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ABSTRACT

This secondary level art curriculum guide helps students to individualize visual and plastic arts experience. It is divided into sections on the nature of art, elements of art, and movements and trends in the world of art. Materials direct the teacher toward important events and concepts, useful exercises, and pertinent points for student development. The material, illustrated by student art and reproductions, is not intended as the substance of lectures but as an outline of areas of emphasis to be used by both student and teacher in the development of a flexible course based on a theme or principle of their choosing. A visual diary of information and observations to help the student become visually sensitive and a portfolio of the student's work are kept as indications of student performance. The course is predicated on the availability of a studio and on access to genuine works of art. At the least, an atmosphere of art, within the working environment is mandatory as is the presence of an artist as teacher, Sources of materials from museums and commercial producers are listed at the end of the guide, as are literature references pertinent to the study of movements and trends in art. (JH)

art

a comprehensive foundation course

THE UNIVERSITY OF THE STATE OF NEW YORK / THE STATE EDUCATION DEPARTMENT
BUREAU OF SECONDARY CURRICULUM DEVELOPMENT / ALBANY, NEW YORK 12224

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FOREWORD

Education should nurture

- *with art as an ever present that "gladdens the heart" and makes our students love the beautiful and detest the ugly;*
- *through art, which enables them to express themselves and to become more interested in and better able to learn other things; and*
- *in art, so that the Michelangelos of our society will be encouraged, and art as art will continue to exist.*

—adapted from a speech by
Princeton sociologist
Melvin Tumin

STUDIO IN ART is a curriculum guide to a comprehensive study of the visual arts. It is intended to assist the teacher in developing a highly individualized program of studio experiences that will meet the needs of interested students at all levels of secondary education. Such a program should be designed to:

- Enrich the students' lives;
- Stimulate and encourage the students' creative growth;
- Increase the students' understanding of the importance of art in contemporary living and in our cultural heritage;
- Help the students to enjoy, appreciate, and come to value works of art;
- Develop in the students those skills, techniques, and understandings which are essential for quality work in the visual arts;
- Identify and encourage students with particular aptitudes for the visual arts; and
- Provide guidance for students with an interest in the vocational or avocational aspects of the visual arts.

Accordingly, the material on the following pages suggests that students be given an opportunity to grasp the feel of art—to experience the excitement and satisfaction of individual creative expression and to appreciate the vision, the skill, and the achievement of the artist—through **direct** contact with the various forms, dimensions, and media of the visual and plastic arts. It presupposes the availability of a studio; ready access to genuine works of art through galleries, museums, and institutes; and, wherever possible, contact with local artists and/or artists-in-residence. Fundamental to its learning procedures are the principles of relevance, student involvement and participation, and respect for individual vision and expression.

STUDIO IN ART was prepared under the direction of Vincent J. Popolizio, Chief of the Bureau of Art Education, and published in tentative form in 1966. The original manuscript was written by Minerva Markey, chairman of the art department at Niagara-Wheatfield Junior-Senior High School, and Ernest Andrew Mills, then chairman of the art department at Mohonasen Central School and now associate in art education. The first draft was edited by Brita Walker, associate professor of art education at the State University of New York at Albany, and revised by Mr. Popolizio and Harold L. Laynor, then associate in art education and now professor of art at Millersville State College, Millersville, Pennsylvania, with the assistance of Richard G. Decker, associate in secondary curriculum. After trial in school systems throughout New York State, the manuscript was rewritten by Rita A. Sator, associate in secondary curriculum, and Mr. Mills. Anthony Haruch, art chairman of Mahopac High School, James L. Zatlukal, formerly associate in art education and now director of secondary education for the Syracuse City School District and James V. Gilliland, associate in art education, provided additional material. Robert A. Reals, associate in art education, reviewed the manuscript. The publication's layout and visual design are the work of Mr. Gilliland.

Gordon E. Van Hooft
Director, Division of
School Supervision

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Art is the one form of human energy in the whole world which really works for union and destroys the barriers between man and man. It is the real cement of human life; the everlasting refreshment and renewal.

—John Galsworthy

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- Independent Study

- Studio in Drawing and Painting
- Studio in Graphics
- Studio in Advertising Design
- Studio in Costume Design and Fashion Illustration
- Studio in Jewelry
- Studio in Product Design

- Studio in Stage Design
- Studio in Interior Design
- Studio in Sculpture
- Studio in Ceramics
- Photography
- Cinematography
- Independent Study

- Ancient Art
- European Art
- Non-European Art
- Modern Art
- Art of the Americas

- Architecture Through the Ages
- Esthetics and Art Criticism
- Independent Study

- Advanced Mechanical Drawing and Design
- Architectural Drawing and Design
- Industrial Design
- Urban Design and Community Planning
- Independent Study

* Titles enclosed in dotted lines are suggestions for locally developed advanced elective courses.

INTRODUCTION

It is not the means of expression and representation that count in art, but the individual in his identity and humanity. First comes the cultivation and creation of the individual; then the individual can create.

—Johannes Itten

STUDIO IN ART is one of a series of curriculum guides intended to help the schools in New York State create highly individualized educational programs that will enable each and every student to "become all he is capable of being," that will develop in him both the means and the desire to live to the fullest in a world of random focus and to improve the conditions of life in which he finds himself. The chief purpose of this publication is therefore to assist the teacher in helping the student

- To see,
- To feel,
- To think,
- To express his thoughts and feelings,
- To make choices, and
- To evaluate

through a wide variety of studio experiences in the visual and plastic arts.

The material on the following pages has been arranged in three categories:

The Nature of Art

A brief consideration of the esthetic principles that underlie the visual arts

The Elements of Art

An inductive approach to the ele-

ments which comprise a work of art

Movements and Trends in the World of Art

A brief description of art of the past and present intended to illustrate the use of the elements and principles of art at various times in various places of the world.

Both **The Nature of Art** and **The Elements of Art** include introductory statements, examples of the kinds of activities the teacher and the student might plan together for classwork and/or independent study, selected illustrations and related topics for discussion, and a series of questions designed to help the teacher to evaluate the student's development in art. In every case, however:

- The descriptive matter is intended for the teacher, not as the substance of lectures for the students.
- The studio experiences are merely examples—the teacher is free to use them when they apply to particular situations, but he is generally expected to work with his students in devising new ones.
- Illustrative materials have been included because they are available on slides; but reproductions are rarely good substitutes for actual works of art, and the teacher is therefore encouraged to use the offerings of resident artists and of local or reasonably accessible galleries and museums as often as possible.
- The topics for discussion have been suggested in an effort to show that open dialog related to the students' experiences in art should be established on both an individual and a group basis.
- Finally, the questions listed under Summary and Evaluation are important guides to each student's development and should be used as part of a continuous monitoring system, rather than as measures of achievement at the end of a given unit.

Movements and Trends in the World of Art is also intended as a resource for the teacher, not as material to be reproduced or otherwise presented directly to the student. Hopefully, the teacher will draw from it throughout the year and the student will emerge from his brief exposure with a new awareness of:

- The many ways in which artists of various times and places have used the elements and principles he is currently exploring,
- The relationship of various movements in the continuous development of the visual arts, and
- The function and importance of art in human life.

In any event, this publication is a guide; and the teacher is expected to use his particular expertise in developing with each of his students a program of studio experiences and exposure to artists and/or genuine works of art that is specifically geared to the student's needs and interests, and that utilizes community conditions and resources as effectively as possible. The program should include a study of all three areas described above, with the major portion of the learning time devoted to the nature and the elements of art, and a sufficient amount allocated to movements and trends. However, there are a variety of ways in which this might be accomplished. For example, the collage of experiences that evolves from continuous teacher-student planning might have:

- **An esthetic base**
  Studio activities and exposure to related works of art might be designed to emphasize the first of the three areas, the nature of art.
- **An elements base**
  In the process of discovering for himself the properties of and the effects that can be achieved with the elements of art, the student might examine how artists at various periods of time have used the elements and the esthetic principles for their own purposes.
- **A thematic base**
  The student might experiment with the use of the elements and principles of art to express his own thoughts and feelings, and then examine how artists in various periods of history have expressed similar themes.
- **A problem-solving base**
  The student might examine the work of artists past and present and experiment with the use of the elements and principles of art in approaching a particular problem, such as personal tension; environmental conditions in the home, the school, or the community; population pressure and human isolation; the difficulties of decisionmaking in an age without

absolutes . . .

There are other approaches, as well; but whatever the plan of organization,

(1) It should evolve from the combined characteristics of the students, the teacher, and the available resources; and

(2) It should be readily and continually adaptable.

The bulk of the student's time should be spent in creative activity; but this is not to imply that the art class is a "free period" during which the student relieves his tensions, fosters his ego, or cultivates his fantasies—and does little else. Secondary school students are interested in more than self-expression; they want to learn something, and they want to feel the satisfaction that results from involvement in genuinely meaningful experiences. It is for these reasons that teachers and students should work together in planning an individualized program in art. And although he shouldn't be expected to "reinvent the wheel," the student will profit most from an educational process in which he makes his own choices, observes the effects of those choices, discovers for himself, compares, draws honest conclusions, and therefore learns.

A final note or two. The student should be required to keep a visual journal and a portfolio.

- The visual journal should be a diary of sorts which includes useful bits of information, notes about references and sources, suggestions for projects or activities, etc. Intended to develop the habit of observation and recording, the journal should be an extension of the student's anatomy, ever with him to capture an image, to record a passing moment, or to visualize a thought.
- The portfolio should contain all of the student's art work—carefully labeled, dated, and signed.

In addition, the teacher should systematically record the student's work on 35 m.m. slides, preferably in duplicate. Evidence of this sort is useful in determining the student's final grade; in supporting recommendations at a later date; in illustrating a concept for other students; and in fulfilling part of the State Education Department's requirements for Regents credit in art.

The suggestions offered on the following pages presuppose the existence of a studio—a separate and clearly defined area with:

- Adequate working, demonstration, display, and storage space;
- Proper heat and lighting for creative art work;
- Sinks with hot and cold running water and clay traps;
- Facilities for audiovisual presentations, which include ways for darkening the room;
- Equipment such as easels, printing presses, potter's wheels, kilns, etc.;
- A wide variety and abundance of materials with which the students can work; and—most important—
- Sufficient staffing to be maintained as an open studio for interested persons not only from the school, but also from the community, whether enrolled or not enrolled in specific art classes.

As indicated in the foreword, the material in this publication further presupposes ready access to genuine works of art; frequent visits to galleries, museums, and institutes; and—ideally—personal contact with local artists or artists-in-residence. But whether or not these conditions are available, the working environment should have the atmosphere of art, and the teacher should be an artist in every sense of the word.

The teaching artist knows his students as well as he knows his art. He explores the areas in which they live; he meets the people with whom they are most intimately involved; he comes to understand the conditions of their living, the values they hold, and the goals to which they aspire. He is aware that:

- Activities which utilize readily accessible materials sharpen one's awareness of his environment and of his own potential for creativity.
- A person's dress is often a key to his interests and attitudes.
- One's cultural heritage can be a source of pride in a pluralistic society, but only when it is fostered rather than forced upon him.
- Appreciative attention makes one feel valued, and he will follow the person who values him because he knows that the latter will never allow him to be hurt.
- "There is no such thing as a wrong perception in art," and therefore only the skill with which one renders his particular vision is a valid subject for criticism, never the vision itself.

And he acts accordingly.

THE NATURE OF ART

Shall I paint the mountain as I see it, and so become an imitator? Or shall I relax, close my eyes, and listen to its dignity, its unfathomable mystery, and when I have relaxed enough to be aware of the bigness beyond myself, paint the mountain as I know it?

—Unknown

THE NATURE OF ART

Art is creative expression in any of a number of forms. Distinguished from both science and craft, it is usually classified with the humanities—for art is a function of human perception based upon human values and human experience.

A work of art results from a spiral of creative processes which includes perception, response, interpretation, abstraction, decisionmaking, and interaction with a medium. Although some aspects of it may simply "happen," a work of art is an arrangement of forces which induces esthetic experience. It operates on many levels, may serve public as well as private ends, and is valued for a variety of reasons:

- The artist values his work if it successfully expresses what he wants to say, if the process of creating it was emotionally satisfying, and if the audience of his choice appreciates his achievement.
- The viewer values the work if he feels that it communicates to him; if he can empathize with it; and if it draws him back again and again, and makes him want it for himself.
- The critic and historian value the work if it captures its own milieu, and consider it a masterpiece if it helps the people of any time and any place to understand more fully what it is to be a human being.

The extent to which artwork becomes a work of art depends not only upon the skill and insight of the artist, but also upon the modes of perception available both to him and to his audience. This is one of the reasons why an artist is sometimes ignored or even disparaged in his own age, yet praised in the times which follow.

A mode of perception is a way of seeing, an avenue to understanding. It is governed by the manner in which our sensory equipment functions and by the manner in which we've been "programed" or conditioned by experience. In general, the process of perception is the same for all of us, but:

- We see, hear, feel, smell, and taste in varying degrees, and these differences affect our concepts of the world about us:
- Our senses are part of an interrelated system, so that what we perceive through one often affects the others;
- Sensation stimulates the imagination and sometimes creates images that seem more real than those that really are;
- We interpret sensory input in terms of our experience, filtering the information through our interests, needs, and value systems; and
- We seek order and meaning in our universe, and operate at different levels of abstraction.

For these reasons, we tend to see what we want to see, what we expect to see, or what we are led to see; and each of us perceives himself, his surroundings, and his relationships to his fellows and the things beyond himself in different ways. There are no wrong perceptions, then; but we can increase our sensitivity, sharpen our awareness, and develop new perspectives by broadening the base of our experience.

An artist sees the world in terms of his humanity, but also in terms of his art, that is, he is keenly aware of sound, or space, or color, or rhythm, or movement --because these are the constituents of his art. Sensitive to the particular qualities of his medium, he draws from his perceptions and shapes an idea. The components with which he works have been identified and labeled, primarily for the benefit of students and critics. The **elements of art** are space, light and color, form (shape), line, and texture. These are arranged according to any or all of the following **principles of design:** rhythm, balance, harmony, emphasis, variety, and unity. The labels form convenient handles for grasping the concepts an artist either consciously or intuitively employs. In addition, they provide a language through which we can "talk about" a work of art. And most importantly, they enable us to develop new modes of perception—to see our lives in terms of component parts with constantly changing forms and relationships. But the elements and principles of art should be examined with care: they are neither entities nor absolutes; they are not standards for critical judgment; and a knowledge of them will make neither an artist nor a critic. For an artist is like the legendary cook who creates a gustatory delight by combining "a pinch of this" with "a pinch of that" until the mixture "feels" right. He **knows**—and the proof is in the pudding. The critic, of course, is the gourmet whose senses have been cultivated to a fine degree of appreciation for the experience. And the rest of us bring to the feast a varied palate.

In addition to recognizable elements such as line or form or color and the ways in which these elements seem to have been arranged, a work of art has readily identifiable qualities or characteristics that we tend to group and label as **style**. But like those given to the elements and principles of art, the terms used to identify style are arbitrary and are therefore primarily useful in talking about a work of art, or in comparing works which seem to exhibit similar characteristics. The particular qualities of an artist's work may be markedly different from those of another, and so may serve as a means of identification. Often, an artist's way of seeing and/or his choice of and sensitivity to his medium change; and the resulting changes in feature or quality enable us to classify the various phases of his work in terms of style. Before developments in science and technology made the world a global village, the characteristics of art in particular historical periods and geographical areas were so markedly similar that critics established such categories as Classicism, Romanticism, Realism, Impressionism, Fauvism, Cubism, Expressionism, Surrealism, Constructivism, etc.* But the identifying features of contemporary works of art are so varied that they preclude any attempt to categorize and effectively predict what the next major movement will be—a situation that reinforces the theory that art is a re-

* These and other developments in art are described in the final segment of this publication p. 61

liable barometer of its age. Edmund Burke Feldman's classification in ART AS IMAGE AND IDEA (Prentice-Hall, 1967) is probably as useful as any. He describes four types of work:

- **The style of objective accuracy,** in which the artist creates the illusion of reality through a careful selection of sensory data in order to produce a work which implies much more than is visually there and thus makes a statement
- **The style of formal order,** in which the artist arranges selected elements of art according to principles of intellectual, biomorphic, or esthetic order
- **The style of emotion,** in which the artist interacts with his medium according to his emotional response to his subject and/or his attempts to elicit an emotional response from the viewer
- **The style of fantasy,** in which the artist expresses the products of his imagination—the dreams, the visions, or the hallucinations that so often express or become reality

Feldman's categories obviously include both the major movements identified above and the less easily classified works of contemporary art.

The style of a work often helps us to find the **content**, the meaning beneath the subject matter, for it reveals much about the artist's way of seeing, his environment, and his cultural milieu. Since developments in the social and behavioral sciences and the humanities have provided us with useful tools and a conceptual framework with which to approach an analysis of style, we are increasingly able to construct a picture of the changing condition of man through an understanding of his art. Heinrich Wolfflin specifically relates artistic creation to available modes of perception in his PRINCIPLES OF ART HISTORY: THE PROBLEM OF THE DEVELOPMENT OF STYLE IN LATER ART (Dover, 1950); and Irene Rice Pereira demonstrates the theory that the use of space in art reveals man's concept of himself and his relation to his environment, his fellows, and whatever he believes in beyond himself in a volume entitled THE NATURE OF SPACE (Corcoran Gallery, 1956).

Both of these books are especially valuable for the viewer and the student of art criticism; but Wolfflin's work might also prove helpful to the teacher in understanding the student's changing view of himself, the world about him, and his relation to it. Herr Wolfflin identifies five categories of progression which reveal a spiral of growth in human thought and awareness. In the early stages of his development, man sees people, places, and events as discrete entities that bear a one-to-one relation to himself. As he grows, he begins to see that these items relate to each other as well as to him, and that there are similarities and commonalities as well as differences among them. He learns that facts, conclusions, and beliefs are subject to change. He becomes aware of other dimensions and begins to explore and experiment. He discovers alternatives, and communicates more and more often in the shorthand of symbol and suggestion. But the implied progression does not mean that one mode of perception or expression necessarily **supplants** another, it simply indicates that human experience, individually and collectively, has increased the number of available alternatives from which man—and therefore the artist—is able to choose. An awareness of the alternatives available to a person at a given age or period in time is not important to our enjoyment of his work; but it is essential to our appreciation of the measure of his achievement.

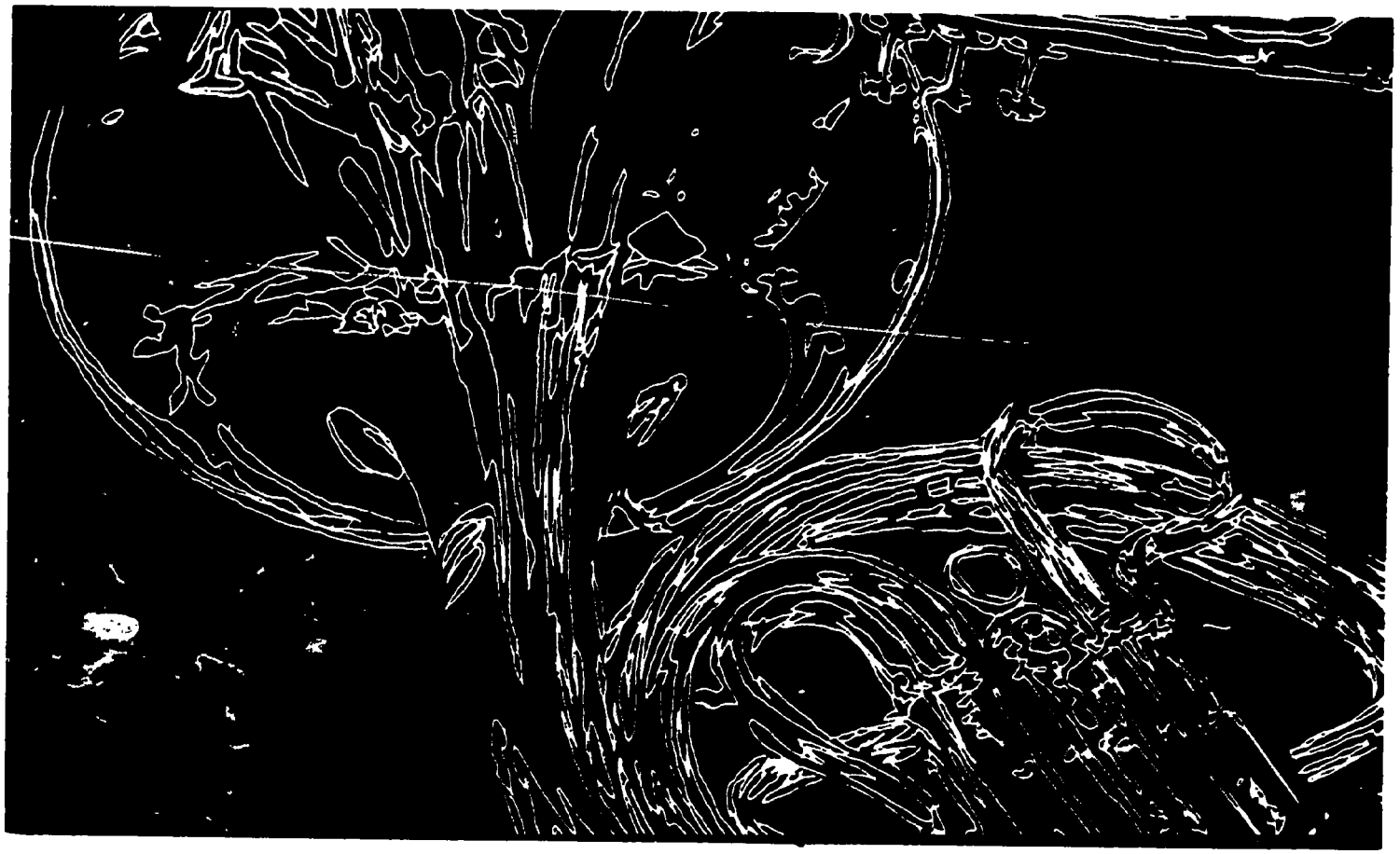
A work of art is the product of choice and as such, involves a number of considerations. The artist works with his medium until it represents for him a whole, a gestalt. In many cases, the process alone—the exertion of intellectual, emotional, and physical energy in the act of creation—is sufficiently satisfying. The work is an extension of the man; and when it is finished, he is complete. In others, the artist requires a response, an interaction with his fellows. To a certain extent, the style of a work influences the nature and degree of that interaction. Environments and happenings depend upon it; light, texture, and movement often trigger kinesthetic response; and we tend to identify with naturalistic subjects and styles more easily than with abstract efforts. In any event, art is becoming an increasingly meaningful, shared experience.

