late Bronze Age. Togolok is also a chronological phase, around the second quarter of the 2nd millennium BC, with continuity to the preceding Gonur phase.

**token:** small artifacts, generally of clay, made into one of 16 types: cones, spheres, disks, cylinders, tetrahedrons, ovoids, rectangles, triangles, biconoids, paraboloids, bent coils, ovals, vessels, tools, animals, or miscellaneous. Such objects were used on Early Neolithic sites in western Asia as counters to keep records of goods. A plain token was typical of the periods between 8000 and 4300 BC and after 3100 BC. The shapes were mostly restricted to cones, spheres, disks, cylinders, and tetrahedrons; the surface was usually plain. Complex tokens were typical of the 4th millennium BC temple administration and include all 16 types of tokens. Complex tokens are characterized by an extensive use of markings – linear, punctuated, or appliqué. Researchers (especially Diane Schmandt-Besserat) suggest that tokens were the precursor of writing as they began to be placed within clay bullae (envelopes) that were marked with a cylinder seal representing the content of the bullae. This led to writing numbers on a tablet, and then to words.

**tomahawk:** a light ax formerly used as a tool or weapon by Native Americans.

**tombstone:** a stone placed across a grave. [gravestone]

**tone:** a mixture of light (white) and shade (black) with a color.

**tongs:** a tool with two movable arms that are joined at one end, used for picking up and holding things.

**tongue chape:** elongated metal fitting with a triangular outline which fit on the end of a scabbard to prevent the tip of the sword cutting through the leather.

**tool:** any existing physical object that is in some way fashioned or altered by humans and employed for a specific task or purpose. Tools made of stone included axes, adzes, arrowheads, spearheads, daggers, knife blades, scrapers, borers, burins, picks, etc. The first tools date back to c. 2,600,000 years ago, the beginning of the Paleolithic age, and are different-sized pebble tools called choppers. The chopper was the only tool used by people for almost 2 million years, until the appearance of the hand ax, a superior (and sharper) version of the chopper.

**toolkit:** a term for all the tools used by a given culture for its technology (spatially patterned), or for a set of tools used together for a specific task (functionally patterned). [tool kit]

**Toprakkale:** site on Lake Van, eastern Anatolia (Turkey), which was the center of the Urartian state, c. 850–600 BC. There is a large temple complex consisting of a Urartian fortress, storerooms, and residential area, including bronze, carved ivory, and silk artifacts. There are other temples, storerooms, etc. in the area in which some wall paintings remain. The walls of Toprakkale, erected in the 8th century BC, were of cyclopean masonry and sloped slightly inward, perhaps as a defense against earthquakes. Artifacts show a high level of artistic achievement, in bronze, gold, silver, and ivory. Excavations have also uncovered a basalt floor inlaid with limestone and marble, parts of a decorated marble frieze, and brilliantly polished red pottery vessels. Toprakkale is also the name of a fine burnished red ware of the Urartian period. [Topra Kaleh]

**torc:** a neckring, of gold or bronze, and penannular in shape (an almost-complete ring). Examples are made of spirally twisted metal and appeared in the Early Bronze Age of central Europe and continued until the Roman occupation, being particularly popular among the Celts. They were very common in the La Tène Iron Age, and examples made of gold, silver, and electrum occur in graves and hoards. [torque]

**Torksey-type ware:** a style of late Saxon pottery of central England, dating from c. AD 850 to 1150 and made using a fast wheel at workshops around Torksey, Lincolnshire.

**torsade:** a decorative band in which two ribbons twist in a regular pattern around a row of circles. In the double torsade, three ribbons twist around two rows of circles.

**tortoise core:** in stone toolmaking, a distinctive core having the shape of a tortoise shell and characteristic of the Levalloisian culture. A nodule of flint is prepared to form a core resembling a tortoise, from which flakes are struck.

**totem:** any object from the natural world, usually an animal, with which a particular clan or tribe considers itself to have a special association or even blood relationship. It is also the term for a representation of such in an emblem or badge or a group of people within a Native American nation who share the same totem.

**touchstone:** a stone used to test how genuine an object is by rubbing the object against the stone, particularly used for testing gold and silver.

**tournette:** a turntable that was rotated manually to assist in the manufacture of a pot. They were used in Mesopotamia from about 5000 BC. It was a forerunner of the potter's wheel (c. 3400 BC).

**toy:** an object for a child to play with, typically a model or miniature replica of a thing.

- trace:** any physical characteristic of an artifact that can be described.
- traceology:** study of the traces left by use on the cutting edges of stone tools, with the aid of a microscope.
- tracer:** a tool for marking out or engraving designs, used to outline the raised areas on a surface. In metalworking, a tracer was frequently used to outline the raised areas on the surface of repoussé metalwork. A tracer is worked by hammering.
- trade:** the transmission of material objects from one society to another; the buying and selling or exchange of commodities between nations or trading parties. Trade is a descriptive cultural model used in the culture historical approach.
- trait:** any element of human culture – material or nonmaterial – or technology. This term can be used for any individual artifact or aspect of man's culture, ranging from monument or artifact types to social or ritual practices.
- tranchet:** a large Mesolithic or Neolithic chisel-ended flint artifact with a sharp straight cutting edge, produced by the removal of a thick flake at a right angle to the main axis of the tool. The technique was used for the manufacture of axes and adzes and allowed a blunted tool to be resharpened by removing another flake from across the edge. The tranchet technique has two definitions: (1) the removal of a large flat flake from the tip of a biface to form a straight cutting edge from the edge of the tranchet flake scar; or (2) the technique used to create or resharpen the ax or adze's cutting edge. [tranchet ax, tranchet axe, tranchet flake, tranchet technique]
- transfer printing:** a technique, invented in England in the 1750s, of decorating enamels and ceramics with engraved designs that are printed on to paper using a special ceramic ink. The paper is then pressed against the surface of the enamel or ceramic and the design thus transferred.
- transitional:** a term used to describe an artifact that was utilized and manufactured across two or more cultural periods.
- translucent:** chipped material that transmits a certain amount of light, usually indicating high quality.
- transverse arrowhead:** a type of flint or stone projectile tip, having a trapezoidal outline with the wider straight end forming the leading edge, and of the later Mesolithic in northern Europe. [petit-tranchet arrowhead]
- transverse flaking:** a technique similar to oblique flaking, but the flake scars lie at right angles to the central line of the artifact.
- transverse line:** an imaginary line extending across the center of a projectile, halfway between the distal tip and the basal edge.
- transverse plane:** plane parallel to the stance of a pot or perpendicular to the longitudinal axis in a piece of wood.

**transverse section:** a cross-section where the cut is made parallel to the base line of the artifact drawing and the outline of the section keeps the front surface at the top.

**transverse striae:** linear mark, ridge, or groove situated or extending across something.

**trapeze:** a geometric microlith whose outline has four sides – two lateral, nearly parallel sides with the longer one being the cutting edge and the shorter opposite edge backed or not backed; the remaining distal and proximal sides are backed obliquely at an angle to both the cutting edge and to each other.

