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ABSTRACT

GRADES OR AGES: Grades 7-9. SUBJECT MATTER: First aid and survival education. ORGANIZATION AND PHYSICAL APPEARANCE: The guide is divided into five sections: bandaging skills, control of bleeding, conditions caused by extremes in temperatures, foreign substances in body openings, and other common emergencies. The publication format of four columns gives the outline of content, the major understandings and fundamental concepts, suggested teaching aids and learning activities, and supplementary information for teachers. The course objectives are presented in the introduction. OBJECTIVES AND ACTIVITIES: Each subsection contains questions and topics for discussion. The supplementary information provides teachers with further discussion material. INSTRUCTIONAL MATERIALS: Information is given on measuring body temperature, pulse, and respiration, a brief description on making bandages is also presented. Lists of multimedia resources are presented for teachers and students. Information is also given on the procurement of teaching kits, flip charts, mannequins, and injury simulations. STUDENT ASSESSMENT: No provision is made. OPTIONS: The guide is suggestive only. (BRB)

HEALTH CURRICULUM MATERIALS
Grades 7, 8, 9

STRAND V — EDUCATION FOR SURVIVAL
FIRST AID AND SURVIVAL EDUCATION

The University of the State of New York/The State Education Department
Bureau of Secondary Curriculum Development/Albany 12224
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FOREWORD

This publication contains curriculum suggestions for teaching Strand V - Education for S
Aid and Survival Education, for grades 7, 8, and 9.

The publication format of four columns is intended to provide teachers with: a basic c
in the first column; a listing of the major understandings and fundamental concepts which ch
achieve, in the second column; and information specifically designed for classroom teachers w
provide them with resource materials, teaching aids, and supplementary information, in the th
fourth columns.

The comprehensive nature of the health program makes it imperative that teachers gain fa
with all of the strands presently in print. In this way, important teaching-learning experie
developed by cross-referring from one strand to another.

It is recommended that the health coordinator in each school system review these materia
and consult with teachers, administrators, and leaders of interested parent groups in order t
the most appropriate manner in which to utilize this strand as an integral part of a locally
and comprehensive program in health education.

The curriculum materials presented here are in tentative form and are subject to modifi
content and sequence. Critiques of the format, content, and sequence are welcomed.