Art lives—in every sense of the word. It is creative; it involves a series of related processes and requires an artist, a medium, and an audience, in varying relationships; it responds to, reflects, and often projects the conditions of life; and

because—like life—it is an experience, it is never the same.

One or more of the following types of activity might prove useful in helping the students to increase their understanding of the nature of art:

- A variety of experiences designed to sharpen their awareness of:
  - The sensory elements of their environment, such as light, sound, color, smell, texture, movement, etc
  - The wealth of their surroundings as a source of inspiration and material for work in art
  - The similarities and commonalities in seemingly different things, and the differences between things that seem to be the same



  - Relationships—between people, for example; or between form and color, sight and sound or touch, human and nonhuman, cause and effect, thought and execution, technology and art, and art and life
  - The effects of things upon each other (e.g., the effects of light and air upon color, of sound upon mood, of man upon his environment, of technology upon the conditions of life, of alternatives upon choice, of a sense of value upon attitude and behavior)
- Informal discussions with local or visiting artists about the nature of art and how an artist works
- Visits to art galleries or museums and/or slide presentations and discussions such as the following:
  - Expose the students to a series of works in which the **subject** is the same, but the **content** and/or **the style** are different. For example:

Subject—Instruments

Georges Braque's MUSICAL FORM, VIOLIN AND PIPE, GUITAR, STILL LIFE: MUSIC SHEET

Raoul Dufy's THE YELLOW VIOLIN, HOMAGE TO MOZART

William M. Harnett's THE OLD VIOLIN

Subject—Women

Francois Boucher's MME. BERGERET
Jacques Louis David's MME. DU-GAZON AS ANDROMACHE
Eugene Delacroix's MMLE. JULIE DE LA BOUTRAYE
Vincent van Gogh's LA MOUSME, MLLE. RAVOUX
Pablo Picasso's GERTRUDE STEIN
George Romney's MRS. DAVENPORT

MADAME DUGAZON AS ANDROMACHE by Jacques Louis David. Oil on canvas. THE CLEVELAND MUSEUM OF ART. GIFT OF GEORGE S. KENDRICK

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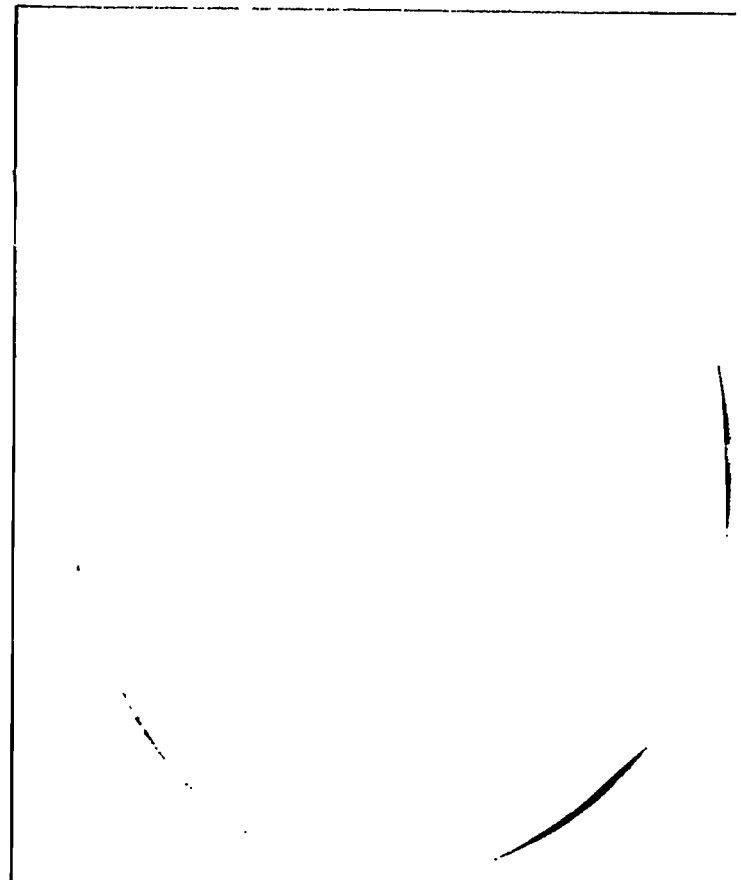
MADEMOISELLE RAVOUX by Vincent van Gogh. Oil on canvas. THE CLEVELAND MUSEUM OF ART. Purchase. LEONARD C HANNA. JR BEQUEST

James A. McNeill Whistler's **AN ARRANGEMENT IN GREY AND BLACK ("Whistler's Mother"), LADY OF LANGE LIJSEN**

Then discuss such topics as the following:

- The motives the artist may have had for selecting the particular subject of his work
- The function of the subject in a work of art
- Specific characteristics of the works



MLLE JULIE DE LA BOUTRAYE by Eugene Delacroix Oil on canvas THE CLEVELAND MUSEUM OF ART IN MEMORY OF MAUD STAGER EELLS GIFT FROM HER DAUGHTER

selected (e.g., the use of space or color, abstract elements).

Compare or contrast such items as the following:

- The artist's interpretation of his subject
- The artist's use of one or more of the elements of art
- The mood created by the artist in selected works (e.g., Whistler's ARRANGEMENT IN GREY AND BLACK vs. van Gogh's LA MOUSME or MLLE. RAVOUX, Edward Munch's SELF PORTRAIT ON EKELY vs. Edgar Degas' NIECES OF THE ARTIST)
- The characteristics of style in each of the various works
- Discuss with the students the artist's interpretation of his subject, the elements of art and the principles of organization he employed, and some of the specific characteristics of his style in a group of paintings like the following:

  Joan Miro's COMPOSITION (1933)
  Mu-Ch'I's SIX PERSIMMONS
  Kenzo Okada's NO. 2 (1954)
  Pablo Picasso's THE STUDIO or VIEW FROM THE STUDIO
  Rembrandt van Rijn's THE ARTIST IN HIS STUDIO
  Jan Vermeer's THE ARTIST IN HIS STUDIO

- Using a group of paintings such as the following, help the students to understand how an artist achieves unity in his composition and thus directs the viewer's eye:

  Sandro Botticelli's ADORATION OF THE MAGI
  Agnolo Bronzino's PORTRAIT OF A YOUNG MAN
  Paul Cezanne's LA MONTAGNE STE. VICTOIRE
  Andre Derain's THREE TREES
  Vincent van Gogh's THE STARRY NIGHT
  Arshile Gorky's WATER OF THE FLOWERY MILL
  Miniatures from Persia or India
  Claude Monet's POND AND COVERED BRIDGE
  Pablo Picasso's MA JOLIE, STILL LIFE

- Through examples drawn from contemporary and historical periods of art, help the students to understand what style is and how it relates to the way men think; the materials available to them: and the social, political, and economic conditions of their lives.

- Inductive learning experiences concerned with the basic principles of organization and design in a variety of two- and three-dimensional art forms. Some of the following suggestions might prove useful:

Rhythm

Jean Arp's LEAVES AND NAVELS, ANCHORS, DESIGN OR NAVEL
Max Brill's RHYTHM IN SPACE
James Brooks' BIXBY
Henry Moore's RECLINING FIGURE 1952, TWO FORMS, KING AND QUEEN, TWO WOMEN SEATED, STANDING FIGURES
Jose de Rivera's CONSTRUCTION NO. 47, CONSTRUCTION NO. 48

Balance

Alexander Calder's STILL FISH, TWO WHITE DOTS IN THE AIR, HEXTOPUS
Edgar Degas' GIRL DANCER OF 14, DANCER ON STAGE, FRIEZE OF DANCERS
Julio Gonzalez' ANGEL, WOMAN COMBING HER HAIR, PERSONNAGE
Norbert Kricke's SPACE SCULPTURE, SPACE TIME SCULPTURE
Auguste Rodin's LEJONGLEUR, ETUDE, DANCE MOVEMENT E

PROCESSION by Ibram Lassaw. Wire, copper, various bronzes, and silver. COLLECTION WHITNEY MUSEUM OF AMERICAN ART, NEW YORK

Harmony

Alexander Archipenko's BOXING MATCH, THE SPIRIT OF THIS CENTURY, STANDING GIRL, MODELING OF LIGHT

Raymond Duchamp-Villon's THE HORSE

Henri Laurens' AMPHION, SEATED WOMAN, YELLOW ACCENT

Emphasis

Alexander Calder's STILL FISH, SEVEN-FOOTED BEASTIE, A PIECE OF MY WORKSHOP

John Hovannes' figure studies

Ibram Lassaw's PROCESSION

Variety and Unity

Umberto Boccioni's UNIQUE FORMS OF CONTINUITY IN SPACE, THE CITY RISES, ELASTICITY

Juan Gris' HARLEQUIN, GUITAR AND FLOWERS, STILL LIFE WITH OPEN BOOK

Henri Laurens' THE GUITAR, HEAD, SEATED WOMAN

Jacques Lipchitz' MAN WITH A GUITAR, SAUVETAGE, RECLINING NUDE WITH GUITAR

Seymour Lipton's CRUCIBLE

Henry Moore's INTERNAL AND EXTERNAL FORMS

Appropriate examples might also be drawn from stitchery, plastics, printing media, etc.

- Creative experiences with a variety of media. For example:
  - Using pastels, conte crayons, wax crayons, inks, felt pens, printmaking materials, etc., individually or in combination, the student might develop a character study of someone he knows well—a friend, a member of his family or his class, even himself. The study should be a personal interpretation of the subject which includes some of the subject's unique qualities and the student's feelings toward him.
  - Using clay, plasticine, or plaster and wire, reed, wood, plastics, or similar materials, the student might develop a nonobjective three-dimensional construction which incorporates one or more of the concepts

and principles of art to which he has been exposed. For example, his composition might illustrate the use of positive and negative space.

- Using tempera, watercolor, ink, acrylic, collage material, etc., in any combination, the student might develop a painting which makes full use of color and organization in expressing his personal feelings about a particular aspect of society.
- Using photographs, illustrations, fabrics, found objects, lettering, etc., in combination with drawing or painting materials, the student might develop a collage, a composition of found objects, or an exhibit which emphasizes one or more of the various styles of art (e.g., Art Nouveau).
- Using folding bristolboard, cardboard, paint, ink, felt pens, colored pencils, cellophane, etc., the student might redesign the packaging of a product that does not sell itself through its own appearance. The project will require some research on the evolution of contemporary packaging and an understanding of the principles of organization and design.
- Using tempera, acrylics, pastels, oil crayons, watercolors, inks, torn paper, or nay combination of these, the student might develop a drawing or a painting which illustrates a particular style of art, such as Cubism, Pop art, or Abstract-expressionism. One of the drawings in his sketchbook might serve as a point of departure.

● Independent studio experiences in which the student develops:

- A two- or three-dimensional work of art which illustrates one of the following degrees of the use of subject matter:
  (1) representational (the subject is clearly recognizable)
  (2) abstract (aspects of the subject are identifiable as the basis for the design)
  (3) nonobjective (the subject can not be identified in the work)
- A painting, drawing, print, collage, or piece of sculpture in one of the art styles to which he has been exposed
- A studio problem in personal interpretation, using media of any type

● Independent research projects in which the student learns about:

- The artist's contribution to social change
- The development and application of the "form follows function" concept in contemporary design
- The similarities and differences in the way each of two sculptors handles space, form, material, and some of the principles of organization and design
- The significant characteristics of the architectural styles developed by such men as Frank Lloyd Wright, Ludwig Mies van der Rohe, Louis Sullivan, Edward Durrell Stone, Eero Saarinen, H. H. Richardson, Le Corbusier, Philip Johnson, and R. Buckminster Fuller

Summary and Evaluation

Does the discussion indicate that the student:

- Has expanded his horizons to include all types of art, past and present, rather than that which is just "pretty"?
- Is aware that art should bear the imprint of the artist?
- Realizes that composition is the foundation of all art, whether representative or highly individualized?
- Has become more receptive to new ideas and new ways of seeing?
- Has discovered that he has an individual or unique interpretation to bring to the world of art?

Does the creative work of the student:

- Reflect something of his own personality or of his own feelings toward the subject he has selected?
- Indicate that he realizes that art is not merely the recording of what he sees?
- Reflect an understanding of the principles of organization that were discussed in class?

Is the student's work relevant?

- Does it involve the world **he** knows?
- Does it reflect the kind of life **he** leads?
- Does it reflect **now**?

Is the student able to communicate through art?

- How does the class respond to his work?
- Does the student feel that he has successfully projected his thoughts? If so, why? If not, why not?
- Do other students feel that he has been successful? If so, why? If not, why not?

THE ELEMENTS OF ART

THE ELEMENTS OF ART

The elements of art are the components that an artist abstracts from the world about him and then uses as visual/tactile/kinesthetic language for the expression of his particular vision. They are variously labeled. On the pages which follow, we've identified **space, light and color, form (shape),** line, and **texture** as the elements of art; but the names are arbitrary. Others might argue:

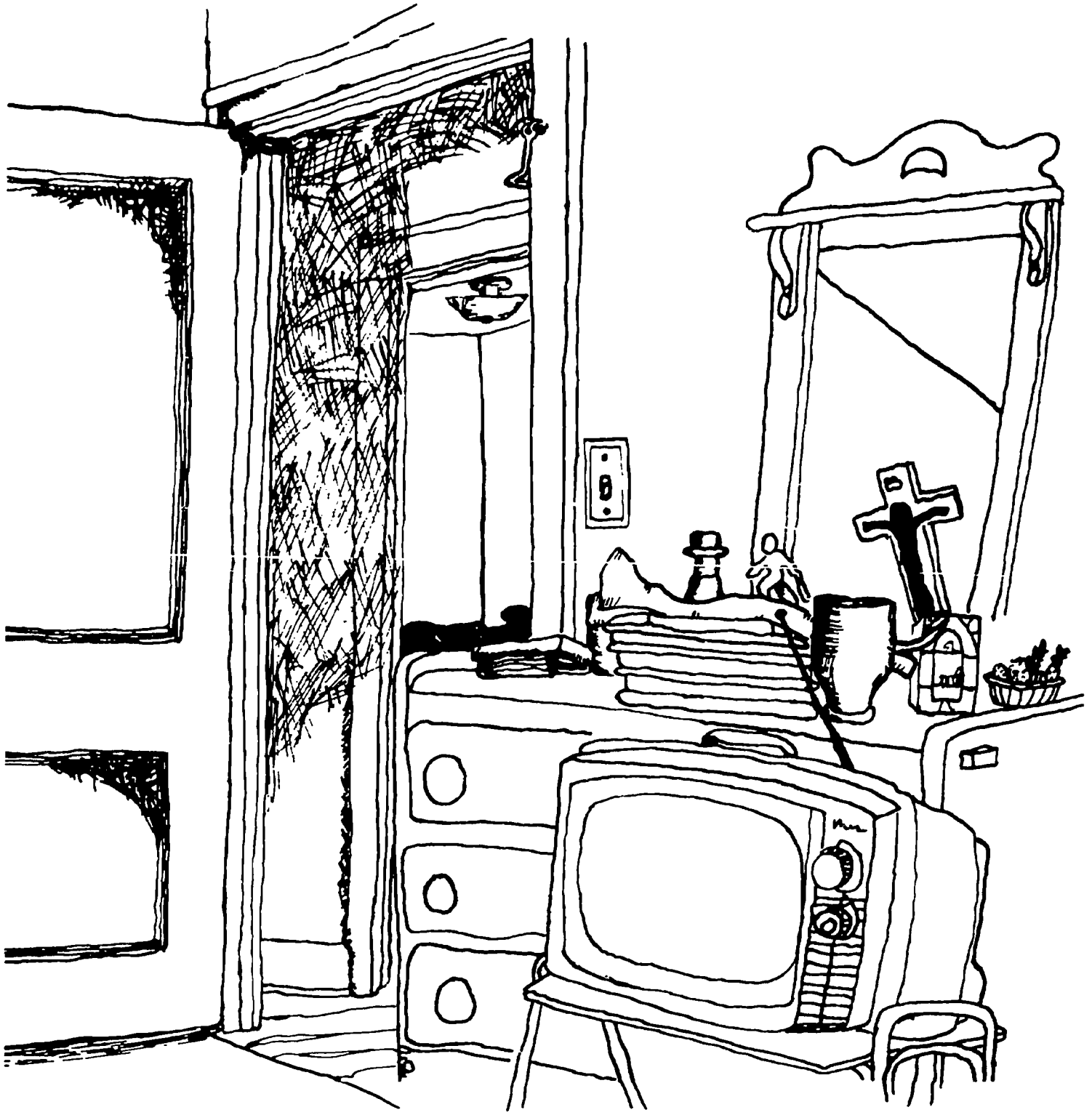
- That movement is an element—we've combined it with our discussion of space;
- That shape is a separate item because of its two-dimensionality—we've considered it an aspect of form;
- That value is an entity—we've related it to light and color; or
- That the elements of art are really line, shape, mass, color, value, texture, etc.

The classifications vary; but since these are usually understood through the context in which they appear, the teacher is encouraged to use whatever labeling he prefers. The important thing is that the students come to understand the properties and potentials of the various elements of art in a functional way. The study of structure and syntax in a work of art should enable the student to:

- "Shift gears" as he looks about him, and sees his environment through various perspectives;
- Use the elements of art alone and in combination as effective modes of expression; and
- Understand something about the decisions an artist makes as his work evolves from ideas that change even as the work to achieve them progresses.

There is a pattern to the material which follows; but that pattern was devised in order to print the material in usable form, not to suggest that it be presented that way in a classroom situation. On the contrary, the teacher is expected to work with the elements of art in ways that:

- Derive from his own unique capabilities, the observed and/or expressed needs and interests of his students, and the best utilization of available resources;
- Afford ample opportunity for creative work in a variety of media; and
- Include consideration of the arrangement of those elements and of the viewer's interaction with the work, for these produce the totality of esthetic experience which makes the whole of a work of art far greater than the sum of its parts.



SPACE

Space is fundamental to creation. It is a prerequisite for and an integral part of the physical universe. It is real, perceptible, infinite, and affective. And it exists in the mind of man.

The apprehension of space is directly related to human experience—individual and collective. It begins with what we see within the frame of our optical field and develops from perceived relationships between concrete objects to abstract ideas, models, and extensions. As a child grows, his world changes. Rooms and furniture become more proportionate; being alone is no longer frightening; adults seem less formidable; places are easier to get to; strange things become familiar; and seemingly endless seasons come to an end. And with the development of his personal concept of space, there is a corresponding growth in attitude and way of thinking. In similar fashion, man's concept of space develops with his culture and experience. For primitive man, the area beyond his immediate environs was a place of no return, and the skies belonged to the supernatural. He patterned the land he occupied, assigning to each space a function in accordance with his needs, his values, and his beliefs. Hunting expeditions, curios-

ity, and improved methods of transportation extended man's geographical limits; instruments of measure and navigation introduced a third dimension; and the conflicts of advancing civilization directed his attention to the unexplored space within himself. Ultimately, new modes of travel, the use of symbol for expression and communication, the increasingly rapid exchange of information and ideas, and developments in science and technology made the world a global village, added the fourth dimension of space-time, and put a human imprint on the moon. The changes in man's concept of space are reflected in his thought—and in his art.