**travois:** native American vehicle consisting of two joined poles (transversely connected wooden shafts) pulled by a horse or dog (dragged at an angle to the ground). Found in North America, it is believed to be the first vehicle used by humans.

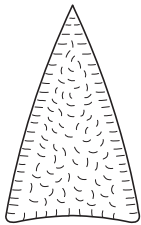
**tray:** a thin flat board or plate usually with a raised edge on which things can be carried.

**treasure trove:** in law, treasure found hidden in the ground, etc., but of unknown ownership. In Britain, treasure troves are the property of the State, though sometimes they are in part returned or recompensed to the owner of the land. To be declared treasure trove by a coroner's inquest, the items must be of gold or silver, and must have been lost or hidden with the intention of recovery by someone who is no longer traceable. In these circumstances, the Crown takes possession, rewarding the finder with the market value or with the object itself if it is not required for the national collections.

**tree-trunk coffin:** a tree trunk cut longitudinally and hollowed out for use as a coffin, with the other side used as the lid, of the British Isles about the early 2nd millennium BC. [monoxylous coffins]

**trenail:** a wooden cylinder or dowel used for pinning planks or timbers together.

**trencher:** a shallow dish or plate used to serve main meals off or to serve sweetmeats, these usually being painted with devices and riddles.



Triangular

**triangle:** a geometric microlith that has one side with a sharp cutting edge and two other sides shaped by backing.

**triangular:** a projectile, knife, perform, or blade that has three sides or roughly has the shape of a triangle.

**triangular loom weight:** a small triangular block of baked clay with parallel sides and perforations through the corners for attachment to the warp threads on an upright loom. Found from the later Bronze Age and Iron Age in the British Isles.

**triaxial body:** a modern prepared clay body consisting of a clay, an aggregate or filler, and a flux.

**tribunal:** in Roman architecture, a raised platform in a basilica on which the magistrates' seats were placed. It was also the rostrum, or raised platform, from which the commander of a fort spoke to his assembled men or dealt out justice.

**trident:** a weapon with a long shaft and a three-pronged head.

**trigonolith:** in the West Indies, a triangular or breast-shaped stone object, with or without decoration, usually representing a zemi. Small pottery or shell examples can also be found. [three-cornered stone]

**trimming:** cutting material away from the surface of a leather-hard pottery vessel with a tool, such as a lithic flake held at an acute angle to the vessel surface, to removed traces of the seam.

**tripartite urn:** an Early Bronze Age collared urn of the British Isles with a body of three distinct components or sections: a trunco-conic or ogee body, a concave neck, and a collar which is usually angled but occasionally vertical.

**triple vase:** a Roman vessel of three small jars, either attached to the top of a tubular ring-base or joined together at the body.

**tripod:** a set of three leg- or knoblike supports attached to the base of a vessel to raise it above the surface.

**tripod pitcher:** a large jug for liquids with three small legs projecting from the base for support; of the medieval period in northwest Europe.

**trireme:** earliest type of Greek warship which used a battering ram in the prow as its main weapon, and was named for the three banks of oars by which it was propelled.

**trivet:** a ceramic, stone, or metal stand on which a cooking pot or kettle is set for support or to protect a surface.

**Trojan War:** legendary conflict between the early Greeks and the people of Troy in western Anatolia, dated by later Greek authors to the 12th or 13th centuries BC and lasting 10 years. It was described in Homer's *Iliad* and *Odyssey* as occurring when Paris, son of the king of Troy, eloped with Helen, wife of Menelaus, king of Sparta. Menelaus's brother, Agamemnon, king of Mycenae, raised an army and besieged Troy.

**trolling lure:** a fishing device towed behind a moving boat.

**trumpet:** a brass wind musical instrument sounded by lip vibration against a cup mouthpiece. It has been made of horn, conch, reed, or wood, with a horn or gourd bell, as well as the modern brass instrument. The metal trumpet dates from the 2nd millennium BC in Egypt, when it was a small ritual or military instrument sounding only one or two notes. In the Late Bronze Age it was made by riveting sheet bronze into the shape of a cattle horn.

**truncation:** the process that produces, and the tool type that exhibits, drastic redirection of outline in the artifact's distal or proximal area, effected by steep retouch.

**Trundholm:** site where a bronze-wheeled model of a horse pulling a disk, dated to c. 1650 BC, was found in the Trundholm bog in Zealand, Denmark. It probably represented a chariot of the sun and was deposited as a ritual offering.

**trunnion:** either of a pair of cylindrical mounting lugs or projections on the sides of a cannon or mortar, by which it is pivoted on its carriage. A trunnion is also one of a pair of laterally projecting knobs on a stone or metal blade (ax, chisel, etc.) to assist in its hafting.

**Tudor green ware:** a type of pottery made in southeastern England in the 16th century AD with thick green or yellow glaze over a light-colored body.

**tula adze:** in Australia, a hafted chisel made to work hardwoods. It is a thick, round, stone flake, usually about 5 cm (2 inches) long, with a steeply trimmed working edge opposite an obtuse-angled striking platform. They usually have a prominent bulb and convex bulbar surface. Ethnographic examples are set in gum on the end of a wooden handle or spear thrower. The edge would be resharpened until the flake became elliptical, when it would be discarded. In this form, with a heavily step-flaked edge opposite the striking platform, it is termed a “tula adze slug.” Tula adzes are restricted to more arid regions and the oldest examples come from Puntutjarpa (c. 8000–5000 BC) and are exactly like those still used by desert Aborigines. [tula]

**tulang mawas:** literally “monkey bone,” a long-shafted, socketed iron ax of Iron Age peninsular Malaysia, c. 300 BC.

**tumbler:** a flat-bottomed drinking vessel with no handle or stem.

**tumbrel:** a balance for weighing coins.

**tunnel handle:** in pottery, a handle flush with the surface of the pot. It is usually produced by piercing two adjacent holes in the wall of the vessel before firing and adding a pouch of clay inside to prevent the contents from escaping. The feature was widely used around the western Mediterranean c. 3500–2000 BC. [subcutaneous handle]

**Turin Papyrus:** a hieratic manuscript of the 19th dynasty of Egypt which lists the kings of Egypt from earliest times to the reign of Ramses II (1279–1213 BC), under whom it was written. The papyrus is now in the Egyptian Museum in Turin, Italy, in very fragmentary condition, but it is still considered the most detailed and reliable of the existing Egyptian king lists. It lists not only names but also regnal years, months, and days and also divides pharaonic history into dynasties and into three major periods – the Old Kingdom, Middle Kingdom, and New Kingdom. It was evidently copied from a more complete original. [Turin Canon, Turin Papyrus of Kings, Turin Royal Canon]

**turning:** 1. In making wooden artifacts, a reductive forming technique using a lathe to rotate a piece of wood and a mainly stationary chisel to remove material from it. 2. In pottery making, a reductive form-



ing technique using a sharp tool to remove long curls of fabric from a rotating vessel.

**turquoise:** a phosphate gemstone, sky blue to pale green, which forms as veins and nodules in the fissures of sandstone and trachyte. It was mined by the Egyptians from the late Predynastic period onwards and was almost as highly prized as jade in Mesoamerica. It was also highly prized for jewelry in western Asia and the American southwest. Turquoise was obtained from the Sinai peninsula before the 4th millennium BC in one of the world's first important hard-rock mining operations. It was transported to Europe through Turkey, probably accounting for its name, which is French for "Turkish."

**tussah:** a type of strong, coarse, tan-colored silk obtained from the cocoon of wild silkworms in China and India (the products of various Asiatic Saturniidae, such as *Antheraea paphia*).

**tutulus:** a circular bronze ornament worn at the waist by women during the Bronze Age in Denmark.

**tuyère:** a metal nozzle through which air is forced into a forge, hearth, kiln, or furnace from the bellows. In antiquity it was usually of clay, and often survives as the only evidence for a metalworking site. This short tube made of clay, through which the air from bellows could be blown into a furnace, was used to produce the high temperatures required for metalworking and smelting.

**tweezers:** small pinchers used to pluck out hairs, and for other purposes.

**twining:** basketry made with a horizontal stitch or weft; a technique of textile or basket weaving in which the wefts are inserted in pairs, and twine around one another as they embrace each successive warp. The warp is relatively rigid and the weft is relatively pliable. [twined basketry; twined (adj.)]

**twist:** the direction that cordage was rolled in its manufacture – either S-twist or Z-twist.

**tyg:** a drinking vessel with two or more handles.

**type:** a classification of artifacts based on the shared attributes of groups of artifacts or features, such as pottery types, projectile point types, or house types. The class is defined by a consistent clustering of attributes. In pottery, it is part of a standardized taxonomic classification based on stylistic attributes: modes and varieties (minimal units); and types, groups, complexes, and spheres (maximal units).

**type fossil:** a particular artifact form used to define a specific period or culture, such as an Acheulian handaxe, using a dating concept borrowed from geology. A specific artifact can serve to represent the taxon of which it is a member. Such an artifact would have a wide distribution in space but a restricted one in time. Its value lies in correlating cultural sequences over large areas, as in cross-dating. In archaeology,

- the time taken for a type to spread by diffusion must be allowed for and, if possible, calculated from outside evidence. [fossil directeur]
- type series:** arrangement of a particular form of artifact into a series, usually according to a progression of changes in its shape/form. It may provide a form of relative dating for objects as well as a means of classification.
- type–variety–mode analysis:** a taxonomic classification of pottery based on stylistic attributes that defines a hierarchy of modes and varieties (minimal units), types, groups, complexes, and spheres (maximal units). [type–variety system]
- typological method:** classification of artifacts into types to compare artifacts or features across time and space, or to determine relative dates for sites. [typology]
- typology:** study of classes with common characteristics; classification of artifacts; or systematic classification of artifacts or remains according to type, i.e., form and decoration. This is the first step in archaeological analysis and is necessary in comparing assemblages and in determining time sequences. Groups of pottery, for example, may be assembled by those with long necks, those with handles, and those with a pedestal base. Within these may be subgroups based on variations in handle shape or decoration. The relationships between similar types can sometimes be shown not merely to classify, but also to explain, their development – which is called seriation. It may show increasing complexity or functional improvement, simplification and functional decline, or change based on fashion. Typology may be associated with chronology, in that it may be possible to place groups of the same kind of material in a sequence.
- tzompantli:** skull rack on which, in the Aztec and some other Mesoamerican cultures, the skulls of sacrificial victims were displayed.
- Tz'u-chou ware:** a large group of Chinese stoneware made in the Chihli, Hopei, Honan, and Shansi provinces and decorated in bold designs with contrasting slips and later with enamels. It was produced during the Sung (AD 960–1279), Yuan (1279–1368), and Ming (1368–1644) dynasties. Vases, bottles, and other vessels were decorated with simple brushwork in brown, black, or gray on a white, cream, buff, or turquoise background; the pale background was achieved by applying a coating of slip to the body of the vessel before firing. Bold strokes, curves, splotches, concentric bands, and animals and birds were typical motifs. Another type of ornamentation consists of incisions in the slip coating that reveal the contrasting color of the body underneath. [Cizhou]

# U

**Ucayali sequence:** a 4000-year sequence of the many pottery styles that have been found at a number of sites near Pucallpa, eastern Peru.

**ulu:** a transverse-bladed Arctic knife, crescent-shaped, and usually of slate. The blade of the knife is the lower element of an inverted T and the handle is the vertical upright element.

**umbrella:** a folding circular cover on a stick held in the hand for protection against rain.

**umiak:** a large, open boat used in Greenland and by other Arctic peoples, made of seal or other animal skins stretched on a wooden (driftwood) or whalebone frame. It was called the women's boat, as opposed to the kayak – the men's hunting and fishing boat. It was paddled and was either round or elongated, like the birchbark canoe. The umiak was used by women for transporting themselves, children, the elderly, and possessions. It was also used by the men for whaling.

**unbeveled:** an edge that is not steeply flaked into a bevel.

**underglaze:** a type of colored decoration applied to raw or biscuit ware before the glaze coating is applied.

**underworld book:** pictorial and textual compositions inscribed in New Kingdom royal tombs that describe the passage of the sun god through the underworld and the sky. They probably imparted secret knowledge and included hundreds of names of demons and of deities and other beings who accompanied the sun god in his barque on his journey through night and day. The texts are in the present tense and form a description and a series of tableaux rather than a narrative. Private individuals used them in the Late Period.

**unflaked:** a face that is unaltered by applying flaking.

**unfluted:** a term referring to a projectile or tool that does not have a channel flake removed to form a flute.

- unguent flask:** a small narrow-necked vessel of a rough fabric like ceramic or glass, used for ointment or perfume in Hellenistic times. [unguent bottle, unguentarium]
- unidirectional core:** a core that has had flakes removed from only one direction.
- uniface:** a stone tool having only one side or surface flaked or chipped. [uniface tool]
- uniface bevel:** a bevel which was formed by removing steep flakes from just one face of an edge. The opposing face may have a few flat flake scars of the primary flaking or scattered retouch flake scars.
- unifacial flaking:** the removal of secondary flakes from only one surface of a stone nucleus.
- unifacial tool:** a stone tool flaked in such a way as to produce a cutting edge that is sharp on one side only.
- univallate:** having only a single rampart.
- unlooped socketed spearhead:** a large metal projectile point of the later Bronze Age in Europe, mounted on a wooden shaft by a socket cast into the base of the object.
- Unstan ware:** a type of finely made and decorated Neolithic pottery from the 4th millennium BC; elegant, round-based bowls with a band of grooved patterning below the rim, found in the northern part of the British Isles, especially the Hebrides, Western Isles, and Orkney.
- unworked:** of a stone tool, not carved.
- Upchurch ware:** a Romano-British polished and burnished black and gray ware of the Upchurch Marshes of Kent in southeastern England.
- updraft kiln:** an installation for firing pottery or burning lime with a firebox in which the fuel is positioned and burns below the chimney-like chamber in which the pots are fired.
- upholstery nail:** a nail used to fasten upholstery where fastenings will show, made with both ornamental and colored heads.
- Upper Paleolithic:** the final part of the Paleolithic period, from about 40,000 years ago to about 10,000 years ago. It was characterized by the development of bladed stone tools and regional stone-tool industries (e.g., Perigordian, Aurignacian, Solutrean, and Magdalenian of Europe), the hunting of large herd animals, human burials, the appearance of cave paintings and other art forms, and the replacement of the Neanderthals with modern humans (Cro-Magnon man). There were also localized industries in the Old World and the oldest known cultures of the New World. Upper Paleolithic industries exhibited a greater complexity, specialization, and variety of tool types, and distinctive regional artistic traditions emerged. The latter included small sculptures (clay and stone figurines, ivory carvings), monumental paintings, incised designs, and reliefs on the walls of caves.