Both the nature of space and man's conception of it have a strong effect upon his attitudes and behavior. Extreme examples include claustrophobia (the fear of closed spaces) and agoraphobia (the fear of open spaces); but there are other effects as well. Cramped quarters breed tension; spacious quarters suggest affluence and well being; and the open lands of Marlboro Country offer escape to peace and rugged individualism. Violence, child abuse, emotional disturbances and nervous disorders, the excessive use of alcohol or drugs, pollution —all of these in some way relate to limitations in physical space.

Man—and particularly the artist—has the ability to control the use of space and its effects upon his fellows and himself. Boys and girls rearrange their rooms; men adjust their work space; housewives and designers effect the illusion of space through color, texture, and placement; architects consider both exterior and interior space in planning buildings; farmers, efficiency engineers, and urban planners pattern space in terms of productivity, facility, effectiveness, and need; visual artists organize and structure space in two- and three-dimensional compositions, happenings, and environments; and graphic artists, advertisers, photographers, filmmakers, set designers, performing artists, painters, sculptors, etc., exploit both the psychological and esthetic aspects of space to create visual effects that involve the viewer.

The time has come when man must:

- Carefully plan the use of space, with full awareness of the generations to follow;
- Continue his exploration of physical space—above the ground, in the sea, and beyond the planet earth;
- Devise new ways of creating the illusion of space; and
- Expand the use of space within his mind.

The artist can make a unique contribution to these efforts. Through his creative work, he can:

- Depict the conditions of his time,
- Project the effects of contemporary thought and action,
- Increase public awareness,
- Influence decisionmaking, and
- Play an integral part in solving—and precluding—the problems of space.

And because the student is a member of the decisionmaking public, because he will make the choices for his personal environment and may even become an artist, an architect, a city planner, etc., his experience with space should be varied and extensive. This might include some of the following types of activity:

- Experiments designed to help the student grasp the feel of his body in space and the effects of movement and changed positions on this feeling (gymnasts, performing artists, and drama or physical education teachers might be helpful here)
- Experiments with spatial relationships
- Experiments with environments, happenings, and kinetic art
- Slide presentations and discussions
- Visits to art galleries, institutes, museums, and other sources of appropriate exhibits
- Figure-ground exercises and similar experiments with positive and negative space
- Experiments with creating the illusion of space in two-dimensional forms through:
  - Defining mass, which implies the space necessary to contain it
  - Converging lines
  - Linear perspective—one-point and multiple-point
  - Aerial or atmospheric perspective
  - Point of view
  - The use of positive and negative spaces
  - Positioning shapes or forms
  - Separating and overlapping planes and edges
  - Diminishing shapes or forms
  - Sharpening or softening detail
  - The recessive use of color
  - Changes in value
  - Diminishing gradations of texture

- Experiments with the effects of light, color, mass, texture, pattern, proportion, etc., on three-dimensional space
- Informal meetings with people whose work is directly related to the planned use of space (e.g., advertising designers, architects, community planners, graphic artists, interior designers, performing artists, sculptors, set designers)
- Observation, sketchbook notes, or photographic essays concerned with the use of space in the student's immediate or community environment
- Involvement in planning efforts
- Independent studio and/or research projects

Some of the following suggestions might be useful in the development of an individualized learning program in the visual arts:

STUDIO EXPERIENCES

- Using pencil or pen and India ink, the student might make a number of enlarged sketches of common objects (e.g., paperclips, penpoints, rubberbands) and then use them as the basis for a drawing which emphasizes shapes emerging from or receding into space.
- Using black and white cut paper, the student might experiment with the articulation of space on a two-dimensional surface through arrangements which involve some of the following:
  - A single geometric shape in a variety of sizes
  - Small shapes cut from larger, related shapes—using all the pieces
  - "Lines" formed from thin strips of varying lengths
  - Geometric shapes of various sizes
  - A series of shapes, each of which directs the viewer's eye to the next
  - The simulation of advancing or receding movement on a striped field
  - Grids of equispaced curves superimposed on straight lines to create a moire effect

Torn paper might be used in the same type of activity to achieve interesting compositions through less precise shapes.

- Using found objects, scraps of wood or cardboard, and glue, the student might construct a three-dimensional structure composed of a number of small units arranged in identifiable or random relationships.
- Using tracing paper and a felt pen or a soft pencil, the student might investigate the principles of linear perspective by making a series of tracings of the interior or exterior views of buildings from large magazine photographs.
- Using appropriate materials, the student might develop a large drawing or painting of a stacked construction of found objects within the room (e.g., stools, chairs, easels). His work might emphasize negative shapes, color, and organization.
- Using drawing, painting, and collage materials, the student might develop a series of compositions which emphasize written and printed letter forms as figures against a ground.
- Using a variety of materials, a small group of students might construct a kinetic composition which depends upon mechanical devices, air currents, magnetic or gravitational force, and/or a moving light source for its effects.
- Using a variety of materials, a group of students might construct an environment which includes such things as moving and stable forms in space, light, color, and sound

RECLINING NUDE WITH GUITAR by Jacques Lipchitz. 1928. Black limestone 16 3 8" high at base 27 5 8" x 13 1 2". promised gift and extended loan to THE MUSEUM OF MODERN ART NEW YORK. FROM MRS JOHN D ROCKEFELLER, 3rd

DISCUSSIONS

- Show the students a variety of examples of the use of space in three-dimensional forms. Some of the following items might be included
  - Charles Eames' The Charles Eames House
  - Naum Gabo's CONSTRUCTION IN SPACE, SPIRAL THEME
  - Sidney Gordin's RECTANGULAR, NO. 5: CONSTRUCTION NO. 10
  - David Hare's MAN LEARNING TO FLY

Barbara Hepworth's FIGURE
Jacques Lipchitz' RECLINING NUDE WITH GUITAR, BIRTH OF THE MUSES
Seymour Lipton's THE CRUCIBLE, THE SORCERER
Laszlo Moholy Nagy's THE SPACE MODULATORS
Henry Moore's RECLINING FIGURE
Louise Nevelson's FIRST PERSONAGE, ROYAL TIDE I

Eero Saarinen's David S. Ingalls Hockey Rink at Yale University
David Smith's HUDSON RIVER LANDSCAPE
Frank Lloyd Wright's The Solomon R. Guggenheim Museum in New York City

and representative selections from landscape architecture, furniture and product design, urban planning, minimal sculpture, environments, etc.

RECLINING FIGURE by Henry Moore. UNESCO BUILDING, PARIS

Such topics as the following might then prove useful for discussion:

- Henry Moore's "carved space"
- The essence of the human figure in space as expressed by the connecting solids, deep hollows, holes, and dense shadows of works by Barbara Hepworth, Jacques Lipchitz, and Henry Moore
- The use of line and/or geometric form in space by such men as Naum Gabo, Sidney Gordin, David Hare, and David Smith
- A comparison of Laszlo Moholy-Nagy's THE SPACE MODULATORS with recent sculptures by Louise Nevelson
- The fact that many of the early leaders in the field of furniture and product design were also architects

HUDSON RIVER LANDSCAPE by David Smith. Steel. COLLECTION WHITNEY MUSEUM OF AMERICAN ART, NEW YORK

- Show the students a variety of examples of the illusion of space in two dimensional forms. Some of the following selections might be appropriate:
  - Sandro Botticelli's BIRTH OF VENUS, THE ADORATION OF THE MAGI
  - Pieter Breughel the Elder's THE HARVESTERS
  - Paul Cezanne's ORANGES, STILL LIFE WITH APPLES AND ORANGES, POT OF FLOWERS WITH PEAR
  - Chi Ch'en's HORSE AND WILLOW TREE IN MOONLIGHT
  - Giorgio de Chirico's DELIGHTS OF THE POET, THE NOSTALGIA OF THE INFINITE, JUAN-LES-PINS
  - Robert Duncanson's BLUE HOLE — LITTLE MIAMI RIVER
  - El Greco's GETHSEMANE
  - Jan van Eyck's ANNUNCIATION
  - Lyonel Feininger's VIADUCT, VILLAGE STREET
  - Guercino's "Aurora," in the Baroque ceiling of Rome's Casa Ludovisi
  - Harvest scenes in the wall painting of a tomb at Thebes
  - Henri Matisse's LADY IN BLUE
  - Piet Mondrian's COMPOSITION LONDON
  - Claude Monet's MORNING HAZE
  - Parmigianino's MADONNA WITH LONG NECK
  - Persian or Indian miniature work
  - Pablo Picasso's LES DEMOISELLES D'AVIGNON

THE NOSTALGIA OF THE INFINITE by Giorgio de Chirico. 1913 14?. Oil on canvas. 53 1 4" x 25 1 2". Collection. THE MUSEUM OF MODERN ART. NEW YORK. ADVISORY COMMITTEE FUND

  - Jackson Pollock's NUMBER 1 (1948)
  - Raphael's MADONNA AND CHILD ENTHRONED WITH SAINTS
  - Roman wall paintings from Pompeii
  - Jacob van Ruisdael's THE WINDMILL, A ROUGH SEA
  - Wang Shih-Chiang's MOUNTAIN LANDSCAPE
  - Victor de Vasarely's OP ART
  - Jan Vermeer's THE STUDIO
  - Leonardo da Vinci's THE LAST SUPPER

Examples of the illusion of space in advertising design, serigraphy, architectural drawing, etc., should also be included.

Individual or class discussion might include such items as the following:

- The illusion of boundlessness created by Breughel, de Chirico, and van Ruisdael
- The illusion of depth or three-dimensional form in Cezanne's ORANGES
- The use of linear perspective to create the illusion of space in THE LAST SUPPER and MADONNA AND CHILD
- The illsuion of spatial recession created by Feininger's use of overlapping planes, transparencies, and planes that appear to move through one another
- The use of figure-ground relationships in Optical Art, advertising design, and serigraphy and other forms of printmaking

- Show the students a variety of examples of actual movement and the illusion of movement in space. Some of the following selections might be appropriate:

Richard Anuszkiewicz' DEGREE OF VIVIDNESS
Giacomo Balla's DOG ON A LEASH, SPEEDING AUTOMOBILE
Umberto Boccioni's UNIQUE FORMS OF CONTINUITY IN SPACE, THE CITY RISES
Alexander Calder's LOBSTER TRAP AND FISH TAIL, RED GONG, WHALE
Marcel Duchamp's NUDE DESCENDING A STAIRCASE
Ellsworth Kelly's GREEN BLUE RED
Matta's LISTEN TO LIVING
Theodore Roszak's SPECTRE OF KITTY HAWK
Jean Tinguely's HOMAGE TO NEW YORK
Victor de Vasarely's TORKE

Some of the following topics might be useful for discussion:

- Familiar forms of movement in space (e.g., tree branches, telephone wires, or cobwebs moving in the wind; the human figure in motion—walking, running, bending, dancing, swimming, diving, throwing something, etc.)
- The patterns created by energy or movement in space, and the artist's expression of them (e.g., Giacomo Balla, Matta, and Marcel Duchamp)

SPEEDING AUTOMOBILE by Giancomo Balla. 1912. Oil on wood. 21 7 8" x 27 1 8". Collection. MUSEUM OF MODERN ART. NEW YORK. Purchase

- The illusion of movement in a stable form, such as that created by sculptors Umberto Boccioni, Theodore Roszak, and Diego de Rivera
- The illusion of movement in Optical Art, as exemplified by the work of Richard Anuszkiewicz, Ellsworth Kelly, Bridget Riley, Victor de Vasarely, and others
- Alexander Calder's contribution to the use of space in art (e.g., changing spatial relationships and patterns produced by the movement of forms in space)
- The role of the viewer in Optical Art, kinetic art, environments, and happenings, and the resultant changes in the world of art

- Show the students a representative sampling of the artwork of various cultures from early times to the present, and help them to see the change in man's perception of space as evidenced by his art.

INDEPENDENT STUDIO AND RESEARCH PROJECTS

- A pictorial essay developed from drawings or photographs of a particular shape or form in space
- A visual presentation concerning the effective use of space in graphic design
- An original banner, book jacket, poster, or other type of graphic art which incorporates the effective use of positive and negative space or spatial relationships in its design
- A visual presentation concerning the use of linear perspective by artists of the Renaissance
- A visual presentation which illustrates a variety of techniques for creating the illusion of a third and/or fourth dimension in a two-dimensional art form
- A personal interpretation of space
- An effective use of the human form in action as either figure or ground in an original drawing, painting, or series of prints
- An effective spatial arrangement of opaque, transparent, and/or translucent planes and volumes in an original, nonobjective construction
- The development of a problem in architectural, landscape, or interior design to which the abstract spatial studies which have been completed can be specifically applied
- A research report on the development of urban planning in the local community, a particular city, another part of the United States, the "new towns" of Europe and America, or such experiments as Chandigrah and Brasilia
- A summary-analysis of Gyorgy Kepes', Laszlo Moholy-Nagy's, and/or Irene Rice Pereira's ideas about space, shape or form, motion, and vision as expressed in their work and writings
- A booklet composed of an ordered series of "frames" which produce a "motion picture" when flipped with the edge of one's thumb
- A report on the relationship between stroboscopic or stop-action photography and (a) the simultaneity of the Cubists, or (b) the space time visualization of the Futurists

SUMMARY AND EVALUATION

To what extent do the observations, responses, and creative work of the student reveal that he:

- Is aware that space is a very real element of existence?
  - — Has both qualitative and quantitative characteristics and is therefore perceptible?
  - — Has affective properties?
  - — Exists in the mind, as well as in the physical universe?
- Is aware that he not only can, but **must** control the use and effects of space?
- Is aware that man's concept of space is directly related to the development of his consciousness and has therefore changed throughout the ages?
- Is aware that many aspects of his environment are three-dimensional compositions in space?
- Is able to organize and construct a three-dimensional composition in space?
- Understands the fundamental techniques for creating the illusion of space and/or movement in two-dimensional forms?
- Is able to create the illusion of space and/or movement in two-dimensional forms effectively and imaginatively?
- Understands the nature of positive and negative space?
- Is able to use positive and negative space effectively and imaginatively in a variety of two- and three-dimensional forms?
- Is able to use space creatively in his own art work?

LIGHT AND COLOR

It is difficult for sighted people to imagine a world without light and color. These are the only elements of art which must be perceived visually; and since light is the **sine qua non** of visual experience, and color a derivative of light, it seems appropriate to consider them together.

In general, the artist works with light and color on an intuitive basis. That is, he responds to what he sees in a very personal way, and experiments freely with various aspects of artistic expression. However, as he becomes aware of the effects he can achieve and of the processes/techniques through which he can achieve them, he begins to work with light and color in an increasingly cognitive as well as intuitive manner, particularly as he comes to use these elements as direct and independent language. For this reason, some knowledge of the theory of light and color—but not of rules or color wheels—has been included in the material which follows.

Light is a visible form of radiant energy which also includes infrared, ultraviolet, and X-rays. One of the many properties of light is color, a circumstance which can easily be proved by simple experiment: If "white" light passes through a drop of water or a prism, it is dispersed into a rainbow of colored light; and if the resulting spectrum passes through a second but inverted

prism, the bands of color will combine to form white or colorless light again. Thus color is a "frequency phenomenon," an optical sensation produced by radiant energy of particular wavelengths and intensities.

There are two types of color:

- **Chromatic**—which includes the entire visible spectrum, and
- **Achromatic**—which includes only white, black, and the various tints and shades of gray.

Chromatic colors have three attributes or properties:

- **Hue**—that characteristic of a given color for which it is named;
- **Intensity** or **saturation**—the purity of a hue; and
- **Value**—the brilliance of a hue as measured on a scale of grays between the two extremes of white and black. As white is added to a pigment, its color becomes lighter and therefore "higher" in value; as black is added, it becomes darker and therefore "lower" in value. Colors with values higher than medium gray are often called **tints**, and those with lower values are called **shades**. Thus lavender is a tint of violet; and maroon, a shade of red. Adding either white or black lessens the purity of a hue and makes the viewer more aware of a color's value than of its hue as it approaches either end of the scale.

Achromatic colors differ only in brilliance or value: they have no hue and therefore no intensity or saturation. The characteristics of chromatic and achromatic color are readily demonstrated by adjusting the b&w/color and brightness level knobs on a television set when a program is being presented in color.

Changing the color of light is an **additive** process that sometimes produces rather surprising results. For example, when the artist combines red light with green in the proper intensities, he will see a pure or monochromatic yellow—although that frequency of radiation is rarely present. If he adds green to blue, the result is a blue-green called turquoise or cyan; but blue and red produce magenta—an optical sensation that cannot be found in the spectrum at all!

Red, green, and blue are the **primary colors of light** because, in appropriate mixtures and intensities, they form all the colors in the visible spectrum. When one of these is added to another, the resulting color will produce the afterimage of the third and is therefore considered its complement (e.g., if one stares at a concentration of blue light, he will see an afterimage of yellow; the reverse is also true; each of the colors is therefore the opposite or complement of the other). Yellow, cyan, and magenta comprise the **secondary colors of light**. The **complementary colors** are blue/yellow, red/cyan, and green/magenta. In close proximity, they tend to enhance one another; but they cancel each other out in combination and produce colorless or "white" light, the sum of the spectrum in balance. The complement of light is darkness, or the absence of light.

Changing the color of pigment is a **subtractive** process, with more predictable results than its counterpart in light. Since pigment is a substance, it can only be seen when there is light—and then it absorbs or "subtracts" some of the frequencies of radiation and reflects or transmits others. For example, blue paint absorbs the red, orange, and yellow bands of the spectrum, reflects the green, blue, and violet ones, and therefore appears to be blue. Yellow paint absorbs blue and violet; reflects red, orange, yellow, and green; and therefore looks yellow. A mixture of the two absorbs all but green and very small portions of red, orange, yellow, blue, and violet. The only light reflected by both colors individually and in combination is green, which therefore becomes the characteristic color of the paint. A work by Vincent van Gogh illustrates an interesting application of these phenomena: By juxtaposing distinct brushstrokes of blue and yellow paint in THE RAVINE, he causes the viewer to see blue and yellow both as independent colors **and** as green, a combination of the two. This deliberate alternation of the viewer's perception coupled with the staccato rhythm of the brushstrokes produces a color vibration that makes the turbulent water in the painting come alive.

The **primary colors of pigment** are the **secondary colors of light**: yellow, cyan, and magenta. As we've just seen, yellow plus cyan or blue equals green. Cyan plus magenta equals violet, and magenta plus yellow equals orange. Green, violet, and orange therefore comprise the secondary range of colors; and the complementary pairs include yellow/violet, cyan/orange, and magenta/green. In close proximity, the complementary colors of pigment tend to enhance each other; but unlike those of light, they have a dulling effect when mixed and ultimately produce one of the many tints or shades of gray. Thus red and green light will produce yellow light; but red and green pigment looks like mud.

The characteristics of light are determined by its source, a condition which ac-

counts for the virtual effects of television, light shows, and fireworks on the Fourth of July. It further accounts for the differences between natural and artificial light and is therefore of particular importance to photographers whose selection of film, filters, and flashbulbs is dependent upon the quality of light and the special effects for which these items are to be used.

In turn, the nature of light affects the appearance of things illuminated by it. Artists have long exploited the visual effects of incidence, intensity, and color on persons or objects in motion or at rest. A working knowledge of these is fundamental to both the visual and the performing arts, which depend upon it for the strength of their illusion. As might be expected, light has its greatest impact on color—an impact that ranges from the wildly psychedelic to simple metamerism, the tendency of colored surfaces to look alike in one kind of light and quite different in another. In general, we maintain a fairly normal perception of color under very different types of illumination; but an awareness of the principles involved enables the artist/designer to produce a variety of optical effects and may remind the average consumer to select his materials under the same conditions of light as those in which they are to be seen.

With the exception of fluorescence, the colors we ascribe to a nonluminous object (e.g., a flower, a lemon, a rug, or anything else that doesn't produce its own light) depends upon:

- The nature of the light which falls upon it,
- What the object does to that light,
- The medium through which it travels, and
- Our perceptual apparatus.