**upright loom:** a structure on which woven cloth is manufactured, comprising two more or less vertical supports (often set in the ground) with a horizontal beam across the top. The warp threads are tied to the cross-beam so that they hang down, thus allowing the weaver to move a horizontal shed rod between alternating sets of the warp in order that a shed is opened up for the weft to be threaded through. The warp threads were tensioned by loom weights. The upright loom was commonly used in antiquity, traces of them being known in Europe from the Middle Bronze Age onwards.

**uraeus:** the coiled cobra of ancient Egypt, worn by the pharaoh on his brow, usually combined with one or other of the royal crowns, as a symbol of his supreme authority. The cobra is associated with the goddess Wadjet or with the sun, whose eye it is held to be. It is an agent of destruction and protection of the king, spitting out fire.

**Urewe ware:** a characteristic Early Iron Age pottery type of the interlacustrine region of East Africa: southwest Kenya, northwest Tanzania, Rwanda, east Zaire, and south Uganda. It dates from the last centuries BC to the first centuries AD and is the name of a tradition of the Chifumbaze complex. Urewe ware was ancestral to the varied wares of the Early Iron Age complex further south. Named after a site in southwest Kenya, the makers of Urewe ware were clearly skilled workers of iron.

**Urfirnis:** characteristic ware of the Middle Neolithic and early Helladic periods of Greece and also the name of a glaze-like paint. The pottery has a buff fabric decorated with a dark lustrous slip or glaze. The sauce boat and the askos are the most notable shapes.

**urn:** any large and decorative vase, especially one having an ornamental base and no handles, and often used for storage. It is most often found as a container for the ashes of a cremation burial, the so-called cinerary urn for jar burials. The term is widely used in the European Bronze Age, and the name Urnfield cultures, given to the Late Bronze Age of much of central, eastern, and southern Europe, refers to the characteristic burial rite.

**urn cover:** a flat piece of stone, wood, or ceramic placed over the open top of an urn before, during, or after its placement in a burial pit.

**use:** the third stage of behavioral processes, in which artifacts are utilized (following acquisition and manufacture, and before deposition).

**use life:** the length of time a tool or artifact is used before it is discarded; the sequence a tool goes through from production to discard. [use-life continuum, uselife]

**use retouch:** an irregular scattering of small scars often found on the edges of artifacts and thought to be the accidental result of tool use.

**use-related primary context:** a primary context resulting from abandonment of materials during either manufacturing or use activities.

**use-related secondary context:** a secondary context resulting from disturbance by human activity after the original deposition of materials.

**use-wear analysis:** examination and study of the edges and surfaces of artifacts, mainly stone tools, to determine the type of wear they have experienced and thus the tasks for which they were used. Microscopic analysis is used to detect signs of wear on working edges. [microwear analysis, use-wear, usewear analysis]

**use-wear striae:** polish, striations, breakage, or minor flaking which develop on a tool's edge during use. Microscopic examination and study of the wear may indicate the past function of tools. [use-wear stigmata, usewear stigmata, usewear striae]

**ushabti:** small wooden or glazed-stone mummiform figurines placed in Egyptian tombs of the Middle Kingdom onwards. They were to undertake work on behalf of the deceased, who might be called upon to perform manual labor in the afterlife. [shabti]

**utilitarian function:** physical functions of artifacts as distinguished from symbolic or ideological functions.

**utilized flake:** a piece of stone debitage used for cutting or slicing. The edge may be damaged from use, but not deliberately.

**utilized material:** pieces of stone that have been used without modification.

# V

**V perforation:** a method of making buttons in which two converging holes are drilled to meet at an angle below the surface. The technique was common in Europe in the Copper and Early Bronze Ages, and was used especially among the Beaker folk.

**vaisselle blanche:** a type of ceramics made in the Aceramic Neolithic (PPNB) of Syria, Lebanon, and the east bank of the Jordan River. It was white, made from lime mixed with ashes, air dried, and sometimes painted in bands.

**Valders Advance:** final advance of the ice during the Wisconsin glaciation of the Pleistocene in North America, beginning about 12,000 BP until approximately 10,000 BP.

**Valdivia pottery:** formative period culture dating to the later 4th millennium BC on the coast of Ecuador, South America, named after a site of the same name excavated by B. Meggars and C. Evans in the early 1960s. The culture is important in being amongst the earliest in the region to have a developed ceramics industry that used a variety of plastic techniques for decorative motifs. Artifacts suggest a marine-orientated subsistence pattern.

**Valencia:** ceramic complex of red-colored jars, one of the best known in Venezuela and found on a number of mound sites in the north central part of country. The shapes of huge human figurines with flat, wide heads are very distinctive. Typically the pottery is coarse and sand- or mica-tempered. Decoration may be appliqué work, rectilinear incision, or modeled human faces with coffee-bean eyes. It dates to c. AD 1000–1500 and possibly derived from the Arauquim complex or from the La Cabrera phase of the Barrancoid series. [Valencoid subtradition]

**value:** intensity, brilliance, or lightness/darkness of a color. In the Munsell color chart, value is the vertical dimension, varying from dark to light.

**Vapheio:** site of a Mycenaean tholos tomb in Laconia, Greece, dated to the 15th century BC, and giving its name to the style of magnificent gold cup found there. The most popular shape was straight or slightly splayed walls widening to the rim, and a single handle – and is decorated with scenes of bulls. The form occurs in pottery from the middle Minoan period (late 16th to early 15th century BC) on Crete and was important to the Mycenaeans in the late Helladic period. Other rich grave goods found are bronze weapons and fine jewelry. [Vapheio cup]

**variable:** any dimension, quality, or measurement that varies.

**variant:** a term used in projectile typology to describe a variation of a type.

**variety:** a group of artifacts within a type that have other more specific attributes in common; for example, pottery made over several generations by the same family.

**varnished ware:** pottery decorated with roughcast scales or roundels, usually small bowls or roughcast beakers, in white fabric with a greenish-brown shiny slip. They occur from around the 1st century BC/AD of central Gaul and the Rhine.

**vase:** a decorative container without handles, typically made of glass or china and used as an ornament or for displaying cut flowers.

**vase support:** a pottery vessel with a hollow cylindrical base which supports a dishlike upper surface; the name for a pottery pedestal or ring made to support round-based pottery that could not stand by itself on a flat surface. The term is used especially in European prehistory to describe highly decorated incised examples from the French Middle Neolithic Chasséen culture. [vase-support]

**vat:** a large container for holding or storing liquids.

**vein quartz:** a relatively pure type of quartz which is found in veins in areas of igneous rocks.

**vellum:** fine parchment from the skins of calves, a term that was broadened in its usage to include any especially fine parchment. In the 4th century AD vellum or parchment as a material and the codex as a form became dominant.

**ventral:** in flakes and blades, toward the side that was not exposed until after removal from the core. [ventral surface]

**Venus figurine:** small female statuettes of the Upper Paleolithic, found from southwest France to European Russia. They are statuettes, sculptured in the round, of naked and often obese women. The figures, sometimes with exaggerated abdomen, breasts, and buttocks, were made of clay, stone, antler, bone, limestone, steatite, or mammoth ivory, and have been found on Eastern Gravettian and Upper Périgordian sites from the Pyrenees to eastern Russia. The heads are featureless and the legs and arms are little emphasized. They mainly date from the



period 30,000–15,000 years ago; a later series is different in character, more slender and hollow stomached, and are contemporary with the Magdalenian.

**vertical axis:** an imaginary line that is perpendicular to the base line and runs through the center of the artifact as it is oriented for drawing. It is the axis upon which the artifact is rotated, one-quarter for a profile, one-quarter for a back view, so that each feature and flake scar maintains its distance above the base line in the views of the front, profile, and back.

**Verwood ware:** medieval and later pottery industry based in the New Forest of southern England.

**vesicular ware:** pottery whose fabric embodies crushed calcite (either shell or mineral grit) as a tempering agent, used especially for kitchen wares such as storage jars, cooking pots, and bowls. [calcite-gritted ware]

**vessel:** an object used as a container (especially for liquids).

**vice:** an appliance for holding an object while work is done on it; it usually has a pair of jaws.

**Victoria West:** a technique for preparing cores by removing a single flake, which is Levallois-like and associated with Earlier Stone Age assemblages of interior South Africa. [Victoria West technique]

**Vicús:** early Horizon culture of the Piura Basin in north Peru where deep shaft tombs were discovered. The Vicús tombs have produced abundant metalwork, modeled wares resembling the Gallinazo style and early Moche ceramics, and a local style of pottery with negative painting. Vicús material covers most of the 1st millennium AD and was eventually replaced by Chimú.

**Viking Age:** the period of Scandinavian history from c. AD 700 to 1100 that begins with the first Viking raids on western Europe at the end of the 8th century. Therefore, the period is more narrowly defined as the 9th to 11th centuries.

**Villafranchian:** a major division of early Pleistocene deposits and time, named for a sequence of terrestrial sediments studied in the region of Villafranca d'Asti, an Italian town near Turin. This was a time when new mammals suddenly appeared in the Lower Pleistocene period. The Villafranchian is also significant because within it the earliest hominids that clearly evolved into modern man (the australopithecines) appeared. The Villafranchian is in part contemporaneous with the Blancan stage of North America.

**viscosity:** resistance of a fluid to flow; the thickness or stiffness of a fluid (such as a slip or glaze) causing it to resist being stirred or not to flow/run once applied to a body.

**vitreous:** like glass in appearance or physical properties; also, of a substance, derived from or containing glass.

**vitrification:** the melting and fusion of glassy minerals within clay during the high-temperature firing of pottery (above 1000°C), resulting in loss of porosity. It occurs when clay particles fuse together as glass – a process starting between 800 and 900°C and completed at about 1200°C.

**void:** an open space in a pottery fabric. [pore]

**volute:** a spiral scroll decorating capitals of the Ionic order.

**votive deposit:** an object or group of objects left in a sacred place as an offering to a divinity generally with the intention of securing a favor or expressing gratitude or devotion. Votive deposits were often made at natural sites (e.g., caves, rivers, lakes, or peat bogs) and, unlike other types of hoard, were not intended to be recovered later. [votive model, votives]

**vousoir:** wedge-shaped stone building block used in constructing an arch or vault.

# W

**wadjet eye:** the left eye of Horus, restored by the god Thoth, and used commonly as a symbol in the New Kingdom. It symbolized the power of healing and was a powerful protective amulet.

**waisted ax:** large Pleistocene stone tool with a flaked cutting edge and flaked notch on each margin, thereby giving it a waist for hafting. It was made in New Guinea and in Australia. [waisted axe]

**Wajil:** unglazed earthenware of the Korean Proto-Three Kingdoms period that was hard-fired and reduced.

**wampum:** small cylindrical beads made from polished shells and fashioned into strings or belts, formerly used by certain Native American peoples as currency and jewelry or for ceremonial exchanges between groups. [peag]

**Wandjina figure:** a type of anthropomorphic bichrome or polychrome painting made in the Kimberley region of Western Australia, succeeding the Bradshaw style (c. 3000 BC) and persisting to the present. Wandjina takes its name from the ancestor spirits depicted in the paintings. The large white spirit figures are outlined in black and have mouthless, circular faces that are framed in red, rayed halos. The Bradshaw style was a series of bichrome and monochrome figures.

**ware:** generally, articles made of pottery or ceramic. Specifically, ware is a class of pottery whose members share similar technology, paste, and surface treatment.

**warming pan:** a pan with a long handle which would be filled with coals and drawn over sheets to warm a bed.

**warp:** the fairly rigid foundation of basketry.

**warp and weft:** in weaving, the warp constitutes the foundation threads that run lengthwise and the weft threads are the horizontal threads

that interlace through the warp at right angles. Warp provides the fairly rigid foundation in basketry and weft is the more flexible stitching.

**warp point:** small, late prehistoric, general-purpose projectile points with triangular configuration and no notches or stem.

**warp-weighted loom:** an apparatus on which textiles are made, with the warp threads running lengthwise through the material and weighted on one end while the other ends are secured to the loom itself.

**Warring States period:** a division of the Zhou/Chou dynasty, 475–221 BC, the latter part of the Eastern Zhou/Chou period, made up of six or seven small feuding Chinese kingdoms. The Warring States period saw the rise of many of the great philosophers of Chinese civilization, including the Confucian thinkers Mencius and Hsün-tzu, and the establishment of many of the governmental structures and cultural patterns that were to characterize China for the next 2000 years. The Warring States period is distinguished from the preceding age, the Spring and Autumn (Ch'un Ch'iu) period (770–476 BC), when the country was divided into many even smaller states. In 223 BC, Ch'in defeated Ch'u and 2 years later established the first unified Chinese empire.

**washer:** a small disk or flat ring of metal, wood, or leather.

**waste flake:** a byproduct, eliminated or thrown away as worthless after the making of a stone tool; either a larger piece flaked off from the original stone (primary waste flake) or a smaller piece removed during finishing (secondary waste flake). [debitage, waste]

**waster:** a name for the waste product of the pottery manufacturing process. This could occur when the clay choice was bad or there was a problem in the mixing of clays or problems in firing. These finds may suggest the presence of kilns or other pot-firing structures. It includes any refuse deposit of vessels or fragments of vessels that were cracked, warped, or otherwise damaged and made unusable during firing. [waster dump]

**water smoking:** preheating; the initial phase of the firing cycle in which all mechanically held water in the clay piece is volatilized and removed by slow heating to about 120°C.