Since white light is a balance of the full visible spectrum, any substance illuminated by it will reflect and/or transmit some of its colors and absorb others. Colored light limits the range of frequencies that can be reflected, transmitted, or absorbed to those that comprise the apparent color of the light. For these reasons, a piece of red paper looks red under white light because it reflects the red and orange bands of the spectrum and absorbs all others. It also looks red in red light. But in yellow light, the paper absorbs all but very small amounts of red, orange, and yellow radiation, and therefore appears to be black or a very dark brown. White materials always reflect light in the same proportions they receive—thus a piece of white paper looks white in white light, red in red light, yellow in yellow light, and bright or dim according to the brilliance of the light which makes it visible.

So—an illuminated object can reflect, transmit, or absorb only those colors included in the light which falls upon it; but the substance of which it is made can alter the effects of that light in a variety of ways. Colors of the same intensity and hue will therefore look quite different in:

- A piece of glass or cellophane;
- A bowl of gelatin;
- A volume of liquid;
- A swatch of velvet, cotton, silk, or wool;
- A Christmas tree ornament;
- A strip of enameled wood or aluminum siding;
- An enameled metal dish;
- A glazed ceramic; or
- A painting done with oil, acrylic, tempera, watercolor, crayon, pastel, etc., alone or in combination.

And some materials (e.g., gold foil and motor oil) have the added property of reflecting one color and transmitting another.

Both the color and the quality of light are affected by the medium through which it passes—hence our nacreous dawns, blue skies, and flaming sunsets. The world of color fades on foggy mornings, and the "real" browns and greens of distant hills become an optical grayish-purple. The Old Masters observed these phenomena and used them to advantage in creating mood and the illusion of depth on a two-dimensional surface. Painters, potters, and glaziers recognized the properties of silicones with respect to light and raised their usage of them to a high level of art through such processes as glazing, crackling, etc. The development of plastics further enabled artists to capitalize upon the visual effects produced by the internal absorption, transmission, reflection, dispersion, distortion, polarization, and/or interference of light waves resulting from the structure and composition of transparent and translucent planes and volumes.

In the final analysis, however, the most significant aspect of light and color is our visual perception of them; for no matter how independently they may exist in the physical universe, their chief importance to us in terms of life and art is directly related to our capacity for seeing and our response to what we see. The process of seeing is generally the same for all of us; but there are differences —both in what we see and in how we respond to what we see. For example, some of us are more susceptible to eye fatigue than others, or are subject to it under different circumstances; and because eye fatigue produces afterimages of complementary color, our visual sensations are sometimes distorted. One man in 10 and one woman in 100 is

"color blind": some see little difference between particular shades of blue and green, others between green and red. Individually and collectively, we tend to associate color with experience—a condition which is evident in our personal preferences; in the visual temperatures we ascribe to certain colors (e.g., the "warm" reds, yellows, pinks, and oranges, and the "cool" blues, greens, grays, and whites); in the color symbolism of various cultures; and most recently, in the proud affirmation "Black is beautiful!" Interestingly enough, we are not disturbed by orange skies and similar departures from the real in filmed cartoons or advertising displays; but we refuse to eat—are even sickened by—blue mashed potatoes, green fried eggs, and similar distortions of familiar foods. Thus we experience not only visual, but also emotional, physiological, psychedelic, even hallucinogenic effects from certain combinations of light and color. More often than not, our responses are predictable in terms of scientific laws and principles; but a significant number of them still seem unique.

For these reasons, the student should be encouraged to discover for himself—through direct experience in a free, imaginative, and self-structured way—without the use of set rules and color wheels:

- The appropriateness of light and color as a medium of expression in the world of NOW, a world which bypasses internalized perception in favor of a direct attack on the senses intended to elicit an immediate, all-at-once, nonrepeatable response:
- The power of the imaginative use of light and color to visualize one's own perceptions and to change the viewer's mode of consciousness as well;
- The effects of these elements upon the apparent size, shape or form, weight, and spatial relationships of items within a work of art;
- The effects of the quantity of color, the shape of the color area, the symbolic or psychological aspects of color, and the manner in which it has been applied on the overall effect of color and upon warm/cool, advancing/receding, expanding/contracting, etc., relationships;
- The range of expression available to him through the choice of subjective or optical color, as opposed to local, real, or objective color;
- The emotional as well as visual sensations evoked by tonality, a limited palette, or a myriad of colors;
- The differences between the effects achieved through a thorough mixing of paints or pigments, and those resulting from a free and textured handling of them;
- The quality and effects of controlled illumination, regardless of the actual lighting conditions in which the work was developed or is viewed; and
- The use of light and color for unity, harmony, and balance.

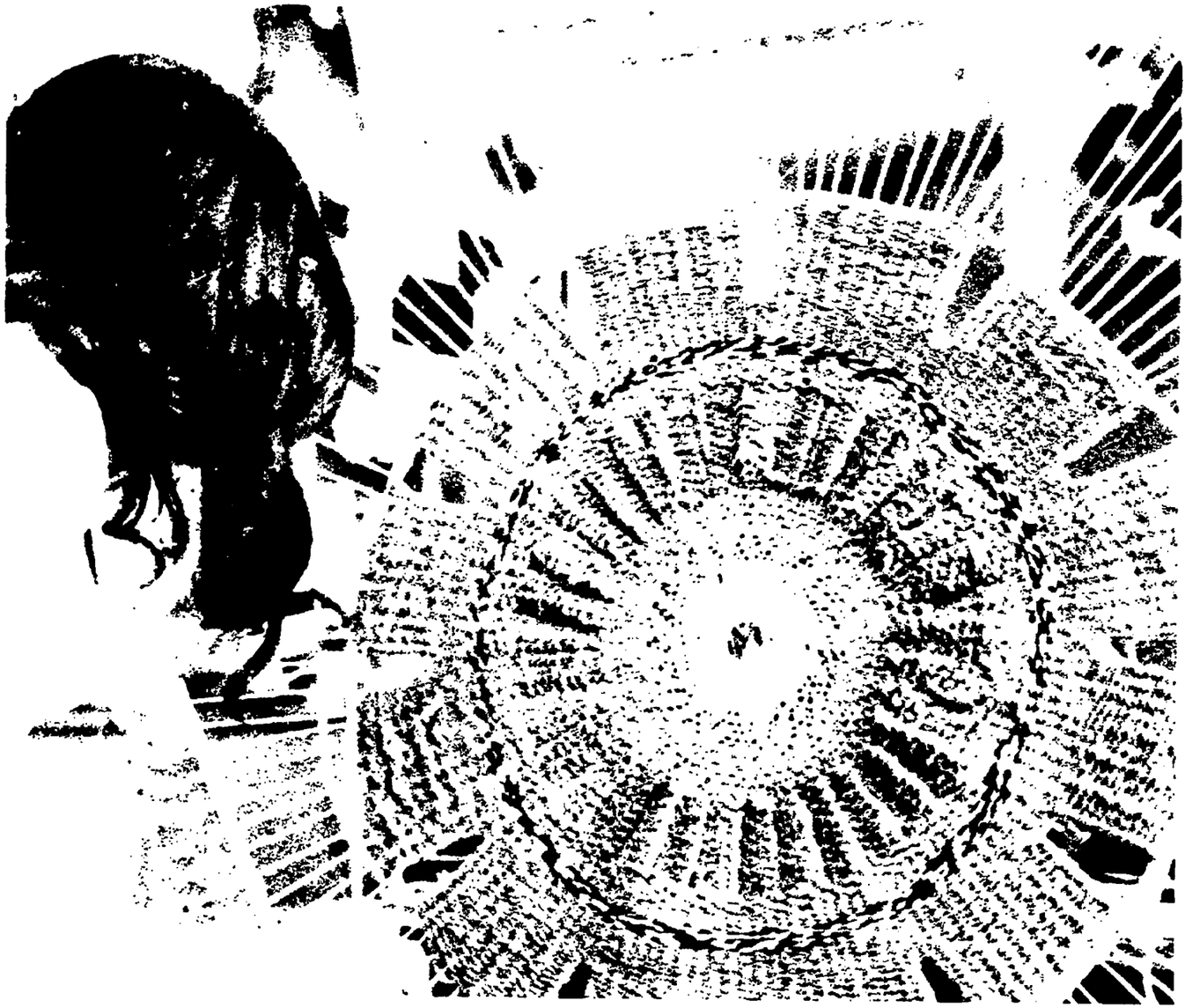
It is with these thoughts in mind that the bibliographic references on pages 35-36 have been included.

STUDIO EXPERIENCES

- Using cardboard rectangles of the same size, the student might develop an achromatic value scale and then create a matching scale in color. In addition, he might experiment with visual effects produced by placing rectangles of the same size but different colors on various colored backgrounds.
- Using acrylic, tempera, or oil paint, the student might experiment freely with color mixing and discover, perhaps, how many variations of a single color he can produce.
- Using a wide variety of paints, pastels, inks, and art papers, the student might explore the unique qualities of each medium (e.g., transparency, opaqueness, fluidity, covering power, texture) and the various effects he can produce with them.
- The student might experiment with ultraviolet or black light on fluorescent colored surfaces.
- The student might experiment with the effects of color on our eating habits by preparing foods in unfamiliar colors, serving them to his friends, and observing the results.
- Using cardboard or corrugated paper boxes and tempera or acrylic paint, the student might construct a three-dimensional form which expresses a personal feeling or emotion through the effective use of color.
- The student might develop a painting in which color is used in unusual or unnatural ways (e.g., green faces, purple fire hydrants, blue bananas, orange skies).
- The student might design and construct stabiles or mobiles of tissue paper, cellophane, magazine pages, or other colored materials.
- The student might create interesting

two and three dimensional forms of colored glass, cellophane, or plastic planes.

- The student might experiment with the effects of color and motion, using:
  - Small squares of complementary color attached to the same corner of alternate pages in a book;
  - Colored discs slit from center to circumference and attached to a revolving turntable or potter's wheel; or
  - Patches of color attached to the blades of an electric fan.



- The student might experiment with achieving light and color effects in photography through the imaginative use of f-stops, filters, and supplementary illumination.
- The student might experiment with light shows, environments, and lighting design as it applies to interiors, advertising displays, and live theater performances.
- Using a variety of color combinations, the student might design a wardrobe for a teenage boy and/or girl.
- The student might create interesting compositions by arranging such materials as string, cellophane, wax crayon shavings, Vaseline*, etc., in 2x2 glass slide mounts or between pieces of heavy celluloid: sealing them with tape; and then projecting them as slides. (The heat from the projector will melt the Vaseline* and crayon, with rather unusual results.)
- The student might experiment with the color effects of fused glass by creating a simple glazed clay dish form or a shape suitable for hanging.
- Using transparent enamel, the student might experiment with color in a dish or pendant by refiring several colors over and over.
- Using sponges, string, toothpicks, twigs, popsicle sticks, toothbrushes, cardboard strips, found objects, tempera, and a variety of papers, the student might experiment with brushless painting in black, white, and the primary colors of pigment.
- Using paper and black and white tem-

pera, the student might illustrate the concept of value by translating a subject from his sketchbook into a variety of simple, flat, achromatic planes.

- The student might design a woodcut or an etching which illustrates the use of line to achieve value.
- The student might develop a painting in which value is the chief source of dramatic or emotional impact.

DISCUSSIONS

- Examine with the students a variety of examples of the use of light and color:
  - In advertising and packaging;
  - In manmade environments such as homes, schools, churches, museums, galleries, shops, municipal buildings, manufacturing centers, etc.; and
  - In clothing and accessories, both historical and contemporary.

  Then discuss with the students such topics as the following:
  - The use of color for eye appeal and emphasis in marketing and advertising;
  - The use of light and color in architecture and interior design, including local examples as well as those from other cultural or geographical areas;
  - The use of color in clothing and accessories, again including local examples as well as those from other cultural or geographical areas;
  - The fact that certain colors are flattering to certain people, and others are not;
  - The effects of color as opposed to black and white in photographs, films, and/or television programs.

- Show the students a variety of works of art which illustrate the effective use of light and color. Some of the following might be included:

  Josef Albers' HOMAGE TO THE SQUARE: ASCENDING
  Robert Campin's ALTARPIECE
  Mary Cassatt's MOTHER AND CHILD, THE LODGE
  Paul Cezanne's PINES AND ROCKS, CHESTNUT TREES AT JAS DE BOUFFAN
  Marc Chagall's I AND THE VILLAGE, BIRTHDAY
  Gerard David's TRIPTYCH OF ST. JOHN THE BAPTIST
  Stuart Davis' LUCKY STRIKE
  Andre Derain's LONDON BRIDGE
  Raoul Dufy's CASINO DE NICE, SAILBOAT AT SAINTE-ADRESSE
  Lyonel Feininger's GELMERODA
  Vincent van Gogh's SUNFLOWERS
  El Greco's ST. JOHN'S VISION
  Childe Hassam's COLUMBUS AVENUE, BOSTON: RAINY DAY; WINTER NIGHTFALL IN THE CITY
  Hans Hofmann's BLUE RHAPSODY
  Edward Hopper's NIGHTHAWKS
  Wassily Kandinsky's BLUE (NO. 393), COMPOSITION NO. 2
  Franz Kline's SIEGFRIED; BLACK, WHITE AND GRAY
  Georges de La Tour's EDUCATION OF THE VIRGIN
  Light sculptures
  Seymour Lipton's CRUCIBLE
  Franz Marc's BLUE HORSES
  Henri Matisse's GRAND INTERIEUR ROUGE, RED STUDIO
  Mayan Bonampak Temple frescoes
  Joan Miro's MAN, WOMAN, AND CHILD; THE MOON
  Claude Monet's HAYSTACKS, ROUEN CATHEDRAL
  Henry Moore's INTERNAL AND EXTERNAL FORMS
  I. Rice Pereira's LANDSCAPE OF THE ABSOLUTE
  Pablo Picasso's LE GOURMET, HARLEQUIN
  Maurice Prendergast's LOW TIDE, BEACHMONT; CENTRAL PARK
  Abraham Rattner's APRIL SHOWERS
  Tillman Reimenschneider's altarpieces and sculpture
  Auguste Renoir's LADY WITH PARASOL
  Rembrandt van Rijn's PORTRAIT OF A YOUTH, THE NIGHT WATCH
  Diego Rivera's FLOWER VENDOR
  Mark Rothko's PAINTING (1953-54), EARTH AND GREEN
  Georges Roualt's DEAD CHRIST, OLD KING, A CLOWN, THREE JUDGES
  Henri Rousseau's THE SLEEPING GYPSY
  Georges Seurat's SUNDAY AFTERNOON ON THE ISLAND OF LA GRANDE JATTE, AT THE CONCERT EUROPEEN
  Alfred Sisley's BANKS OF OISE, EARLY SNOW OF LOUVECIENNES
  Stained glass windows in Chartres Cathedral and others
  Titian's VENUS AND THE LUTE PLAYER
  Tohaku's BOOM OF MAPLES AND FLOWERS
  Johannes Vermeer's YOUNG WOMAN WITH A WATER JUG, THE ARTIST'S STUDIO
  Jean Antoine Watteau's EMBARKATION FOR CYTHERA

Yoruba dance masks

Such items as the following might then be discussed:

- The intensity of the colors used by van Gogh
- The use of cool, subdued color in Picasso's LE GOURMET and HARLEQUIN
- The use of black masses and outlines for separation of color and "visual shock"
- The comment that Henri Matisse, the informal leader of the Fauves, "was fairly well convinced that color imitation or exactitude not only failed to convey the emotions felt by the artist, but constituted instead an impediment to successful expression."
- The theory of color demonstrated by the Impressionists and the Pointillists
- A comparison of the use of light and color by the Old Masters and the Impressionists
- Kandinsky's comparison of color and painting with musical notes and composition
- The statement that "Rothko appears to be seeking a way of changing the viewer's mode of consciousness through color. . . . he wants painting to seize the consciousness, to get behind man's thought and feeling."
- The various techniques for applying paint employed by Chagall, van Gogh, Rembrandt, Seurat, and Titian.

CARDINAL DON FERNANDO NINO de GUEVARA by El Greco. Oil on canvas. THE METROPOLITAN MUSEUM OF ART. BEQUEST OF MRS H O HAVEMEYER. 1929. THE H O. HAVEMEYER COLLECTION

- The strong emphasis given to color as nonverbal language by such groups or movements as Orphism, Die Brucke (The Bridge), Der Blaue Reiter (The Blue Rider), and psychedelic art.

- Have the students examine the use of value in a variety of art forms: advertising design, architecture, fashion design, painting, printmaking, product design, sculpture, etc. Some of the following examples might be included:
  - Harry Bertoia's WALL PIECE
  - Georges Braque's STILL LIFE FRUIT, STILL LIFE WITH GRAPES, STILL LIFE: BLUE PLUMS, LE JOUR
  - Alexander Calder's mobiles
  - Giorgio de Chirico's NOSTALGIA OF THE INFINITE, DOUBLE DREAM OF SPRING, JUAN-LES-PINS, ANTIQUE ERA
  - Herbert Ferber's THE FLAME
  - Juan Gris' GUITAR AND FLOWERS; LE PAQUET DE TABAC; LA COMPOTIER, STILL LIFE
  - George Inness' AUTUMN OAKS
  - Ray Komai's side chair
  - Georges de La Tour's THE FORTUNE TELLER
  - Fernand Leger's THE CITY, THE BLUE BASKET, THREE WOMEN
  - Edouard Manet's THE FIFER, THE DEAD TOREADOR, THE GUITARIST

STILL LIFE by Juan Gris. 1911. Oil on canvas. 23½" x 19¼". Collection, THE MUSEUM OF MODERN ART, NEW YORK. ACQUIRED THROUGH THE LILLIE P. BLISS BEQUEST

Peter Max's contemporary posters
Henry Moore's sculptures
George Nelson's chairs
Louise Nevelson's CATHEDRAL NO. 1-6, ROYAL TIDE I
Pablo Picasso's DOG AND COCK, HARLEQUIN ON HORSEBACK, WOMEN OF ALGIERS, MA JOLIE STILL LIFE, VIOLIN AND GRAPES
PSYCHEDELIC WET (film)
Rembrandt van Rijn's THE DESCENT FROM THE CROSS, ARISTOTLE CONTEMPLATING THE BUST OF HOMER
Ludwig Mies van der Rohe's Seagram Building
Eero Saarinen's TWA Flight Center at Kennedy International Airport, the General Motors Technical Center Service Section, chair
Yves Tanguy's MAMA, PAPA IS WOUNDED!
Titian's THE TRIBUTE MONEY, VENUS AND THE LUTE PLAYER
George Tooker's THE SUBWAY

Such items as the following might then prove useful for discussion:

- The relationship of value to hue and intensity
- The importance of value in posters, traffic signs, advertising displays, etc.
- The effects of surfaces on light, color, and value (cf. fabrics, fashion accessories, and the works of Harry Bertoia, Henry Moore, Louise Nevelson, Ludwig Mies van der Rohe, and Eero Saarinen)
- The dramatic effects of illumination achieved by Rembrandt, La Tour, and Titian
- The use of value to interpret space and mood
- The nature, function, and effects of chiaroscuro
- The differences between the abstract use of value to create the illusion of space, as illustrated by the paintings of Georges Braque and Juan Gris, and the more realistic use of it in the works of George Inness
- The illogical use of darks and shadows in the paintings of Giorgio de Chirico

INDEPENDENT STUDIO AND RESEARCH PROJECTS

- A visual presentation of the effects of light on color
- A color and light show produced and presented by a few students for the entire class or school
- A lighting design for a school or community theater production
- A painting or print developed from selected color combinations, such as warm or cool colors, complementary colors, analogous colors, etc.
- A painting developed from several colors, all of the same value
- A visual presentation of recent trends in the use of color for packaging and advertising design
- A series of experiments in the use of color for figure/ground contrast (positive and negative shapes)
- A visual analysis of the psychological or emotional aspects of light, color, and value
- A visual presentation or a layout which illustrates the use of contrasting values to achieve vitality in advertising, fash-

WATER LILLIES by Claude Monet. c. 1920. Oil on canvas. 6' 6 1/2" x 19' 7 1/2". Collection. THE MUSEUM OF MODERN ART, NEW YORK. MRS. SIMON GUGGENHEIM FUND.

ion and interior design, architecture, painting, or sculpture

- A visual analysis of the work of the Impressionists, the Fauves, the Pointillists, the Cubists, and/or any other group of artists concerned with the creative use of light, color, and value
- A visual analysis of Optical, or Op Art
- A collage or painting based upon the color theories of a particular artist or movement in art
- A composition which involves movement as well as color
- A miniature or full-size environment, involving light, color, movement, and both two- and three-dimensional design
- A three-dimensional structure or relief in which color is an integral part of the total design
- A visual presentation of the use of color in architecture and environmental design
- An interior design for an apartment, a home, a school, a "house of the future," a community building, etc.
- A painting which illustrates the use of light and dark values for dramatic effect
- A series of experiments with a variety of ways of expressing value, such as smudging, rubbing, or blending lines with charcoal; wet and dry techniques; and combinations of watercolor, inks, and other media
- A visual presentation of techniques for

achieving value in various forms of printmaking

SUMMARY AND EVALUATION

To what extent do the observations, responses, and creative work of the student reveal that he:

- Understands the nature and properties of light and color, and the relationship between them?
- Is aware that light and color are integral to his environment—and has developed the ability to see that environment in terms of these two elements, when he chooses to do so?
- Understands the nature of value and its relationship to color and light?
- Understands the implications of the nature and properties of light for photography and the other visual arts?
- Is aware of the variety of effects that can be achieved through the imaginative use of light, color, and value?
- Understands that these effects depend not only upon the artist's perception and use of the elements which produce them, but also upon the viewer's capacity for seeing, his level of sensitivity, and both his personal and cultural experience—particularly with color?
- Is aware of the power of color and light to affect human sensibility, and of the full significance of that power?
- Is aware of current trends in the use of these elements—including their use as a psychological force—in the world about him?
- Is aware of the increased range of color and media produced by modern technology?
- Is able to use color abstractly and nonobjectively, as well as representationally?
- Is aware of the many ways in which artists use value: for modeling, interpreting space, creating mood and illusion, developing pattern, etc.?
- Understands the importance of value and light in three-dimensional design?
- Enjoys experimenting with light, color, and value in a variety of media, and observes the effects he can produce with them?
- Is able to mix, control, apply, and otherwise use these elements imaginatively and creatively in his own art work?

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FORM (SHAPE)

Form is a segment of space or substance with distinguishable boundaries. It can be a plane, a three-dimensional image on a flat surface, a volume, a construction, an open spatial structure — even negative space or a void. Two-dimensional forms are often called shapes and are usually defined by closed lines; but they also emerge from areas of color, overlapping planes, and contrasts of texture or value. Three-dimensional forms are defined by their mass or structure and by patterns of light or movement, and often require the viewer's touch for their effectiveness as esthetic expression.

Like the other elements of art, forms are everywhere. They are large or small, simple or complex, rounded or pointed, convex or concave, perfect or irregular, airy or massive, static or mobile, and often tangible as well as visible. There are two major types:

- **Biomorphic** forms are rounded, ovoid, amorphous. They resemble the **organic** aspects of nature and therefore relate to life and primal sources.
- **Geometric** forms are perfect, pointed or circular, mathematical. They resemble the **inorganic** aspects of nature, are often produced by instruments devised by man, and therefore

suggest intellectual, abstract, and mechanical qualities.

In general, the "meaning" of a shape or form and the responses it evokes have a basis in common human experience. But because the properties of these elements as we encounter them in life acquire a new meaning when they are used in conjunction with other elements in a composition; because the significance of objects and actions differs from culture to culture; and because the viewer brings to a work of art his personal experience, his own level of sensitivity, and his own way of seeing, the impact of the shapes or forms in a given achievement will vary.

The artist selects, transforms, or creates forms that seem most appropriate for his purpose. For example:

- He may seek to redefine the properties of forms;
- He may attempt to capture the essence of his subject through a representational or abstract use of form;
- He may use the symbolic value of particular forms as a means of expression or communication;
  He may create nonobjective forms which stimulate direct sensory reactions;
- He may organize a variety of forms, or variations of one in conventional ways; or
- He may deliberately distort, juxtapose, or use familiar forms in unfamiliar ways—as Picasso does in GUERNICA —in order to make a personal statement or to elicit particular types of response.

In any event, the artist's use of shape or form is a **matter of choice** and therefore serves as an important clue to the meaning of the work as a whole.

It also tells us something of the artist's milieu, since the shapes and forms in art are related to the materials, processes, and prevailing attitudes of the time. For primitive man, shapes often had religious significance and three-dimensional forms were physical embodiments of the gods, rather than mere representations of them. Early works like the pyramids and the Sphinx, the Colossus of Rhodes, the Anglo-Saxons' Stonehenge, and the monoliths of Easter Island are massive structures made of stone and meant to serve religious, political, and/or commemorative purposes. There is a permanence about them that spans both worlds. Later works were carved, molded, cast, constructed, assembled, etc., of marble, wood, terra cotta, bronze, wax, wire, polyester, transparent and translucent plastic, found items — even ice. They released the forms and meanings that were "imprisoned" in the material, or captured the human form, or celebrated the divine, or said something about the human condition, or defined an element of the physical universe, or served a functional purpose, or exploited technological developments, or lodged a protest. Contemporary forms reflect the changing nature of life: they are nonobjective, kinetic, amorphous—even liquid. And recent works go further yet by stressing the here-and-now, the one-time-only, the direct sensation of the 70's in balloon structures that self-destruct and in sculptures of ice that melt in the making.

As with the other elements of art, the student's experience with form should be varied and extensive. Some of the following types of activity might be included; but in any event, the student should be encouraged to reinforce his visual perception of things by touching or feeling them whenever possible.

- Direct experience with a variety of media through which the student can discover:
  - The physical properties of forms
  - The symbolic properties of shapes and forms
  - The visual and/or symbolic effects of various arrangements of shapes and/or forms
  - The effects of light and/or movement on forms, or specific arrangements of them
  - The relationship between forms and the materials and processes used in depicting, transforming, or creating them
  - The variety of purposes which forms can serve
  - The effects one can achieve with fragmented forms
- Experiments in creating three-dimensional images on a flat surface
- Experiments in abstracting through the conversion of three-dimensional forms to two-dimensional shapes in varied perspectives
- Sketching sessions designed to sharpen the student's awareness of the types, functions, and arrangements of shapes or forms:
  - In the whole human figure, or in enlarged details of that figure;
  - In machines and machine parts;
  - In or about the school building;
  - In the natural environment;
  - In shopping areas, office buildings. streets, neighborhoods;

- In art galleries and sculpture gardens;
- In photographs, advertisements, television commercials; etc.

- Film or slide presentations, visits to cultural institutes and exhibits, and open discussions
- Informal meetings with architects, sculptors, interior designers, industrial engineers, graphic artists, and/or others whose occupations involve depicting, transforming, or creating shapes and forms

The following suggestions are more specific:

STUDIO EXPERIENCES

- The student might create a mood composition with shapes of various sizes cut or torn from colored paper and pasted on mounting board.
- The student might create a series of designs based on simple organic forms by making a rubbing on textured paper or cloth.
- The student might develop a simple form by pinching, adding, subtracting, or otherwise modeling terra cotta, clay, or plasticine until a satisfying design has been achieved.
- The student might construct a stabile of brightly colored rectilinear cardboard, celluloid, or plastic shapes.
- The student might build a three-dimensional construction of shapes carved or cut from scraps of styrofoam or genolite and textured with a burning tool and/or oversprayed with paint.
- The student might carve a simple hand sculpture that appeals to the touch and brings out the grain, curve, and character of the wood.
- The student might develop a nonobjective painting or collage which incorporates the use of transparent overlapping planes or a combination of media.
- The student might spotlight a series of interesting forms from a variety of angles and directions, and observe the effects of changes in lighting upon the appearance of the items and the shapes and values of the shadows it casts.
- The student might create simplified forms by draping or wrapping an object, or a group of objects, in sheeting or thin material.
- The student might illustrate a multiple view of a simple object or paper sculpture.
- The student might create a three-dimensional study of the simple geometric shapes and forms in a seated or reclining human figure.
- Using dowel rods, toothpicks, and nylon fishing line, the student might create a stylized figure or animal form with many open and closed spaces.
- Using discarded mechanical advertising display material, the student might create a kinetic sculpture.

DISCUSSIONS

- Through films, slides, and visits to art galleries, museums, sculpture gardens, and shopping areas, expose the students to a variety of three-dimensional forms. These might include hats, jewelry, ceramics, silverware, furniture, accessories, primary structures, environments, architecture, and such representative works of art as:
  - African sculpture—particularly from the Congo, in the Bakongo and Basonge style
  - Jean Arp's RELIEF, HUMAN CONCRETION, DESIGN
  - Leonard Baskin's SEATED MAN WITH OWL
  - BIRTH OF ATHENA (relief on the eastern pediment of the Parthenon)
  - Chinese deities
  - Constantin Brancusi's BIRD IN SPACE, FISH
  - Lynn Chadwick's TEDDY BOY AND GIRL
  - DISCOBOLOS ("The Discus Thrower")
  - Frank Gallo's SWIMMER
  - Lorenzo Ghiberti's bronze doors for the baptistry at Florence
    LANGUEDOC FIGURE OF CHRIST
  - Alberto Giacometti's CITY SQUARE, HEAD OF THE ARTIST'S MOTHER, THE CART

HEAD WITH HORNS. AFRICAN. BAULE. Anonymous. 19th century. Ivory. COLLECTION PETER POL LOCK. NEW YORK

  - Sidney Gordin's CONSTRUCTION NO 17
  - Tom Hardy's BISON
  - Indian temple sculpture
  - Gaston Lachaise's TORSO
  - Edmonia Lewis' FOREVER FREE
  - Jacques Lipchitz' RECLINING NUDE WITH GUITAR, BIRTH OF THE MUSES, FIGURE
  - Michelangelo's MOSES, HEAD OF DAVID, PIETA
  - Henry Moore's TWO FORMS, RECLINING FIGURE
  - Isamu Noguchi's CRONOS
  - Andrew O'Connor's HEAD OF LINCOLN
  - Jose de Rivera's CONSTRUCTION 56, CONSTRUCTION "BLUE AND BLACK"
  - Luca della Robbia's MADONNA AND CHILD, MADONNA WITH LILIES, MADONNA DEL ROSETO
  - Augusta Savage's GAMIN

Topics like the following might then be discussed:

- The variety of materials used in three-dimensional forms
- The use of form in jewelry, accessory, product, and furniture design
- The interpretation of the human form in Greek and African sculpture, and in the work of representative artists (e.g., Baskin, Gallo, Ghiberti, Giacometti, Lachaise, Lipchitz, Michelangelo, Moore, O'Connor, della Robbia)
- A comparison of the biomorphic forms used by Jean Arp and Isamu Noguchi and the geometric forms in the work of Jose de Rivera and Sidney Gordin

RELIEF by Jean Arp 1938 39. after a relief of 1934-35. Wood. 19 1 2" x 19 5 5". Collection. THE MUSEUM OF MODERN ART. NEW YORK. GIFT OF THE ADVISORY COMMITTEE (by exchange)

CRONOS by Isamu Noguchi. Balsa wood. STABLE GALLERY. NEW YORK

Buckminster Fuller, Philip Johnson, Le Corbusier, Oscar Niemeyer, Ludwig Mies van der Rohe, Paolo Solervi, Edward Durrell Stone, and Frank Lloyd Wright

- The relationship between the viewer and three-dimensional forms in representative works of art from various periods

● Show the students a variety of examples of the use of form in lettering, advertising design, fabric and wall-/or wrapping paper design, mechanical

- The contributions of such men as Charles Eames, Paul McCobb, George Nakashima, Jans Risom, Eero Saarinen, and Hans Wegener to functional design
- The importance of form in functional design
- The use of form, structure, and space in the architectural designs of R.

TALIESIN WEST. Terrace. Frank Lloyd Wright. 1938. SCOTTSDALE. ARIZONA

THE BUS DRIVER by George Segal, 1962. Figure of plaster over cheesecloth; bus parts including coin box, steering wheel, driver's seat, railing, dashboard, etc., Figure 53 1/2" x 26 7/8" x 45", wooden platform 5 1/8" x 51 5/8" x 75 5/8" overall height 75". Collection, THE MUSEUM OF MODERN ART, NEW YORK, PHILIP C. JOHNSON FUND.

drawing, photography, printmaking, and such two-dimensional artwork as the following:

Betty Blayton's CONDUCTIVE MIND
Romare Bearden's FAMILY
Aubrey Beardsley's THE BLACK CAPE (from SALOME)
Georges Braque's MAN WITH A GUITAR, WOMAN WITH A MANDOLIN, WOMAN WITH A VIOLIN
Wang Chien's WHITE CLOUDS OVER HSIAO AND HSIANG
Gustave Courbet's THE STONEBREAKERS, THE QUARRY, THE BEACH AT ENTRETAT
Juan Gris' GRAPES AND WINE, LA COMPOTIER, HARLEQUIN
Ernst Kirchner's STREET SCENE
Jacob Lawrence's PRAYING MINISTERS
Fernand Leger's THE CITY, THE DIVERS, THREE MUSICIANS
Piet Mondrian's BROADWAY BOOGIE WOOGIE, PAINTING I, RED AND YELLOW
Pablo Picasso's WOMAN WITH A GUITAR, GIRL WITH A MANDOLIN, THE THREE MUSICIANS, GIRL BEFORE A MIRROR, SEATED WOMAN
Horace Pippin's JOHN BROWN GOING TO HIS HANGING
Kay Sage's NO PASSING
George Segal's THE BOWERY
Ben Shahn's HANDBALL, FATHER AND CHILD

PALM SUNDAY PROCESSION by Romare Bearden. Collage. CORDIER AND EKSTROM, INC., NEW YORK

Henri de Toulouse-Lautrec's JANE AVRIL

Utamaro's BUST OF A BEAUTIFUL LADY

Topics like the following might then be discussed:

- The importance of shapes and forms in advertising, illustration, photography, product and stage design, and sculpture
- The meanings associated with the shapes and forms one encounters in his environment and in art
- The interpretation of the human form in representative works by Courbet, Leger, Picasso, Shahn, and Toulouse-Lautrec
- The use and effects of simplification, overlapping, reorganization, and simultaneity in representative works by Bearden, Blayton, Braque, Gris, Leger, Picasso, and Sage

INDEPENDENT STUDIO AND RESEARCH PROJECTS

- A series of designs based upon the creative use of handwriting and letter forms
- A pictorial essay developed from drawings or photographs of a particular form as seen from a variety of perspectives
- A series of drawings or paintings which illustrate the visual effects of stretching or compressing familiar shapes or forms
- An original drawing, painting, or series of sketches of the human form in action, with emphasis upon mass and positive/negative shapes
- A nonobjective construction composed of opaque, transparent, and/or translucent planes or volumes
- A relief sculpture composed of planes against a background
- A visual or multimedia presentation concerned with a topic such as the following:
  - An art movement involved with the abstraction of form
  - The 3-F philosophy of Frank Lloyd Wright—"Form Follows Function"
  - The contributions of the Weimar Bauhaus to the solution of problems in practical design
  - The relationship between design and the corporate image
  - The relationship between architectural design and ecology

SUMMARY AND EVALUATION

To what extent do the observations, responses, and creative work of the student reveal that he:

- Understands the nature and properties of form?
- Is aware of shapes and forms in his surroundings, and of their importance to his life?
- Realizes that the effect of a given shape or form is dependent not only upon the use to which it is put, but also upon the viewer's cultural background, personal experience, level of sensitivity, and way of seeing?
- Is able to use various types of media in three-dimensional design?
- Is able to create a three-dimensional image on a flat surface?
- Is able to use shapes and forms abstractly and nonobjectively, as well as representationally?
- Is able to use shapes and forms creatively in original two-/and three-dimensional design?

LINE

A line is a graphic or structural mode of expression with a variety of uses and characteristics:

- It has two dimensions—length and width
- It begins with a point or dot and moves in any direction—sometimes dividing and sometimes unifying space, but always leading, limiting, enlarging, or otherwise affecting the viewer's perception.
- It can be made with a pen, a pencil, a brush, a crayon, a twig, a feather, a string; and may be long, short, thick, thin, hard, soft, clear, fuzzy, wavering, precise, broken, continuous, rhythmic, erratic, horizontal, vertical, oblique, straight, curved, bent, jagged—according to the artist's choice and use of tools and media.
- It can be a force or movement; the contour of a shape or form; a passive demarcation between contrasting colors, values, and volumes or areas of mass or space.
- It may be visible or implied.
- And—as works like Alexander Calder's THE HOSTESS so clearly illustrate—it can exist in space as well as on a surface; for a standing structure of wire

or string is actually a line drawing in three-dimensional form.

Like the other elements of art, line is an integral part of man's environment and derives its "meaning" from common human experience with observed reality. For example, horizontal lines often convey a feeling of solidarity, permanence, or peace, because they relate to the ground beneath one's feet, roads, foundations, the horizon (for which they're named), a bed, and sleep or death. Vertical lines suggest life, reaching, dignity, and sometimes resistance, because they are visible in the upright forms of men, trees, buildings, supports, and obstructions. A combination of the two results in balance: right angles are intellectual, mathematical, precise—and therefore imply a reasoned control of natural force; while doorframes, goalposts, and the letter H suggest varying degrees of stability. Diagonals are precarious—like leaning towers of Pisa or ladders without support—unless they stabilize each other in the form of triangles. The jagged lines of lightning bolts, cracks in stone or wood or plaster walls, rips from barbed wire, or the gaping wounds in the earth's surface produced by quakes or other disasters are vivid expressions of tension, danger, high voltage, and sudden catastrophe. Curved lines, on the other hand, are graceful, fluid, calm—and often feminine in nature. When they form circles, they seem perfect or repetitious; when they are ovoid or elliptical, they remind one of eggs and therefore suggest fertility, potential, and biomorphic properties; and when they spiral, they symbolize growth, progression, ascent, upward mobility, aspiration—and the reverse.

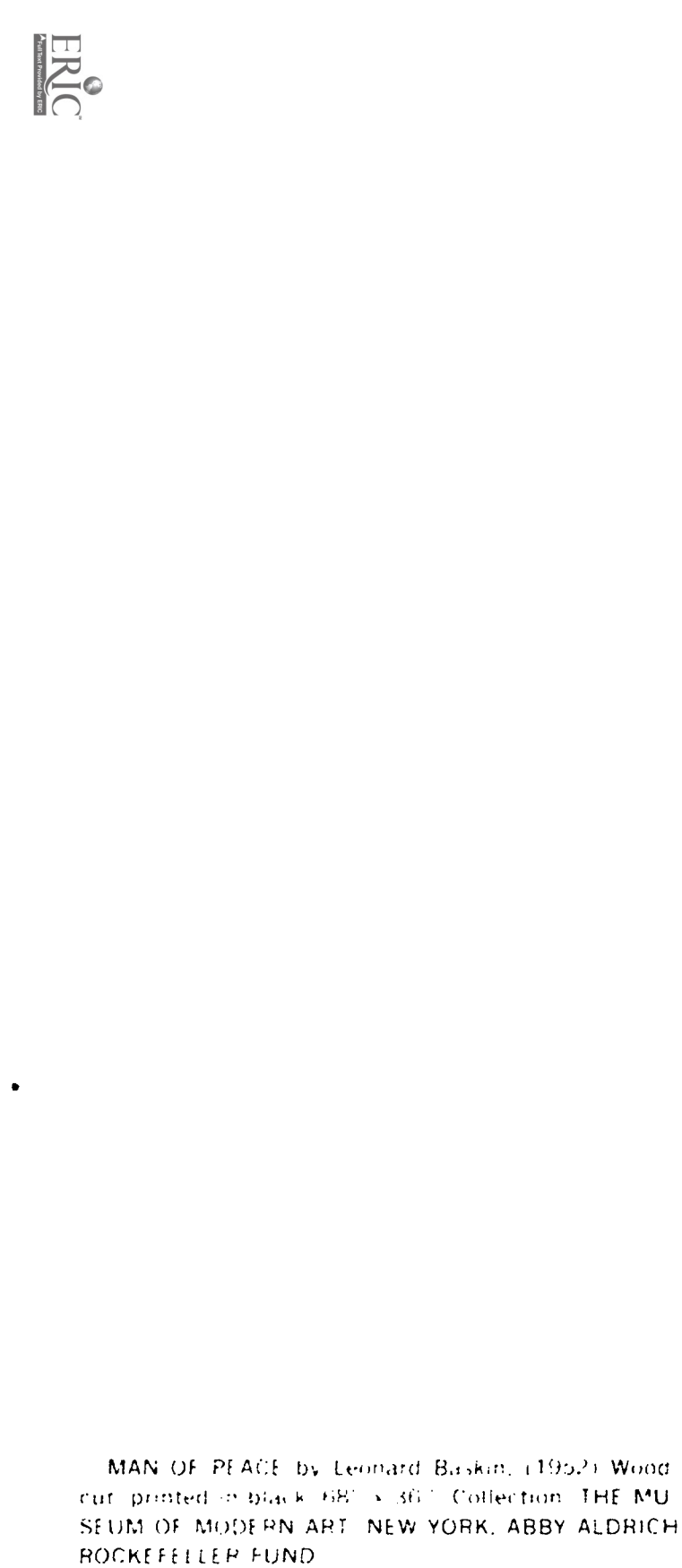
Written language was a natural outgrowth of common visual experience. Primitive people soon discovered that they could communicate by simple marks or diagrams made with a pointed object on a dirt surface. Alone or in combination, lines and dots could be used to identify persons, places, or things and to express relationships, movements, directions, concepts, ideas—even emotions, moods, or attitudes. Pictographs, ideograms, hieroglyphics, cuneiform—signs and symbols of one sort or another were developed as a means of recording and transmitting information. To date, language seems to have passed through four stages of development: pictographic, syllabic, alphabetic, and binary; and its nature and use are strong indicators of advances in civilization. But whether verbal and visual, or purely visual, language can be used not only to communicate or record, but also to create esthetic experience—and the basic element is line.