**weathering:** the process whereby materials are altered through time. This can occur at various speeds, depending on the composition of the objects, the environment in which they are buried, and changes in the environment.

**weaving:** interlacing of long, thin materials, such as yarn or thread to make cloth (fabric) or baskets. Wool, cotton, silk, flax, or some other plant or animal fiber can be used for the yarn or thread to produce textiles of various sorts by criss-crossing the yarns together in at least two directions. Warp threads are those which run up and down the length of a piece of textile, and weft threads are those that run across

the weave at right angles to the warp. Many different patterns are possible, producing different kinds of textile and styles of weave. Patterns can be introduced by using different colored threads in a set order. The earliest evidence of weaving is that represented as textile and flexible basketry impressions on burnt clay from Pavlov in the Czech Republic, which date to between 25,000 and 23,000 BC. The oldest woven cloth so far discovered is made from flax, dates to about 7000 BC, and comes from Çayönü, Turkey.

**weaving comb:** a bone or wooden handled implement with a toothed edge, used in weaving to pack the weft together tightly. The prongs of the weaving comb fit between the warp threads to allow the exertion of downward or lateral pressure on the accumulating weft.

**wedge:** 1. To knead or mix a plastic clay body with the hands or feet or to cut and rejoin the mass before kneading. This eliminates air pockets, randomizes the orientation of particles, compresses the mass, and provides uniform distribution of moisture. 2. An object, usually wood or metal used to force open or keep open another object. It is often used to split timber by striking the thick end and forcing the wood apart.

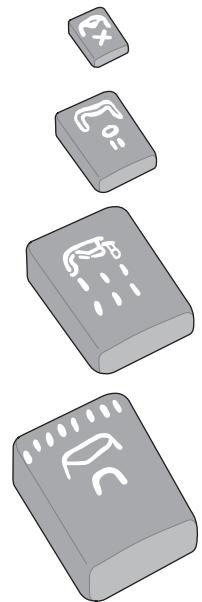
**wedge-shaped microcore:** a core that is small and keel- or wedge-shaped and used to make microblades. They have been found in eastern Europe, Siberia, Mongolia, northern China, Alaska, northwestern North America, and Japan on Upper Paleolithic sites from the close of the Pleistocene.

**weft:** the comparatively flexible stitching of basketry.

**Weichselian:** the final glacial advance, c. 115,000–10,000 bp, corresponding to the Alpine Würm, American Wisconsinan, and British Devensian. The Weichsel glacial stage followed the Eemian interglacial stage and marks the last major incursion of Pleistocene continental ice sheets. It is named for the ice sheet of north Germany and other Quaternary glacial deposits in northwest Europe. Most of the Weichselian is within the range of radiocarbon dating. The ice sheets were probably at their maximum size for only a short period, between 30,000 and 13,000 bp; eight interstadials have been recognized in the Weichselian of northwest Europe. The late Weichsel expansion of the Scandinavian continental ice sheet began about 25,000 years ago, and most of the Weichselian sediments over northern Europe are part of this late Weichselian cold period.

**weight:** stone, clay, or metal object of standard weight used in measurement on balances or scales of some kind; an object used to weigh something down or to measure the weight of another object.

**were-jaguar:** a creature with human infant and jaguar features, which was important in Olmec art. It has a babylike expression, fangs, snarling mouth, and other feline facial features. The number and unity of the



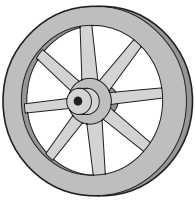
Weights, Egyptian

objects in this style first suggested to scholars that they were dealing with a new and previously unknown civilization. There is a whole spectrum of such were-jaguar forms in Olmec art, ranging from the almost purely feline to the human in which only a trace of jaguar can be seen. The Olmec monuments were generally carved in the round, and were technically very advanced even though the only methods available were pounding and pecking with stone tools. Considerable artistry can also be seen in the pottery figurines of San Lorenzo, which depict nude and sexless individuals with were-jaguar traits. The Olmec also worshipped a rain deity depicted as a were-jaguar.

**West Slope ware:** pottery of the Hellenistic period decorated with simple designs, found on the west slope of the Athens Acropolis. It evolved from black-glossed pottery and was decorated in white and yellow with some incision. Corinth and Crete were also centers of its production.

**Western Style Neolithic pottery:** a type of plain or lightly decorated Early and Middle Neolithic pottery of the western British Isles – mainly round-based bowls that were thin-walled, hard, dark-brown, and with a shouldered profile. [Western Neolithic ware]

**Western Zhou (Chou) period:** a division of the Zhou/Chou dynasty, 1027–771 BC, the earlier part of the Zhou/Chou dynasty, starting with the fall of the Shang dynasty. The first Zhou/Chou rulers parceled out their expanding territory among feudal lords. As the feudal states rose in power and independence, so did central Zhou/Chou itself shrink, to be further weakened by the eastward shift of the capital from sites in the Wei River valley near modern-day Sian to Lo-yang in 771 BC. Thereafter, the Zhou/Chou Empire was broken up among rival states.



Spoked wheel,  
late 2nd millennium BC,  
from Choqa Zanbil

**wheel:** 1. One of man's simplest but most important inventions. A Sumerian (Erech) pictograph, dated about 3500 BC, shows a sledge equipped with wheels. It is also shown in Uruk pictographs, c. 3400 BC, and on the Royal Standard of Ur. Early wheels were solid and unwieldy, made of a single piece of wood or three carved planks clamped together by transverse struts. Spoked wheels appeared about 2000 BC, when they were in use on chariots in Asia Minor. The wheel was not used in pre-Columbian America, except in Mexico, where small pull-along toys in the form of animals were made in terra cotta. The use of a wheel (turntable) for pottery had also developed in Mesopotamia by 3500 BC. 2. A pivoted, possibly mechanically or electrically driven, device capable of sustained rotation upon which a potter builds a vessel, making use of centrifugal force produced at high rotation speeds to aid in lifting and shaping the piece to its final form. [potter's wheel]

**wheel-throwing:** in ceramics manufacture, a technique using centrifugal force to help force the body upwards and outwards from the center of a ball of tempered clay, while the potter's hands restrict outward motion and shape the vessel. [wheel construction; wheel-thrown (adj.)]

**wetstone:** a fine-grained hone stone used to sharpen other tools and for giving a smooth edge to cutting tools after grinding.

**whirligig:** in early Celtic art, a motif comprising three or four conjoined spirals either radiating from, or swirling about, a common center, of which one element may be eccentric, being larger or more complex than the others. The four-part version may appear as a curvilinear rendering of the swastika motif. As with similar motifs in Celtic art, it may be used in a series or as part of a larger design.