Certain lines and line combinations produce unusual perceptual effects as well. For example:

- Vertical lines appear to be longer than horizontal lines of equal length.
- Diagonal lines moving outward from the ends of a horizontal line make a line terminated by diagonal lines moving toward the center appear to be shorter, although the lines are equal in length (the Muller-Lyer illusion).
- Parallel lines crossed by a series of opposite parallel lines seem to diverge in the same direction that the cross strokes converge.
- Converging lines create the illusion of distance.
- Lines of equal length flanked by unequal pairs of darker lines appear to be unequal in length.
- Equal diagonal or oblique lines attached to a baseline appear to be unequal in length if the angles they form with the baseline are unequal.
- Items of equal height appear to be unequal when placed in different locations on a system of converging lines.
- The sides of a square superimposed on a pattern of concentric circles appear to bow toward the center of the figure.
- Straight lines superimposed on a grid of intersecting diagonals seem to bend.
- Concentric circles superimposed on a pattern of diagonal lines appear to be distorted.
- Space divided by lines appears to be smaller than space which is unlined.
- Identical pairs of eyes appear to gaze in different directions, according to the orientation of the lower part of the face.

The effects of line and line combinations such as those described above enable the artist to create the illusion of depth or three-dimensional space on a flat surface, the illusion of motion in stable media, the illusion of life in inanimate forms, and a variety of other visual effects, according to his own intents and purposes. For the artist uses line as he does the other elements of art—objectively or subjectively; for representational, abstract, or nonobjective work—to express his own vision in his own way.

Some of the following suggestions might be useful in developing with the student a wide variety of relevant experiences with line:



MAN OF PEACE by Leonard Baskin, (1952) Wood cut printed in black 68" x 36" Collection THE MUSEUM OF MODERN ART NEW YORK, ABBY ALDRICH ROCKEFELLER FUND

STUDIO EXPERIENCES

- The student might experiment with drawing a number of fast, free lines on a large sheet of paper with a soft pencil held in any manner not normally used for writing.
- The student might experiment with drawing expressive lines with a wide variety of media, including materials not normally associated with drawing (e.g., matchsticks, toothpicks, twigs).
- Using strips of construction paper, the student might experiment with organizing lines in a unified geometric composition which emphasizes spatial relationships in the manner of Mondrian.
- The student might construct a standing figure or animal form from a continuous piece of wire.
- The student might make a series of simple brush drawings of animals, people, plants, machinery, buildings, etc.
- The student might make large drawings from linear patterns in nature, such as wood grain, a fingerprint, a fern leaf, a small branch from a tree, dried weeds, cut sections of fruit or vegetables, etc.
- The student might make a number of sketches of the same scene, emphasizing horizontal lines in one, vertical lines in another, etc.
- The student might make a series of contour drawings of objects or human beings without removing the tool from the paper.
- Using such materials as wire, doweling, strips of wood, reed, string, thread, etc., the student might construct a stabile composed of many curved or straight lines organized as a unified composition.

DISCUSSIONS

- Have the students examine the artist's use of line and dot in a variety of two-dimensional forms of expression. These might include advertisements, aquatints, calligraphy, cartoons, cave drawings, Chinese and Japanese brush paintings, etchings, illustrations, line drawings, mezzotints, paintings, prints, woodcuts, and the works of the Old Masters as well as those of contemporary artists. For example:
  - Leonard Baskin's MAN OF PEACE
  - Mary Cassatt's THE FITTING
  - Paul Cezanne's HOUSE AMONG TREES, THE STOCKADE, CHESTNUT TREES AT JAS DE BOUFFAN
  - Lu Chih's ROCKY LANDSCAPE
  - DEER SCROLL—painting by Sotatsu, calligraphy by Koetsu
  - Vincent van Gogh's POPLARS ON A HILL, CYPRESS LANDSCAPE, CORNFIELD WITH CYPRESSES, ROAD WITH POPLARS
  - Arshile Gorsky's BETROTHAL II
  - Morris Graves' LITTLE KNOWN BIRD
  - Ikkosai Hosei's A RUSSIAN
  - Franz Kline's CHIEF
  - Willem de Kooning's WOMAN, WOMAN II
  - John Marin's Woolworth Building
  - Piet Mondrian's COMPOSITION IN BLACK AND WHITE AND RED, OPPOSITION OF LINES, WHITE AND RED

Emile Nolde's THE PROPHET
Charles Willson Peale's BENJAMIN FRANKLIN
Pablo Picasso's SEATED WOMAN
Jackson Pollock's AUTUMN RHYTHM: NUMBER ONE, 1948
Maurice Prendergast's THE RYDER
Georges Seurat's CAFE CONCERT
Ch'a Shih-Piao's SPRING
Mark Tobey's LYRIC
Bradley Walker Tomlin's NO. 3—1948
James A. McNeill Whistler's BLACK LION WHARF

Such topics as the following might then be discussed:

- The texture and pattern created by line or dot in the works of Pablo Picasso, Maurice Prendergast, and Georges Seurat
- The use of measurement to organize line and spatial relationships in the works of Piet Mondrian
- The character of line in Chinese and Japanese art, and in the drawings of contemporary artists and Old Masters
- The unique quality of line in graphic art
- The power of line to lead the viewer's eye in advertising design
- The use of line in woodcuts by Leonard Baskin, Emile Nolde, and Japanese artists Ikkosai Hosei or Shokoku
- The contrast between the serene, passive line of Paul Cesanne and Mary Cassatt and the swinging line of Vincent van Gogh, as a means of emotional expression
- The vitality of line in the "action painting" of the abstract-expressionist movement, especially that of Jackson Pollock, Franz Kline, and Willem de Kooning

- Show the students a variety of examples of the use of line and dot in three-dimensional forms. Some of the following items might be included:

Alexander Archipenko's THE SPIRIT OF THIS CENTURY "MODELING OF LIGHT"
Harry Bertoia's FLOWER
Alexander Calder's THE HOSTESS, SPINY STABILE, SPRING
Jose de Rivera's CONSTRUCTION NO. 47, HOMAGE TO THE WORLD OF MINKOWSKI
Charles Eames' lounge chair and ottoman
Naum Gabo's MONUMENT FOR A PHYSICS OBSERVATORY, LINEAR CONSTRUCTION #1, LINEAR CONSTRUCTION IN SPACE
Sidney Gordin's CONSTRUCTION NO. 10
Gunter Haese's IN TIBET
David Hare's SUNRISE
Ibram Lassaw's PROCESSION, SIRIUS, METAMORPHOSES
Jacques Lipchitz's PROMETHEUS STRANGLING THE VULTURE
Len Lye's FOUNTAIN
Konstantin Milonadis' FLOWER GARDEN
Henry Moore's KING AND QUEEN
George Nakashima's table and chair
Antoine Pevsner's DEVELOPABLE COLUMN, CONSTRUCTION IN THE EGG, FAUNA OF THE OCEAN
Eero Saarinen's conference chair
David Smith's HUDSON RIVER LANDSCAPE, ROYAL BIRD
Richard Stankiewicz' EUROPA ON A

CYCLE, FISH LURKING
Takis' SIGNAL ROCKET

and appropriate selections from architectural, interior, stage, furniture, product, costume, and jewelry design.

Such topics as the following might then be discussed:

- The apparent impact of science and technology upon the sculpture of this century
- David Smith's attempt to "paint" a landscape in space with line alone
- The contrast between the "storytelling" line of David Smith, Jacques Lipchitz, and Henry Moore, and the Constructivist use of line by Antoine Pevsner and Sidney Gordin
- The use of point or dot in the sculpture of Gunter Haese and Harry Bertoia
- The strong linear quality in the architecture of such men as Frank Lloyd Wright, Ludwig Mies van der Rohe, and Eero Saarinen
- The contrast between the functional lines used in the design of modern washing machines, refrigerators, automobiles, etc., with those in earlier models
- The emphasis on both esthetic and utilitarian needs in the use of clean, functional lines by contemporary designers

SUMO WRESTLERS by Katsukawa Shunko, late 18th century. Wood block. GEMINI SMITH, INC., NEW YORK

INDEPENDENT STUDIO AND RESEARCH PROJECTS

- A series of gesture drawings of the human figure in action
- A series of line drawings or paintings developed from a previously constructed three-dimensional composition
- A number of experimental line compositions using wet on wet, dry on wet, dry on dry, and wet on dry materials
- A series of designs for jewelry developed with line alone
- A series of advertising layouts which emphasize line and type
- A banner or poster in which "script writing" is used to communicate a message
- Models of functional, three-dimensional compositions which emphasize line (e.g., architecture, furniture, monumental sculpture)
- An illustrated report on the use of line in the design of Victorian and contemporary furniture.
- A visual presentation which compares the contemporary use of line in printmaking with that in early forms, including the work of such diverse artists as Daumier, Durer, Munch, Corita Kent, Joan Miro, etc.
- An illustrated report on the use of line in contemporary sculpture

SUMMARY AND EVALUATION

To what extent do the observations, responses, and creative work of the student reveal that he:

- Understands the nature and properties of line?
- Is aware that line can be implied as well as visible, and that it may exist in space as well as on a surface?
- Is aware that line is integral to one's environment and has developed the ability to see his environment in terms of line, when he chooses to do so?
- Is aware of the versatility of line and the resultant variety of its uses?
- Enjoys experimenting with various kinds of line and with various types of media in creating line?
- Perceives the difference between line as decoration or embellishment and line as an integral part of composition?
- Is able to use line to express movement; to define volume as well as area; to reveal a condition, a characteristic, or an emotion; to represent a subject or a situation; to symbolize an idea; or otherwise to convey an intended message or to create a desired effect?
- Is able to use line creatively in his own art work?

TEXTURE

Texture is both a visual and a tactile element of art. Traditionally, the **simulation** of texture was a prime ingredient in an artist's work. Renaissance painters labored to create realistic illusions of natural textures; Raphael's THE SCHOOL OF ATHENS and DISPUTA have painted "architectural frames"; and Baroque artists were renowned for their skill in making flat wood and plaster walls appear to have gold or marble moldings, pilasters, engaged columns, or similar three-dimensional devices. Later attempts to simulate texture in painting were so successful that they "deceived the eye" and earned such stylistic labelings as trompe l'oeil, illusionism, and magic or photographic realism. The medium was always subject to the man, and one of the measures of his genius as an artist was the extent to which he could convert that medium to his purpose. The marks of his tools were expected to be removed, covered, or otherwise disguised in the finished work. Thus the limbs of DAVID are marvelously smooth and the surface of an academic painting has the look of glass.

With the advent of the Impressionists and such innovators as Paul Cezanne, Vincent van Gogh, Fernand Leger, and Paul Klee, artists began to explore the effects of **actual** rather than simulated texture in

a work of art. And there were other developments as well:

- The unique characteristics of the artist's medium and the marks of his tools came to be regarded as effective means of expression in and of themselves.
- Old materials were used in different ways, and items unrelated to art as "beauty" became the new media for artistic expression. For example, paint or pigment was important not only in terms of color, but also because of operations done with it or in it after it had been applied; and such elements of modern civilization as string, tape, nails, junk, and other "found" objects came to be both tools and building materials for contemporary works of art.
- Photography, electronic imagery, and other technological advances lessened the need for the artist as historian, illusionist, and imagemaker.
- Museums and galleries came alive with works designed to be touched and experienced, as well as viewed.
- And such esthetic experience seems to involve the whole sensorium, it was thought to be achieved most effectively for both the artist and the viewer-now-participant through the **process** of art, in which case the work itself becomes a relatively insignificant reminder of the experience.

Painting merged with sculpture; the visual and plastic arts, with the dramatic arts; and representation, with real experience.

As a result, contemporary works include both simulated and actual forms of texture. For example, those in films and photographs are visual only; but paintings often have tangible textures achieved through imaginative methods of applying pigment (cf. the varied techniques of Max Ernst, Niki de Saint Phalle, and Jackson Pollock, among others) and jewelry, craft, ceramics, sculpture—these more than ever depend upon the viewer's sense of touch as well as sight for their effectiveness. No longer restricted to a single medium, the artist often incorporates real objects rather than representations of them in his work. The more familiar forms of multimedia composition include collage, assemblage, frottage, grattage, decalomania, architectural surfaces, and environments.

Texture has come into its own—not only as a means of representation, but also as an effective tool and an independent element of expression and design. The student should therefore be encouraged to experiment with a wide variety of textures and tactile sensations in a free, imaginative, and nonstructured way. As his work in art progresses, some of the following types of activity might be included:

STUDIO EXPERIENCES

- Blindfolded, the student might explore the surface textures of books, tabletops, glassware, fabrics, furs, logs or branches, fruit, flower petals, dried weeds, grass, rocks and stones, soil, cement, metal, plastic, sponge, sandpaper, etc., and then discuss his reactions with the other members of the class.
- Using any surface that lends itself to the activity, the student might make a number of small surface rubbings and then mount them together on a large paper or board.
- The student might create a composition based on textures achieved through the use of oil, acrylic, or tempera paint and a variety of tools (e.g., pieces of sponge, screen, wood grain, styrofoam, string).
- Using items from his sketchbook as a point of departure, the student might explore the textural possibilities of both the medium and the working surface as he develops a painting with acrylic, oil, watercolor, or pastel.
- The student might create a collage from a variety of readymade materials with similar or contrasting textures.
- Using natural and/or manmade "found" materials, the student might develop a relief sculpture or mosaic which emphasizes the actual surface texture of each item, and then study the effect of light on the composition.
- Using pen and ink only, the student might make a textural study of a single object such as an apple, a knotted piece of cloth, a piece of driftwood, etc.
- The student might create a slab construction of clay in which applied or incised surface texture is an important part of the total composition.
- The student might experiment with simulated textures in a series of monoprints made first with lines alone, and then with pieces of strongly textured material that will alter the surface of the ink before the print is "pulled."
- The student might create facsimiles of familiar objects with materials having

surface textures that contrast with those normally associated with the objects.

- The student might design and construct a sensorium.

DISCUSSIONS

- Examine with the students a variety of examples of the artist's use of actual texture in sculpture, architecture, functional design, ceramics, fabrics, and other man-made or natural items. Some of the following might be included:
  - Aztec sculpture
  - Leonard Baskin's WALKING MAN
  - Harry Bertoia's lounge chair, FLOWER
  - Bronze heads from Benin Court, Nigeria
  - Charles Eames' armchair
  - Tom Hardy's BISON
  - A Hindu temple covered with sculpture
  - Le Corbusier's Le Couvent Ste. Marie
  - Seymour Lipton's CRUCIBLE
  - Michelangelo's HEAD OF MOSES
  - Henry Moore's RECLINING FIGURE
  - George Nakashima's mira chair
  - Louise Nevelson's ROYAL TIDE I
  - Selected paintings of Robert Rauschenberg
  - Auguste Rodin's MONUMENT TO BALZAC
  - Ludwig Mies van der Rohe's apartment houses
  - Theodore Roszak's SPECTRE OF KITTY HAWK
  - Eero Saarinen's lounge chair and ottoman
  - Shang Dynasty bronze vessels

POPLARS ON A HILL by Vincent van Gogh. Oil on canvas.
THE CLEVELAND MUSEUM OF ART. Purchase.
LEONARD C HANNA, JR. BEQUEST

Frank Lloyd Wright's Kaufman house or Taliesin, West
William Zorach's HEAD OF CHRIST

Then discuss with the students such subjects as the following:

- The unique surface qualities of the objects and materials examined
- The reactions one might have if familiar objects had textures that were different from those expected
- The growing emphasis on tactile sensation in contemporary art (e.g., not only is the viewer invited to touch the work, but his participation in this manner is integral to it)
- The fact that works of art possess both the texture indigenous to the medium and a surface texture that results from the artist's handling of it
- Frank Lloyd Wright's use of native materials in their natural setting
- The textural differences in the sculptural works of Michelangelo, Henry Moore, and Harry Bertoia
- The textural differences in the metal sculptures of Harry Bertoia, Tom Hardy, Seymour Lipton, and Theodore Roszak

● Display, project, or otherwise expose the students to a variety of examples of the artist's use of simulated texture, or of a combination of actual and simulated texture in drawing, painting, photography, printmaking, and other forms of two-dimensional artwork. Some of the following items might be included:

Ajanta cave painting
Block prints by contemporary Japanese artists (e.g., Aoyama, Mikumo, Saito)
Marc Chagall's BIRTHDAY
Jean-Baptiste Simeon Chardin's BLOWING BUBBLES
Thomas Cole's LANDSCAPE WITH TREE TRUNKS
Edgar Degas' DANCER ON STAGE, WOMAN WITH CHRYSANTHEMUMS, LA DANSEUSE, DANCER RESTING, DANCERS IN PINK
Raoul Dufy's SAILBOAT AT SAINTE-ADRESSE
Vincent van Gogh's WALK AT TWILIGHT, CYPRESS BY MOONLIGHT, POPLARS ON A HILL, HOUSES AT AUVERS
Adolph Gottlieb's THRUST 1959, FROZEN SOUNDS
William Harnett's AFTER THE HUNT
Claude Monet's PALAZZO DA MULA, RED BOATS, CLIFFS AT ETRETAT
Georgia O'Keeffe's WHITE GARDENIA
I. Rice Pereira's GREEN DEPTH
Pablo Picasso's PIPE, GLASS, BOTTLE OF RUM; MAN WITH A HAT; LA TOILETTE
Sen Nan P'ing's DEER IN PINE FOREST
Jackson Pollock's AUTUMN RHYTHM, NO. 27:1950, NO. 17, NO. 12
Auguste Renoir's ON THE TERRACE, LADY WITH A PARASOL, LE BAL A BOUGIVAL
Mark Rothko's YELLOW OVER PURPLE, VESSELS OF MAGIC, ORANGE AND YELLOW
Georges Seurat's THE PARADE, A SUNDAY AFTERNOON ON THE ISLAND OF LA GRANDE JATTE
Edward Steichen's photography
Stitchery by Mariska Karasz and others
Textile applique work by the San Blas Indians
Tie and dye work by Indian artist Ritendra Mozumdar and others
Mark Tobey's THREADING LIGHT; RED MAN, WHITE MAN, BLACK MAN; EARTH CIRCUS; LYRIC

Some of the following topics might be useful for discussion:

- The importance of texture in creating the illusion of depth or space (cf. the work of Thomas Cole)
- The realistic use of texture by such artists as Harnett and Chardin, as opposed to its decorative use by men like Dufy and Chagall
- The manner in which Impressionist and post-Impressionist painters such as Edgar Degas, Vincent van Gogh, Claude Monet, Auguste Renoir, and Georges Seurat achieved both actual and simulated texture through their application of pigment
- The use of texture in textiles (applique, batik, stitchery, tie and dye, etc.)
- The use of texture (achieved through exaggerated directional strokes, in the case of van Gogh) to express emotions, sensations, or ideas
- The reasons why contemporary painters such as Adolph Gottlieb, Pablo Picasso, Jackson Pollock, Mark Rothko, and Mark Tobey found texture an ideal means of expression for abstract and nonobjective art

INDEPENDENT STUDIO AND RESEARCH PROJECTS

- A series of drawings based upon items in the student's sketchbook and emphasizing simulated texture
- A visual presentation or a photographic essay which examines the use of surface texture in various forms of architecture within the community
- A series of heavily textured clay tiles
- A wall hanging made with stitchery and applique
- A painting which simulates the textures, colors, and values used in a collage
- A photographic essay which reveals the beauty to be found in the various textures of one's environment
- A series of prints "pulled" from an inked collage (collograph)
- A tactile chart which also has visual appeal
- A woodcut patterned with lines of various densities
- A depth study of an artist who made particularly effective use of surface texture in his work

SUMMARY AND EVALUATION

To what extent do the observations, responses, and creative work of the student reveal that he:

- Is sensitive to texture, and aware of it in his surroundings?
- Is aware that every substance has texture, and is able to see his environment in terms of texture when he chooses to do so?
- Is aware that texture can be actual, simulated, or a combination of the two —and understands the difference between them?
- Is aware of the variety of effects that can be achieved through the imaginative use of texture, and of its importance to artists and designers?
- Enjoys experimenting with a wide variety of textures and textural effects?
- Is sensitive to the textural characteristics of his media and materials?
- Can use both actual and simulated texture imaginatively and creatively in his own art work?

MOVEMENTS AND TRENDS IN THE WORLD OF ART

. . . when we are witnessing the actual process of history, and cannot yet generalize from particular experiences, all these categories become confused. We can see, from the typical example of Picasso, how difficult it is to attach the diverse manifestations of one genius to the logical limitations of one historical category. The artist, as Keats said of the poet, has a chameleon nature, apt to shock the virtuous philosopher. He has no identity—he is continually informing and filling some other body. That is to say, in practice the artist tends intuitively to identify himself with the purpose and achievement of every other artist, and only by an effort confines himself to a characteristic mode of expression. This may seem like an excuse for plagiarism, and much plagiarism there has been, in every epoch of art. But it is also the explanation of all historical development in art, and an indication of the complexity, and even of the falsity, of all logical categories.

—Herbert Read

THREE MUSICIANS by Pablo Picasso. 1921 (summer). Oil on canvas, 6'7" x 7'3¾". Collection, THE MUSEUM OF MODERN ART, NEW YORK, MRS. SIMON GUGGENHEIM FUND.


MOVEMENTS
AND TRENDS IN
THE WORLD OF ART

Since there are many excellent art history books available in most schools, this section is devoted to establishing a philosophical introduction to this material, and to providing a list of suggested areas of study which might be included; a glossary of movements and trends of art in the modern world, and a list of appropriate references, readings, and sources for visual materials.

The teacher is encouraged to introduce and discuss several selected areas briefly, rather than attempting to survey all that is listed within this section. Listings which are considered particularly timely or appropriate, might be pursued in greater depth.

BACKGROUND

More has happened in the world of art during the past 30 years than during any previous century. One cannot fully understand or appreciate the art of today without some familiarity with what has gone before. Every art movement came about as an extension of, or a reaction against that which preceded it.

The development of art has produced a world panorama from the earliest creations of the cave painters to the abstract expressionists and environmental artists of recent years. In the past, most western histories of art have only emphasized the art of western man. In keeping with the "total world concept" of today, it is essential that all of the art of the past and the present be explored on a global basis.

A world history of art cannot be organized chronologically with any degree of coordination since cultures have not been at the same stage of evolution at the same point in time. The suggested areas of study which follow will help the teacher and the student comprehend the vast panorama which is the world of art. The areas of study "Ancient Art" through "Art of the Americas" are merely listings which give some indication of the global aspects of the painting, sculpture, and architecture of those periods. A good art history text will help students explore each of these areas in great detail and provide meaningful reference material for the teacher. The section entitled "Movements and Trends in Art of the Modern World" (18th-20th centuries), has been expanded to include background material and a glossary of terms. The traditional art appreciation and history course has often been taught chronologically with little emphasis placed upon the art of this century. Perhaps it is time to abandon this tradition and emphasize the art of today.

SUGGESTED AREAS OF STUDY

ANCIENT ART

PALEOLITHIC, MESOLITHIC, NEOLITHIC
EGYPTIAN, TIGRIS-EUPHRATES VALLEY
PERSIAN
AEGEAN, GREEK, ETRUSCAN, ROMAN
HINDU: INDUS, VEDIC, BUDDHIST
CHINESE, JAPANESE
MIDDLE AMERICAN, SOUTH AMERICAN

MEDIEVAL ART

EARLY CHRISTIAN, BYZANTINE
RUSSIAN
MUHAMMADAN, PERSIAN
ROMANESQUE, GOTHIC
HINDU BRAHMANICAL
MUHAMMADAN-HINDU
CHINESE, JAPANESE
AFRICAN, OCEANIC
MAYAN, ZAPOTEC, MIXTEC
TOLTEC, AZTEC, INCA
PUEBLO, HOPEWELL

RENAISSANCE ART

FLEMISH, GERMAN, SPANISH, DUTCH
ENGLISH, FRENCH, RUSSIAN

AMERICAN ART

LATIN AMERICAN
INDIAN
COLONIAL AMERICAN

MODERN ART

A GLOSSARY OF TERMS

It is vital that the teacher keep abreast with the current art scene so that he may introduce and discuss the latest movements in art without personal bias. "The latest" will never be found in an art history book or in curriculum guides. It will only be found by taking the class to current art shows, art galleries, and museums and through the continual use of art periodicals.

Since it is often difficult to locate information and example of the more recent forms of art, this glossary has been formulated as a ready reference for the teacher.

Abstract Art—

A general classification for nonrepresentational works of art. The major difference between abstract and representational painting or sculpture is that the former must be something in and of itself, whereas the latter is a visible and/or tangible image of something else. There are various degrees of abstraction ranging from the semiabstract, in which aspects of the subject are identifiable in the work (e.g., Picasso's THE THREE MUSICIANS), to the nonobjective, in which the subject cannot be identified at all (e.g., Kandinsky's PANEL [4], also called SPRING). There are variations in the purpose of abstraction as well—in some cases, the artist may want to depict the essence of his subject, or a particular characteristic of it; in others, he may intend to create his subject through an appropriate arrangement of light, line, color, form, texture, etc. Although the elements of abstraction have been used in art work and decoration from prehistoric times to the present, the esthetic principle of abstraction did not come into being until the development of Cubism in the early part of the 20th century.

Abstract Expressionism—

A label given to a form of nonrepresentational painting which combines abstract form with expressionist emotional value. Stimulated by the work of Arshile Gorky and the convergence of a remarkable group of European expatriates in New York City during World War II, the movement toward abstract expressionism:

- Dominated the international art scene in the 1950's;
- Reintroduced the huge canvas;
- Employed a creative strategy that rejected planned outcomes in favor of spontaneous execution;
- Celebrated the individuality of the artist;
- Considered both the process of painting and the marks of the tool as integral parts of the work;
- Required not only a visual, but also a kinesthetic response from the viewer; and therefore
- Produced a significant change in the way a painting was supposed to operate in terms of the artist, the setting, and the viewer.

Among the greatest exponents of abstract expressionism are Willem de Kooning, Adolph Gottlieb, Mark Rothko, Franz Kline, Philip Guston, and Robert Motherwell. (See **Neo-Expressionism**.)

Action Painting—

A type of abstract expressionism in which the execution of the painting is the real subject of the work. Pigment is applied with forceful, impulsive brushstrokes or dripped, splashed, hurled, and even fired from a rifle onto the painting surface. As a result, the form and content of the work are governed more by impulse than by conscious effort, and the artist's method becomes his identifying characteristic. The chief practitioners of action painting or its French equivalent, tachisme, were Jackson Pollock, (who is supposed to have coined the phrase) and Willem de Kooning.

Analytical Cubism—

The label given to an early phase of Cubism (1910-12) developed by Georges Braque and Pablo Picasso because of the geometrical appearance of their work. To some extent the label is a misnomer: for although

the founders of the style generally believed that the visible differences in matter were merely superficial variations of common geometrical forms, and that the elements derived from a given subject could be used to build a new structure capable of affecting human sensibility through its own power and coherence. Analytical Cubism was never really based on analysis. But it did present another way of looking at things and was of major significance because it shifted the emphasis in art from visual narrative to the arrangement of forms in which the form, when realized, "is there to live its own life."

Art Nouveau—

An ornate style of art that originated in England during the final decades of the 19th century and later spread to Europe and America. Derived from such varied influences as the arts and crafts movement, Celtic art, rococo styles, Oriental calligraphy, and Japanese art and architecture, it was characterized by:

- Cursive, expressive lines;
- Flowing, swelling, reverse, and whiplash curves;
- Plant and flower motifs in naturalistic forms; and, in a concurrent phrase,
- Straight lines and rectangular motifs.

The most prominent examples of art nouveau can be found in the drawings of Aubrey Beardsley, the posters of Alphonse Mucha, the glassware of Louis Comfort Tiffany, the furniture of Charles Rennie Mackintosh, the architectural ornament and interior decoration of Henri Van de Velde and Louis Sullivan, and the buildings of Antonio Gaudi and Victor Horta. Considered part of the "Aesthetic Movement" in England, art nouveau was also known as the yachting style in France, the Jugendstil in Germany, the Sezession in Austria, and the Stile Liberty in Italy.

Ashcan School, The—

(See **The Eight.**)

Assemblage—

The technique of combining various elements, such as found objects or readymades, into an integrated three-dimensional work or art; also, a work so constructed. An assemblage may be either freestanding or in relief, and may include various parts which have been carved, painted (or otherwise altered), or left in their natural state. Artists: Louise Nevelson, Daniel Spoerri, and Jospeh Cornell.

Barbizon School—

A name given to a group of landscape painters who formed an informal art colony in the village of Barbizon, France, and actively painted in that area from about 1830 through 1880. The Barbizon painters were the first to go into the countrysides and forests to paint directly from nature rather than painting their landscapes in a Paris studio. Although most painted realistic, rural scenes and characters, Corot's landscapes were less realistic and more suffused with light, thus foreshadowing the Impressionists. Artists: Theodore Rousseau, Charles Francois Daubigny, Camille Corot, and Francois Millet.

Baroque—

A dynamic theatrical style that dominated European art and architecture throughout the 17th and early 18th centuries. Its effects were achieved by using realism, illusionism, ornamentation, and a blending of the arts. Illusionistic fresco

ceiling paintings designed to merge with elaborate moldings and cornices were examples of the High Baroque in Italy. Elaborately twisted and curved forms and strong contrasts also characterized the new freedom of Baroque art. Baroque art in its purest form is found in the work of Gianlorenzo Bernini, Francesco Borromini, Pietro da Cortona, and in paintings of Michelangelo AmerighiCaravaggio, Jacopo Robusti Tintoretto, Giovanni Battista Tiepolo, and Paolo Veronese.

Bauhaus—

A school of industrial design established at Weimar in 1919 under the direction of German architect Walter Gropius. Bauhaus provided modern artists with "a knowledge of science, economics, and craftsmanship; and in this manner, industrial designers as we know them were first trained. In 1925, the Bauhaus left Weimar and reestablished itself at Dessau, where a new faculty, now composed of Bauhaus graduates, combined the technician and artist in the same instructor. The school became an experimental workshop in which models for mass production were continually built, revised, and improved." Distinctions were not made among the skills of painters, sculptors, craftsmen, and architects, since the new artist or designer might employ several of these skills in the process of creating an object." The Bauhaus was driven out of Germany in 1933 when the Nazis came to power, and subsequently one of its younger instructors, Laszlo Moholy-Nagy, established an American branch, the Institute of Design in Chicago, where it was eventually absorbed into the Illinois Institute of Technology." The Bauhaus permanently influenced the education of artists throughout the world

Blaue Reiter, Der (The Blue Rider)—

The name of a group of abstract expressionists in Munich who, together with a group of representational expressionists in Dresden, exerted a profound influence on the development of modern art. Founded in 1911 by Wassily Kandinsky and Franz Marc, Der Blaue Reiter also included Paul Klee, Alexei von Jawlensky, and Auguste Macke.

Brucke, Die (The Bridge)—

The name of a group of artists in Dresden who developed a representational form of expressionism that directly contributed to the rise of modern art in Germany and a revival of interest in the graphic arts. Founded in 1905 by Ernst Ludwig Kirchner, Fritz Bleyl, Erich Heckel, and Karl Schmidt Rottluff, the group also included Emile Nolde, Max Pechstein, Kees van Dongen, and Otto Mueller. They were strongly influenced by van Gogh, Gauguin, Munch, the Fauves, and a contemporary vogue for the primitive and the exotic. In 1913, two years after the founding of Der Blaue Reiter with its counter philosophy of abstract expressionism, the group dissolved.

Calligraphic Painting (Lettrisme or Word Art—

The incorporation of words, numbers, or fragments of letters in a painting or composition. The letters, words, or numbers are as important as any other element in the design. The work of Jasper Johns, Robert Indiana, Eugenio Carmi, Corita Kent, and Larry Rivers reflect this idiom.

Camp Art—

An attitude that prizes that which has been universally condemned by most critical opinion, is treasured in primitive regions and cultural backwoods, or has been thrown out by households, museums, or rummage shops. Most of Pop Art reflects the "campy" attitude. The trite, garish, and banal are elevated and become "objets d'art." Artists Lucas Samaras and Edward Kienholz.

Classicism—

Any embodiment of the style of classical Greek and Roman art. Also, the adherence to standards of simplicity, restraint, and proportion which characterize classical art. Classicism has been a recurrent influence on western art and architecture since the Renaissance.

Collage—

From the French verb *coller*—"to paste, to glue." Paper, cloth, other flat materials are attached to a flat surface and used in combination with painting or drawing. An assemblage could be considered a three-dimensional collage. Kurt Schwitters, Juan Gris, Max Ernst, Pablo Picasso, and Georges Braque are noted for their work in this medium.

Constructivism—

A nonobjective art movement that evolved in Russia from a rather interesting combination of influences (Kandinsky's theories of composition, the elements of geometric abstraction used in Cubism and Futurism, contemporary developments in science and technology, and the functionalist/productivist traits of Tatlinism) to which Antoine Pevsner added his artistic techniques and Naum Gabo, his scientific approach to materials and form. Officially begun with a manifesto published on August 5, 1920, the movement:

- Abandoned the figurative and monolithic tradition in sculpture for the use of space, lines of force, and geometric shapes and volumes;
- Treated open space as if it were part of a continuum of matter, rather than as something alien to it;
- Used negative as well as positive forms for the expression of matter;
- Introduced industrial materials into serious sculptural practice; and
- Attempted to bring sculpture into harmony with new concepts in science and, via engineering, with production and industrial design.

Its principal characteristics were dynamism, abstraction, and the integral use of space. Although supported in its early stages by the government of Russia, the movement was proscribed in 1922 along with other styles of abstract art, and its advocates left for Europe where their thinking contributed to such efforts as the German Bauhaus. The chief exponents of Constructivism were Vladimir Tatlin, Alexander Rodchenko, El (Lasar) Markovitch Lissitsky, Laszlo Moholy-Nagy, and the two brothers with dissimilar names who authored the manifesto, Antoine Pevsner and Naum Gabo.

Cubism—

A revolutionary art movement that developed in France between 1907 and 1914. Influenced by the "rationality" of African Negro sculpture and Cezanne's theories of interpreting nature in terms of the cylinder, the sphere, and the cone, the movement began with a group of French painters who met in Picasso's "floating laundry" in Montmartre; moved through two clearly identifiable, but inextricably related phases (see **Analytical Cubism** and **Synthetic Cubism**); and had a major impact on later developments in art. Its advocates believed that a work should be something in itself, not a rendition of something else; that it should affect human sensibility through conceptual structures unencumbered by attempts at representation which distract the viewer with comparison and personal associations; and that the composition itself—the organization of form and color with a given space—was the artist's only percept. Accordingly, the chief characteristic of Cubist painting were:

- A rearrangement of the shapes, colors, and textures of the motif;
- Simultaneous rendition of a variety of perspectives;
- Transparent treatments of opaque objects;
- Violations of light and color in which shadows are sometimes lighter and brighter in color than the objects which cast them; and, particularly between 1912 and 1914,
- An emphasis on textures created by flat-patterning, collage, and materials like sand on the canvas.

Led by Georges Braque and Pablo Picasso, the Cubist painters included Max Jacob, Marie Laurencin, Andre Salmon, Maurice Raynal, Juan Gris, Robert Delaunay, and Francis Picabia. Cubism developed separately in sculpture, although some of Picasso's three-dimensional still lifes and

constructions made with bric-a-brac from studios or cafes may have bridged the gap. The principal exponents of Cubism in sculpture were Raymond Duchamp-Villon, Julio Gonzalez, Alexander Archipenko, Henri Laurens, Constantin Brancusi, and Jacques Lipchitz.

Dadaism—

A movement that evolved from the thoughts and activities of an international group of artist-emigres who drifted into Zurich during World War I. Among the "founders" were Hans Arp, Marcel Janko, and Hans Richter; but later exponents included Marcel Duchamp, Francis Picabia, George Grosz, Max Ernst, Kurt Schwitters, and Man Ray. Originally occupied with the development of cabaret entertainments in a variety of forms, the group considered themselves "a rallying point for abstract energies and a lasting slingshot for the great international artistic movements." But "the artists of the Cabaret Voltaire actually had no idea what they wanted—the wisps of 'modern art' that at some time or other had clung to the minds of these individuals were gathered together and called **Dada**" —a word they stumbled upon in 1916 while looking for something else in a German-French dictionary. They were self-proclaimed activists, caught by the war, widespread disillusionment, Marinetti's inflammatory propaganda, and the Bolshevik revolution. The movement was characterized by:

- A conscious internationalism;
- The inversion of established norms;
- A flamboyant avoidance of "beauty" and conventional artistic form;
- The use of "nonart" methods and materials (e.g., doodling, collage, "found" and "readymade" objects);
- Intentional nonmeaning and absurdity;
- Weird humor and a peculiarly negative wit; and
- A narrowing of the gap between art and life.

Among the best examples of Dada art are Duchamp's photograph of the Mona Lisa with a mustache and THE FOUNTAIN (a porcelain urinal), Picabia's paintings of absurd machines, and Schwitters' Merzbilder and Merzbau constructions.

De Stijl, (The Style)—

A Dutch movement primarily concerned with functionalism and the integration of painting and sculpture with architecture and design concepts. The creed of the de Stijl group was "utter simplicity." Originated by Theo van Doesburg and Piet Mondrian. (See **Neo-Plasticism**.)

Eight, The—

A group of painters who developed the habit of vivid reporting and accurate social description while working as illustrators for New York City periodicals before the widespread use of photography. Also known as the "Ashcan School" because they depicted proletarian subjects rather than the more fashionable ones of salon art, The Eight included Robert Henri, Maurice Prendergast, Arthur B. Davies, George Luks, William Glackens, John Sloan, Ernest Lawson, and Everett Shinn. The general characteristics of the group can be found in the work of Robert Henri, who founded The Eight in 1908 and exerted the strongest influence upon its thoughts and efforts.

Environmental Art (Environments)—

Grew out of the assemblages and the types of events created by the Dadaists. The German artist, Kurt Schwitters (1887-1948), one of the first to use discarded objects as art, modified the interior of his home in Hanover using refuse and found objects as structural and decorative elements. He gave this work the title CATHEDRAL OF EXOTIC MISERY. Environments on the contemporary scene may be regarded as a formalized version of the Dadaists' events and the antiart of the 1920's. Today's artists may duplicate everyday places and events to the last detail. THE BEANERY (1965) by Edward Kienholz is a complete diner. THE DINNER TABLE (1962), by George Segal, includes table, chairs, food, and guests. Other environments may be areas that are changed by the observer. An example of this is MIRRORED ROOM (1966) by Lucas Samaras. (See **Happenings**.)

Expressionism—

An art in which the intensity of the artist's inner emotions and ideas overrides the tradition of portraying actual appearances, resulting in distortions of line, shape, and color. This movement was brought into prominence by such painters as Vincent van Gogh, Paul Gauguin, and Henri Matisse and carried into full bloom by artists painting in Germany during the first quarter of the 20th century. Among the prominent early expressionists were Edward Munch, Ernst Ludwig Kirchner, Max Beckmann, James Ensor, Oskar Kokoschka, Emile Nolde, Wassily Kandinsky, Georges Roualt, Paul Klee, Karl Hofer, and Max Peckstein. (See also: **Fauvism, Die Brucke** and **Der Blaue Reiter**.)

Fauvism—

One of several early 20th century movements concerned with color as an independent language of meaning and emotion. The word derives from *Fauves* or "Wild Beasts," a label given by a contemporary critic to Henri Matisse and his fellow French painters because of their arbitrary and flamboyant use of color. Influenced by Cezanne, van Gogh, and Gauguin, the Fauves rejected the traditional representation of clearly outlined objects in apparent or "natural" colors, the fragmentation of Impressionist techniques, and the monochromatism that characterized many of the developments in French abstraction. Their motto "Exactitude is not Truth" became the dominant theme of modern art, and their efforts paved the way for a new concept of painting as an "art of color" in which line, shape, symbol, etc., played only supporting roles, if any. In addition to Matisse, the informal group of friends and painters included Andre Derain, Maurice de Vlaminck, Albert Marquet, Raoul Dufy, and Georges Rouault.

Folk Art—

Any art, craft, or ornamentation produced by people who may have had no formal training in art, but who have an established tradition of styles and craftsmanship. (See **Primitive**.)

Found Object Sculpture—

(See **Assemblage**.)