**whistle:** a small wind instrument for making whistling sounds by means of the breath; a device for making whistling sounds by means of forced air or steam.

**Whitby-type ware:** middle Saxon pottery made with a slow-turning wheel from around Whitby in North Yorkshire, England.

**White pottery:** soft white, fairly rare, earthenware made only in the Shang period (dates given for the founding of the Shang dynasty vary from about 1760 to 1520 BC; dates for the dynasty's fall also vary from 1122 to 1030 BC). Found chiefly at Anyang, China, it was probably made for ritual or mortuary purposes and was decorated with incised geometric patterns. It is made of almost pure kaolin and is very brittle; few pots have survived unbroken.

**white-ground:** Athenian pottery technique, especially of the 5th century BC, where white slip was applied to the vessel surface and the decoration was painted on that. The white-ground lekythoi – funerary vases with the figures painted in color against a white background – are the most common shapes employing this technique. It was also used on monumental funerary lekythoi. The white-ground lekythoi are believed to be the most reliable source of information about monumental Greek paintings of the Classical period. [white-ground ware]

**whiteware:** a class of ceramics including porcelain, china, pottery, earthenware, stoneware, and vitreous tile that is usually white and consists typically of clays, feldspar, potter's flint, and whiting.

**whorl:** something that whirls, coils, or spirals. It is also a circular object with a central perforation used to weight the end of a spindle and act as a fly wheel, giving momentum to its rotation while spinning thread. This drum-shaped section on the lower part of a spindle in spinning or weaving machinery served as a pulley for the tape drive that rotates the spindle.

**wick:** a twisted fiber that is immersed in wax, grease, or oil, except for one end which is lit.



Whetstone



Whistle

- wickerwork:** woven basketry composed of a flexible thin weft and a thick warp; work consisting of interlaced osiers, twigs, or rods.
- willow pattern:** a conventional design in pottery featuring a Chinese scene depicted in blue on white, typically including figures on a bridge, a willow tree, and birds.
- willowleaf point:** late Solutrean flake tool – slim, with rounded ends and retouching on one side only – of extremely fine workmanship.
- Winchester style:** style of manuscript illumination, ivory carving, stone sculpture, metalwork, embroidery, and architecture from the capital of late Saxon England, c. 10th century AD. The emphasis was on naturalistic figure design; acanthus decoration is prominent in manuscripts and the stone angels carved over the chancel arch of Bradford-on-Avon church.
- Winchester ware:** late Saxon or Saxo-Norman earthenware pottery dating to c. AD 850–1150 in southern England, etc. It is wheel-thrown in a sandy fabric with a yellowish-red or green-colored glaze, often decorated with lines, rouletting, stamped rosettes, cordons, or applied strips. The vessels included spouted pitchers, cups, bowls, jars, tripod pitchers, and bottles.
- Windermere interstadial:** an interstadial of the Devensian cold stage that occurred c. 13,000–11,000 bp. It consisted of a rapid temperature rise to an initial thermal maximum, followed by a slight temperature decline at 12,000 bp. It stabilized until 11,000 bp, when it fell sharply at the start of the Loch Lomond stadial. The Windermere interstadial may be correlated with Godwin's Pollen Zone II.
- window:** an opening in a wall or roof, fitted with glass in a frame to admit light or air and allow people to see out.
- window glass:** sheet glass cut in shapes for windows or doors.
- window lead:** lead came subdividing the quarries of glass and holding them in place in a leaded light. [window-lead]
- wineskin:** a flexible container, usually leather, for the storage and transportation of wine.
- winged axhead:** a form of bronze axhead of Middle or Late Bronze Age date in which narrow, high flanges on both faces are hammered over to enclose the ax haft. Some types feature a side loop to further assist hafting. [winged axehead]
- winged chape:** a metal cap for the end of a sword scabbard with one or more projecting ribs or wings so that a swordsperson on horseback could hold the scabbard with a boot heel while drawing a sword. These date from the European later Bronze Age (Hallstatt C). [wing-shaped chape]
- winged disk:** a sun disk with an outspread pair of wings attached, found in Egypt from the 1st dynasty. It is associated with Horus of Behdet



(Edfu), and symbolizes the sun, and is found especially in architecture on ceilings, cornices, and stelae. It was often copied outside Egypt – for example, it was used in the Levant and by the Hittites, and in Assyria it represented the sun god Shamash and perhaps Ashur. It was adopted by the Achaemenid Persians to represent their chief god Ahuramazda. [‘py wer (Egyptian), winged disc]

**wire:** metal drawn out into a thin flexible thread or rod.

**Wisconsin glaciation:** as an “age” it is a major North American geochronological subdivision of the Pleistocene epoch, c. 75,000–10,000 bp. It was the final glaciation of North America, the fourth and last glacial stage of the Pleistocene. It followed the Sangamon interglacial and is the North American equivalent of the Würm glaciation in the Old World; it is broadly correlated with the Weichselian of northwest Europe and the Devensian of Britain. At certain times during this glaciation, enough water was locked up in the form of ice sheets to cause a drop in sea level and the creation of a land bridge between Siberia and Alaska. It was probably during one such period that man colonized America from Asia. As a “stage” it is a chronostratigraphic subdivision of the Pleistocene, with deposits in the upper US Midwest and adjacent areas of Canada. Most of the Wisconsin deposits can be dated by radiocarbon. The sequence has been divided into Early Wisconsin (c. 75,000–53,000 bp), Middle Wisconsin (53,000–23,000 bp), and Late Wisconsin (23,000–10,000 bp). The substages have been defined as: Altonian (c. 75,000–25,000 bp), Farmdalian (c. 25,000–22,500 bp), Woodfordian (c. 22,500–12,500 bp), Twocreekan (c. 12,500–11,800 bp), and Greatlakean (c. 11,800–10,000 or 7000 bp). The latter replaced the Valderan substage.

**Wolstonian:** in Britain, a penultimate cold stage spanning c. 200,000–125,000 bp. At the type site in the Midlands, Wolstonian deposits overlie interglacial deposits of the Hoxnian. The Wolstonian deposits have Acheulian and Levalloisian artifacts.

**wooden chamber:** a log or board enclosure that contained nested wooden coffins and grave goods placed on display ledges within them. The large wooden coffins were an important form of burial from Late Neolithic times in China. Wooden chambers diffused to Korea and Japan in the early centuries AD.

**Woodland:** a general term for cultural groups living in the wooded, eastern parts of North America during the Formative period. Woodland subsumes many local adaptations, but in general these were hunter-gatherer communities whose subsistence base was augmented with some cultivation. Woodland communities used pottery and had elaborate tool-making and artistic traditions. Burials were usually made in established cemeteries, often within large earthen mounds. Trade networks were



Glendo point  
(Woodland)



Reed point  
(Woodland)



Washita point  
(Woodland)



Harrell point  
(Woodland)



Woodland pot

extensive. Starting about 1000 BC, Woodland comprises a series of distinctive cultures including the Adena, Hopewell, Mississippian, and Iroquoian. In some areas Woodland societies continued down to modern times.

- woodworking:** the act, art, or trade of working with wood.
- woomera:** a spear-throwing device used by Australian aborigines.
- worked:** a term used in projectile point descriptions that describes an area of an artifact which has been shaped or altered by man, such as the removal of flakes along a blade edge.
- working range:** variable amounts of water that may be added to a dry clay to make it satisfactorily plastic.
- wrist clasp:** a type of metal object in pagan Saxon graves in the Anglian areas of England and on the European continent. They were flattened rectangular or triangular pieces of bronze, often gilded or inlaid with silver and decorated with animal ornament. They were used to fasten the cuffs of tunics.
- wristguard:** a rectangular plate of bone or stone, perforated on the ends and strapped to the forearm of an archer to prevent injury when the bowstring recoils. It is sometimes difficult to distinguish a wristguard from a whetstone. They occur commonly in Beaker contexts in Europe. [bracer]
- wrought iron:** iron having a low carbon content that is tough and malleable and so can be forged and welded.
- wrought nail:** a nail that is beaten out or shaped by hammering.
- Würm:** the fourth and final Pleistocene glaciation in the European Alps, c. 110,000/70,000–10,000 years ago, ending with the onset of the postglacial Holocene. The Würm glacial stage followed the Riss-Würm interglacial and is correlated with the Weichsel glacial stage of northern Europe and the Wisconsin glacial stage of North America. It is divided into early, middle, and late phases. The end of the Würm and the retreat of the final glaciers was a complex of minor retreats and advances.

# X

**Xanthian Marbles:** sculptures found at Xanthus, the principal city of ancient Lycia (Turkey), now in the British Museum. The most remarkable ruins of the city are the huge rock-cut pillar tombs. British archaeologist Sir Charles Fellows sent reliefs and sections of the tombs to the British Museum in the 19th century. The figures are Assyrian in character, not later than 500 BC. Sieges, processions, and figures are shown in profile but with the eyes shown in full. Upon one of the remaining pillar tombs is the longest and most important of inscriptions in the Lycian language.

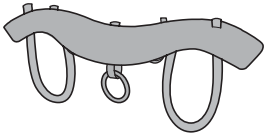
**xoanon:** a wooden image thought to have fallen from heaven, such as the image of Athena in the Erechtheum on the Athenian Acropolis; in Greek antiquity, it is a simple, carved image, especially one in which the original block of stone or wood is readily apparent.

**X-ray art:** a style of prehistoric rock art depicting animals by drawing or painting the skeletal frame and internal organs. The origin of the style can be traced to the Mesolithic art of northern Europe, where the earliest examples were found on fragments of bone in southern France dating from the late Magdalenian. Animals painted in the X-ray motif have also been discovered in the art of hunting cultures in northern Spain, Siberia, the Arctic Circle, North America, western New Guinea, New Ireland, India, and Malaysia. It is found today primarily in the Aboriginal rock, cave, and bark paintings of eastern Arnhem Land, in northern Australia. Figures painted in X-ray style vary in size, up to 2.5 m (8 feet) in length, and are delicate, polychromed renderings of the interior cavity of the animal. [x-ray art, X-ray style]

# Y

**Yarmouth:** a major division of Pleistocene deposits and time in North America, named for deposits in Yarmouth, Iowa, and equivalent to the Mindel-Riss interglacial stage of Alpine Europe. In some places, fossil vertebrates are well represented. It was at least as warm as modern times and, in some regions, the deposits indicate that Yarmouth climates may have been semiarid. The dates are c. 300,000–200,000 BP; the British equivalent is the Hoxnian and the Holsteinian interglacial in northern Europe.

**yellow ware:** pottery made from buff clay and covered with a yellowish transparent clay.



Yoke

**yoke:** 1. A large, heavy, U-shaped stone believed to be a ritual copy of a wooden protector worn by players of the Mesoamerican ball game during the Classic period. It was worn on the hips and decorated with carved designs with double-edge scrolls. 2. The wooden cross-piece fastened over the necks of a pair of oxen or horses and attached to the plow, cart, or wagon to be drawn.

**York ware:** a type of wheel-thrown late Saxon pottery, c. AD 850–1150, with cooking pots, jars, pitchers, flagons, bottles, jugs, bowls, and dishes of hard quartz-gritted fabric, of a light red/brown/gray color.

**Yorkshire vase food vessel:** an Early Bronze Age ceramic vessel of eastern England in inhumation burials, c. 1800–1400 BC. They are thick-walled vessels of coarse fabric with flat bases, decoration on the shoulder and rim, and often with perforated lugs.

**Younger Dryas:** a stadial of the Weichselian cold stage, dated to between 11,000 and 10,000 BP. The last glacial recession (13,000–6000 years ago) was interrupted by this sharp advance. It takes its name from a tundra plant called *Dryas octopetala*, fossil remains of which are common in deposits of the stadial. It was most evident around the North

Atlantic and coincided with an apparent temporary diversion of glacial meltwater from the Mississippi River to the St. Lawrence drainage system. It has been postulated that this discharge of cold, fresh water disrupted the Atlantic Ocean circulation system that warms the North Atlantic.

**yue:** an olive-colored, glazed stoneware preceding celadon and porcelain and created during the Tang period of the 3rd to 10th centuries AD in the Kiangsu and Chekiang provinces.

**yuguito:** a carved stone, presumably a replication of a wooden yoke section, used in the ceremonial ball games.

# Z

**zemi:** religious spirits that were represented by idols of wood, stones, shell, and bones in the West Indies. Zemís are human or animal in form. Ceremonial centers, ball courts, and caves are associated with the cult, which may have reached the islands from Mesoamerica. The Taino culture is famous for these zemi carvings, which are found in many of the islands, notably Puerto Rico and Hispaniola. A distinctive trait of the Antillean Arawaks was the triangular carved stone zemi that represented the hierarchically ranked individual guardian deities of each household in the society. [Zemi; zemís (pl.)]

**Zeuxippos ware:** Byzantine pottery named after the baths of Zeuxippos in Istanbul (then Constantinople), Turkey; dated to the 12th to 13th centuries AD.

**zong:** Chinese artifact, a tube of jade with square outer and round inner perimeters, of unknown symbolism to the southern Neolithic cultures of China. Examples vary widely in size and proportions and have also been found at both Shang and Zhou/Chou sites. They are often decorated with the taotie design. The earliest examples come from the 3rd millennium BC. [ts'ung, tsung]

**zoomorph:** an object, figure, or picture depicting an animal form, such as those found in cave paintings, and used as a symbol in art.

**zoomorphic:** having an animal form or appearance, and attributing the form or nature of an animal to something, such as a deity.

**zoomorphic brooch:** a clothes fastener with an animal design or decoration.

**Z-twist:** the turn of fibers from the top right toward the bottom left.

**zun:** any of a wide range of Chinese vessel types, generally of the Shang dynasty (18th to 12th century BC) and early Zhou/Chou dynasty (1111 to c. 900 BC), probably meant for containing wine. There are two basic varieties: one shaped like a much enlarged ku, tall and somewhat trumpet-shaped; the other of various animal shapes, often with animal decoration. [tsun]