Funk Art—

A group of San Francisco artists borrowed the name from a jazz idiom of the late 1950's when "funky" described music that was suggestive of the old earthy New Orleans hot blues. This San Francisco and Bay Area art form eventually spread across the coun-

try Funk art is earthy, organic, biomorphic, often ugly, and anti Bauhaus the idea and the feeling are more important than the product. Artists: Robert Arneson, Bruce Conner, Claes Oldenburg, and David Gilhooly.

Futurism—

A brief (1909-14), fundamentally symbolic movement dedicated to the expression of "the vortex of modern life—a life of steel, fever, pride, and headlong speed." Conceived and proclaimed by Italian poet Filippo Tomasso Marinetti in the first of several manifestos, Futurism was particularly concerned with time, movement, and mechanization. Sound became a succession of waves; color, a prismatic rhythm; and movement, a serial or radial arrangement of multiple limbs. Among its chief exponents—Carlo Carra, Umberto Boccioni, Luigi Russolo, Giacomo Balla, Gino Severini, and Marcel Duchamp—it was Duchamp who exhibited the greatest understanding of the movement when he described his NUDE DESCENDING A STAIRCASE as "an organization of kinetic elements, an expression of time and space through the abstract presentation of motion." But the Futurists' concepts were depicted within the static conventions of painting and sculpture—they were never integral to the forms themselves; and thus the works became conceptual symbols, rather than representations of their themes. Although the movement failed to survive World War I, it was significant to such later developments as Dada and Surrealism, and it stimulated a new artistic sensibility for the preoccupations of the time: speed and the machine.

LANDSCAPE WITH TREE TRUNKS by Thomas Cole. Oil on canvas. MUSEUM OF ART, RHODE ISLAND SCHOOL OF DESIGN

Genre Painting—

A style of painting that represents some phase of everyday life, such as a rural village scene or a woman at work in the kitchen.

Geometric Abstraction—

A style of abstract painting whose shapes are those of simple geometry (the line, the circle, the square, the triangle, etc.) Sometimes referred to as Classical Abstraction, Kasimir Malevich and Piet Mondrian were among the pioneers of this movement.

Happenings—

Are of short duration and usually call for a script that is used to motivate the observers who become direct participants in the event. Sound, physical movements, speech, and odors as well as a visual and tactile environment all become part of this artistic experience. Allan Kaprow, James Dine, and Robert Whitman are noted for the happenings they have staged. (See **Environmental Art**.)

Hard Edge Painting—

(See **Minimal Art** and **Op Art**.)

Hudson River School—

A name applied to a group of 19th-century romantic American landscape painters who lived in the vicinity of the Hudson River, although they also painted in various other states and countries. Several members of this group possessed great native ability as well as technical proficiency which was gained chiefly from the influence of the Barbizon painters. Artists: Thomas Cole, Frederick Church, Asher B. Durand, Albert Bierstadt, John Frederick Kensett, Thomas Doughty, and Thomas Moran.

Impressionism—

A movement which began in France in the 1860's and is generally considered to be the first great modern art movement. The French Impressionists were primarily concerned with the surface play of light on nature and the hidden effects of color within shadow areas. The artists discovered the brilliancy of color that occurred when dots or strokes of color were placed next to each other on the canvas so that the eye blends the colors instead of the colors being mixed on the palette. Although Impressionist paintings did not conform to how nature had been traditionally represented, they were in fact real attempts at portraying nature as it really is—a feeling, an atmospheric impression! The exhibitions of the Impressionists in Paris in the 1870's and the 1880's were received with great hostility and ridicule. It was not until the group broke up, each to continue in his own individual artistic development, that recognition was achieved. Claude Monet was the acknowledged leader of the movement. Other Impressionist artists were: Camille Pissarro, Alfred Sisley, Edward Manet (in his later work), Berthe Morisot, Pierre August Renoir, and to some extent, Edgar Degas and Paul Cezanne as well as the younger artists, Vincent van Gogh and Paul Gauguin.

Junk Art—

(See **Assemblage**.)

Kinetic Art—

An art in which the aspects of movement dominate. Kinetic art began in Europe and eventually grew to be international in scope. The artist seeks to explore new relationships between science, art, and technology. The machine, the computer, the magnet, optical effects, and free-moving pieces have all been used by kinetic artists. Artists: Alexander Calder, George Rickey, John Whitney, Jesus Rafael Soto, Jean Tinguey, and Pol Bury.

Luminal Art—

An art which developed during the 1960's which uses light as an element of composition in combination with other media or lights. Fluorescent tubes, projected light, and incandescent lights are treated as art objects. Thomas Wilfred, Can Flavin, Earl Reiback, and Chryssa have worked extensively in this medium.

Lyrical Abstraction—

An art movement of the 1960's away from geometric, hard-edge, and minimal art toward the lyrical and sensuous, with an emphasis upon the "artist's touch" and "painterly quality." Artists: Darby Barrnard, Ralph Humphrey, Ronnie Landfield, Larry Poons, Mark Rothko, and Kenneth Showell.

Magic Realism—

The 19th-century "trompel'oeil" takes commonplace objects and through almost photographic presentation of details gives an optical report of what has been observed. William M. Harnett (1848-92) was America's most famous 19th-century artist to use this technique. The surrealists modified "magic realism" to their own needs. Objects are portrayed with great fidelity, but in unusual settings or unreal places to excite the emotions of the viewer. George Tooker and Bernard Perlin's paintings have this mysterious, real-unreal effect. Andrew Wyeth has also been called a "modern magic realist" by some critics.

Mannerism—

An artistic style which developed in reaction to the austere harmony and classical balance of the High Renaissance. Prevalent in Italy in the last half of the 16th century, Mannerism was characterized by an emotional portrayal of subject matter, exaggerated perspective, and rather vivid color. Forms were often elongated as in many paintings of El Greco, who with Tintoretto was among the foremost exponents of this style. Much of the later work of Michelangelo has also been considered by some critics to fall into the Mannerist category. Others associated with Mannerism were Agnolo Bronzino and the sculptor and goldsmith, Benvenuto Cellini.

Minimal Art—

The artist reduces esthetic concern to the basic elements of design. Line, shape, space, and color are the most important aspects in the painting or sculpture. These elements are the subject. In the 1960's, Josef Albers, Barnett Newman, and Ad Reinhardt made color their subject for painting. Other painters, Frank Stell and Ellsworth Kelly, are concerned with the relationship of color to the shape of the picture plane. Sculptors Robert Murray and Tony Smith work with primary structures, using industrial materials and processes to fabricate enormous works. The sculptures produced by this method are monumental, smooth-surfaced, and unique for their clarity of structure.

Mobiles—

This type of sculpture, in which the parts move, was invented by the American sculptor Alexander Calder in the 1930's. The slightest movement of air activates his sculptures. Calder successfully integrates motion into art without sacrificing the essential traits of sculpture. A mobile is set in motion by natural forces, as opposed to a kinetic sculpture in which movement is generally caused by motors or magnets. Other artists noted for their mobiles are George Rickey, Takis Vassilakis, and Konstantine Milonadis.

Moire Pattern—

This term comes from the French word *moire* meaning "watered," and was originally used to describe shimmering silk fabric which has a wavy, watered appearance. Moire patterns are seen whenever a repetitive structure is overlaid with another structure and the line elements are nearly superimposed. Such common objects as overlapping insect window screens, folds in nylon curtains, wire trash cans, and wire mesh fences produce these patterns. Moire patterns are effectively used by many of the Op artists such as Bridget Riley. (See **Op Art**.)

Nabis, Le—

This name—meaning "prophets" in Hebrew—was taken by a group of French painters who banded together in 1888 to charge the simple scenes of life with a pervading sense of mysticism. This group was greatly influenced by Degas and Cezanne, as well as the Symbolist paintings of Gauguin. Among the most noted members of this group were Pierre Bonnard and Edward Viullard, whose landscapes and ordinary subjects were painted with a soft, dreamy, poetic light. Other artists: Maurice Denis, Paul Serusier, Paul Ranson, and Ker-Xavier Roussel.

Neo-Classicism—

A style in which the artist was not only influenced by classical art but often took classical themes for his subject matter; prevalent in France in the 18th and early 19th centuries. The painters Jacques Louis David and Jean Ingres, and sculptor Antonio Canova worked in this style.

Neo-Expressionism—

This term is generally used to include all forms of abstract art which are determined by emotional, accidental, or impulsive forces as opposed to the more meticulously arranged compositions of Geometric Abstraction. This art form stems from the work of European painter Wassily Kandinsky.

Neo-Plasticism—

(See **De Stijl**.)

Nonobjective Art—

A type of abstract or nonrepresentational art in which the subject cannot be identified. The esthetic experience is intended to result from a direct attack on the viewer's sensibilities, unaided and unhindered by the customary avenues of recognition. Alexander Rodchenko is said to have used the term as another label for Suprematism; but the style is usually associated with Wassily Kandinsky, who is credited with having developed the first nonobjective painting in 1909. (See **Abstract Art**.)

Op Art or Optical Illusion Art—

A recent style of art in which sharp edge abstract patterns stimulate a reaction on the retina of the eye resulting in an illusion of dazzle or movement. The juxtaposition of complementary colors enhances this dazzling effect (see **Moire Pattern**). Op Art may also involve mechanical motion, shifting images, light filtered through prisms, and other technical effects as well as "hard edge" painting. The chromatic venerations of the square by Joseph Albers and the color divisionism of Seurat were precursors of Optical Art. Artists: Victor de Vasareley, Bridget Riley, Richard Anuszkiewicz, Agam (Yaacov Gipstein), and Gerald Oster. (See **Minimal Art**.)

Orphism—

A word used by French poet and art critic Guillaume Apollinaire to describe a type of nonobjective painting in which color alone was both form and subject. Characterized by brilliant colors in overlapping planes, the style emerged from a preoccupation with the coloristic aspects of Cubism, capitalized upon the quasi-scientific experiments of Impressionism, and achieved its effects through a geometrical exploitation of the refractive quality of light. The best examples are the "fragmented rainbows" of founder Robert Delaunay in 1912-13, and selected works by Fernand Leger, Francis Picabia, Marcel Duchamp, and Frank (Frantisek) Kupka.

Pointillism (Pointillisme or Divisionism)—

This was an extension or branch of Impressionism in which the chief focus was the principle of broken color (optical mixture). Colors were applied in tiny dots or strokes so that, when viewed at a distance, the eye would blend the color, creating visual masses and outlines. Georges Seurat, who invented pointillism, and Georges Signac were the leading figures of this movement.

Pop Art—

Comic strips, brand-name products, movie stars, signs, Benday dots, ham-

burgers, and actual objects all are images of Pop Art. This movement in painting and sculpture gained momentum in the United States in the 1960's, but was born independently in England in the 1950's. Pop Art reflects the ironies of contemporary culture in all aspects, in both a critical and a detached mood. Among the characteristics which are an important part of the Pop Art strategy are large scale, anonymity, repetition, the commonplace, the absurd, the mass media, and a general ridicule of contemporary American values. The roots of the Pop Art movement have been traced to such diverse factors as Folk Art, Dadaism, Collage, Assemblage, Surrealism, Stuart Davis, and Fernand Leger. (See **Camp Art**.) Artists: Roy Lichtenstein, Andy Warhol, Claes Oldenburg, James Rosenquist, Tom Wesselman, Edward Kienholz, Peter Saul, Red Grooms, Wayne Thiebaud, James Dine, Jaspar Johns, Marisol, Robert Rauschenburg, and George Segal.

Post-Impressionism—

This is a general term which includes all trends in art from 1880 to the early 1900's which were a reaction to Impressionism. Most noted among the artists of this period were Vincent van Gogh and Paul Gauguin, who were concerned with the subjective or emotional content of what they

THE FAMILY. MARISOL (MARISOL. ESCOBAR). 1962. Painted wood and other materials in three sections 82 5/8" x 65 1/2". Collection, THE MUSEUM OF MODERN ART NEW YORK ADVISORY COMMITTEE FUND

saw, and Georges Seurat, who created formal compositions while further refining the principle of broken color. (See **Pointillism.**)

Primary Structure—
(See **Minimal Art.**)

Primitive—

A term which is used to describe an artist who is self-taught and not influenced by other artists or trends, historic or current. Henri Rousseau was the best known French primitive. Although he lived and painted while Impressionism was in full bloom, his unique style of painting does not reflect the Impressionists' theories, or other trends that preceded them. Among the noted American primitives were Edward Hicks, Grandma Moses, and Horace Pippin.

The term primitive also pertains to the art of groups of people who adhere to custom or a traditional pattern of their culture without regard for or knowledge of social or artistic changes in the rest of the world. This type of primitive art was often created for religious or tribal purposes, and appears in the art of Africa, India, New Guinea, Alaska, and America.

Psychedelic Art—

First introduced in the United States in 1966, the curvilinear style seems to have evolved from Art Nouveau. Decorative, abstract shapes and brilliant colors are essential elements of this art form. The development of the new intense colors, inks, and dyes have helped artists such as Peter Max not only in painting, but also in designing posters, clothing, and household objects in this brilliantly colored style.

Purism—

A movement that rejected the overly decorative and fantastic aspects of Cubism in favor of simpler, more functional qualities. Begun with "After Cubism," a manifesto published in 1918 by French painter Amedee Ozenfant and architect Charles Edouard Jeanneret (Le Corbusier), Purism retained many of the principles of the earlier movement, but stressed the recognizable depiction of subjects and was generally characterized by precisely drawn, geometrically simplified forms in pure colors and some degree of stylization. Sculptor Constantin Brancusi has also been identified with the Purists.

Readymades—
(See **Assemblage.**)

Realism—

An art movement in France which was a reaction against the idealized subject matter of Romantic and Neoclassical painting. The Realists painted subjects from everyday life in a "naturalistic" manner. Gustave Courbet, the most noted of this group, organized the first Realist exhibit in 1855.

The term Realism is also used to describe the depiction of real objects, scenes, animals, and human figures as they actually appear in nature—without stylization, interpretation, or distortion. Other terms also used to describe this type of art are representational, objective, naturalistic, and photographic.

Rococo—

A gay, delicate, refined style of art and interior decorating found in France in the 18th century which represented a reaction against the heavy Baroque style, but which reduced many of these elaborate, curvilinear forms of the Baroque to a smaller

scale. In painting, this style was devoted to light, frivolous, rather artificial views of court life during that period. Artists: Jean Antoine Watteau, Jean Honore Fragonard, and Francois Boucher.

Romanticism—

A 19th-century movement which arose as a reaction against Neoclassicism. The spirit of revolution which characterized that age was often embodied in the work of these artists. The Romanticists created personal, dramatic, emotional statements through the use of historic, exotic, or literary subject matter. In France, the painters Theodore Gericault and Eugene Delacroix, and the sculptor Antoine Louis Barye were leading figures in this movement. In England, the leading painter was J. M. W. Turner.

Socialist Realism—

The artists try to mirror society, often with satire. Jack Levine (1915-) holds up a mirror to the corrupt political or civic leader. His people are to be detested, not laughed at. Other social realists such as Jacob Lawrence, Isaac Soyer, and John Sloan depict social conditions without comment, nevertheless revealing a broad human sympathy. The Mexican artists David Alfaro Siqueros (1898-), Diego Riviera (1886-1957), and Jose Clemente Orozco (1883-1949) use their painting as ideological instruments to bring about political change. Artists: George Tooker, Berta Margoulies, Ernest Barlach, Louis Bosa, Edward Hooper, Aaron Bohrod, William Gropper, George Grosz, Ben Shahn. Several members of The Eight might also be termed Social Realists.

Social Realism—

The official style of Soviet art established in 1932 when the government resumed the sponsorship and supervision of cultural activity originally performed by Proletcult, the Organization for Proletarian Culture. Its chief characteristics are:

- An emphasis on social commentary;
- Functionalism in architecture and product design; and
- A generally conservative, representational approach to painting and sculpture, altered within recent years by a limited degree of experimentation and abstraction.

Suprematism—

A nonobjective art movement begun in Moscow in 1913 by Russian painter Kasimir Malevich, who pronounced that:

- Reality in art is the sensational effect of color itself;
- Objects in themselves are meaningless and the ideas of the conscious mind, worthless;
- Feeling is the decisive factor; and
- Through basic forms and simple colors conceived in terms of "pure feeling," art arrives at nonobjective representation or Suprematism.

Malevich's WHITE ON WHITE was the ultimate expression of his thesis. Vladimir Tatlin and Alexander Rodchenko were also associated with the movement, but their functionalist/productivist leanings soon drove them to Constructivism. After the Soviet proscription in 1922, many of the Suprematists went to Paris where they contributed to the development of Geometric Abstraction.

Surrealism—

A movement derived from a mode of creative writing defined by experimenter Andre Breton as "pure psychic automatism . . . free from any control by the reason, independent of any esthetic or moral preoccupation." Named "in homage to Guillaume Apollinaire," who had used the word in describing one of his plays, and officially launched in 1924 with the "First Surrealist Manifesto," the movement attempted to "liberate pictorial ideas from their traditional associations" and to use spontaneous impulses from the subconscious mind as a source of creativity. In general, Surrealist works either depicted the quiet fantasies of dreams and trancelike states or employed a deliberate strategy of psychological shock intended to restructure "customary habits of perception in the act of experiencing the work." They were characterized by:

- A kind of "super realism" within an atmosphere of haunting, sometimes repellent, irrationality;
- Unnatural juxtapositions and combinations of images;
- The illusion of infinite space;
- Some of the earlier Dada techniques, such as the use of found objects; and
- An underlying concern forthe absolute freedom of the mind.

Its chief exponents were founder Breton and Salvador Dali, Giorgio de Chirico, Max Ernst, Yves Tanguy, Hans Arp, Francis Picabia, Joan Miro, and filmmaker Luis Bunuel, whose LE CHIEN ANDALOU (1929) and L'AGE D'OR (1931) are "Surrealist manifestations of the most typical kind." Later adherents include Rene Magritte, Andre Masson, Giacometti, and other painters in Brussels, Prague, Belgrade, London, Denmark, Japan, and the United States.

Synthetic Cubism—

The label given to a form of Cubism developed between 1914 and 1918 by Juan Gris and/or Fernand Leger.

- Gris combined "the 'composition after nature' with the autonomous structure of the picture space" by planning the framework for his painting and then imposing his subject upon it.
- Leger "invented a space without perspective in which he set his geometricized elements."

Synthetic Cubism was characterized by the arbitrary use of color and texture, but always within its own logic of form and space.

Trompe l'oeil—

This French term, which means "deception of the eye," is applied to a type of painting so detailed and photographically realistic that the observer might feel that the objects portrayed are "actual" rather than painted. The painter creates the illusion of reality. Trompe l'oeil is a characteristic of Magic Realism and often an element used in Surealism. Artists: William Harnett and Aaron Bohrod.

Vorticism—

A branch of Futurism founded in England by Wyndham Lewis in 1912 and named from the central clause in Boccioni's manifesto, which advocates "a clean sweep . . . of all stale and threadbear subject-matter in order to express the vortex of modern life . . ." Its chief adherents were William Roberts, Frederick Etchells, Edward Wadsworth, C. R. W. Nevinson, Jacob Epstein, and Henri Gaudier-Brzeska; its credos were published in two issues of an item called "Blast"; and its works were primarily abstract and nonobjective. Although the "Great English Vortex" involved only a small group of writers, painters, and sculptors, by the time it ended in 1915, the movement had succeeded in bringing the combined influences of French Cubism and Italian Futurism to British art.

SELECTED SOURCES OF MATERIALS AND SERVICES

Museums, galleries, and similar nonprofit institutions offer a wide variety of educational materials and services at little or no cost to schools. Teachers are encouraged to make extensive use of local resources, supplementing them with slides, prints, replicas, etc., of significant but otherwise inaccessible works which can be secured from such nationally recognized institutions and commercial enterprises as those listed below.

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Buffalo, New York 14200

Boston Museum of Fine Arts
Boston, Mass. 02100

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Brooklyn, New York 11238

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Chicago, Ill. 60600

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Detroit, Mich. 48200

De Young Museum
Golden Gate Park
San Francisco, Calif. 94118

Guggenheim Museum
5th Avenue & 89th Street
New York, New York 10021

Library of Congress
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Metropolitan Museum of Art
5th Avenue & 82d Street
New York, New York 10028

Munson-Williams-Proctor Institute
Utica New York 13501

Museum of the American Indian
Broadway and 155th Street
New York, New York 10032

Museum of Modern Art
11 West 53d Street
New York, New York 10020

National Gallery of Art
Washington, D. C. 20000

Philadelphia Museum
Philadelphia, Pa. 19100

Seattle Art Museum
Seattle, Wash. 98102

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New York, New York 10020

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New York, New York 10001

DAVID by Michelangelo Buonarroti. Marble. ACCADEMIA, FLORENCE

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