Gordon E. Van Hooft
Chief, Bureau of Secondary Curriculum Development

William E. Young
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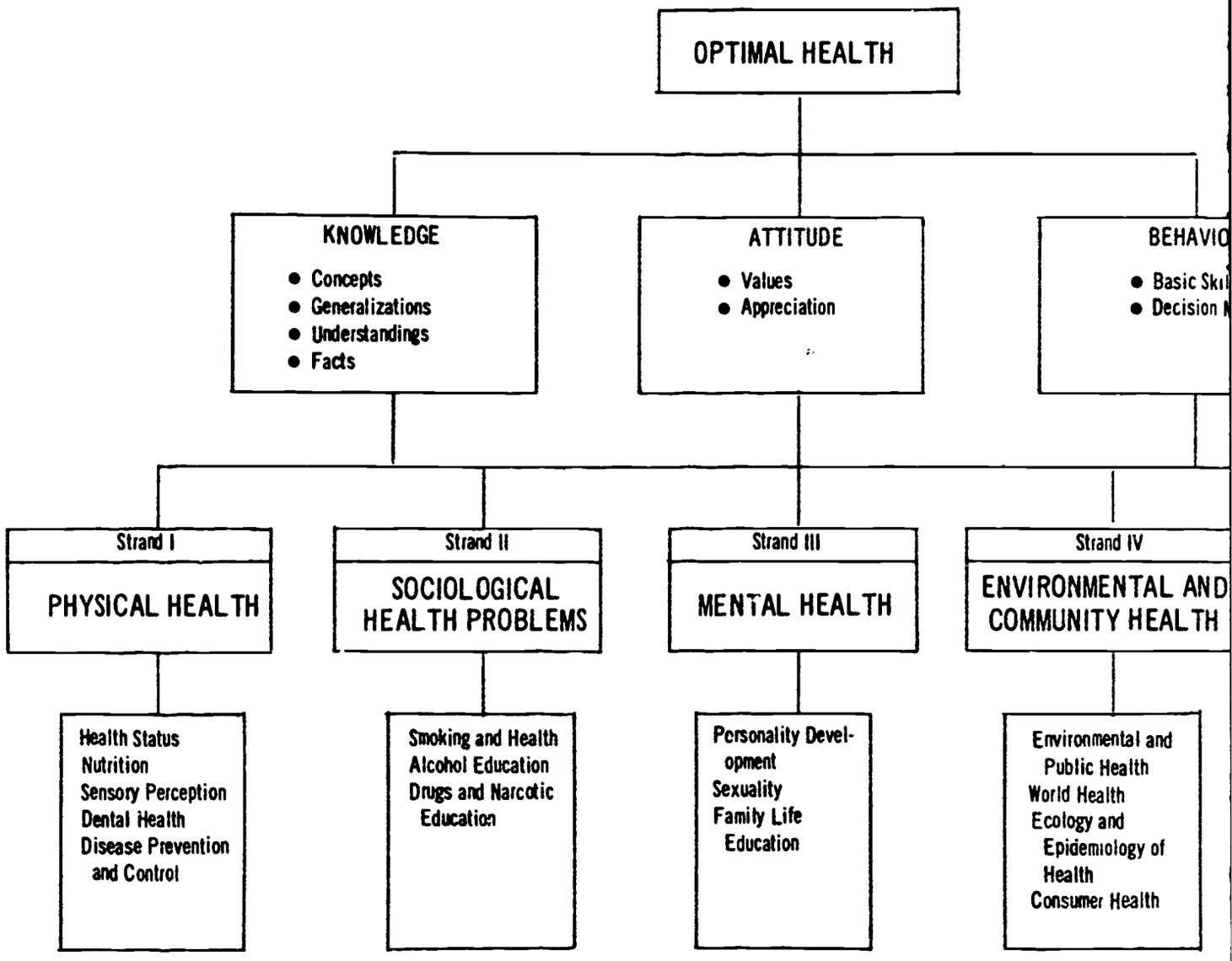
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KNOWLEDGE
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• Generalizations
• Understandings
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ATTITUDE
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BEHAVIO
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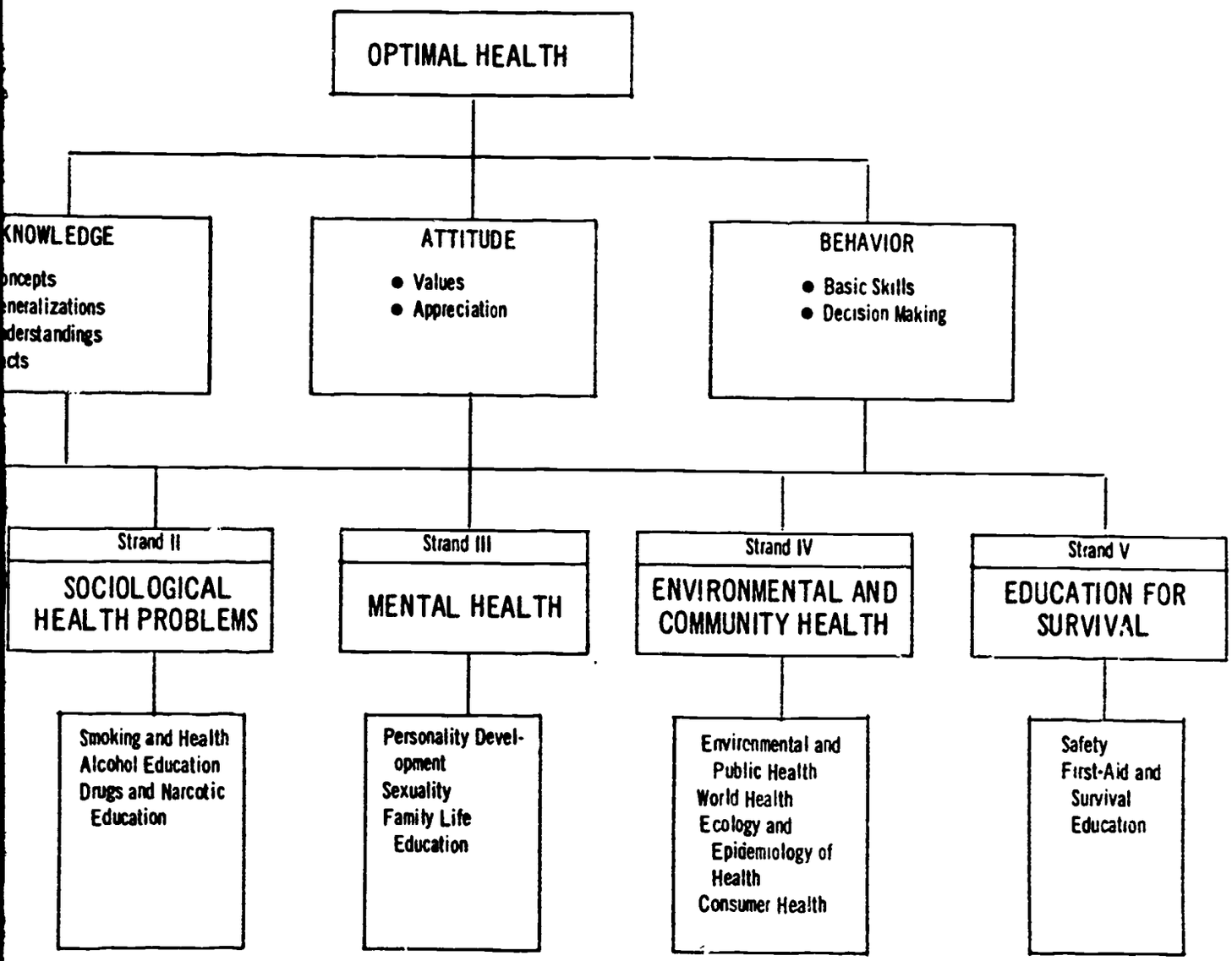
Smoking and Health
Alcohol Education
Drugs and Narcotic Education
Personality Development
Sexuality
Family Life Education
Environmental and Public Health
World Health
Ecology and Epidemiology of Health
Consumer Health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OVERVIEW

A knowledge of first aid procedures makes it possible for an individual to face and handle health emergencies which may occur in everyday living. The adolescent should begin to develop an awareness of his responsibility to others in these emergency matters. On the other hand, he should also become aware of the limitations of first aid and those things which he should not attempt. For example, first aid education should not go beyond emergency care and treatment....It is not its intent to teach students how to cure illness or to correct injuries.

The basic goals of first aid education, however, do include student instruction in those procedures which will bring about the prevention of (1) death, and (2) further injury to a victim of sudden illness or accident. Consequently, to bring about these ends, appropriate content and learning experiences should be provided.

It becomes obvious that teachers should be prepared to teach first aid and should hold an American Red Cross Instructor's Certificate or have received college training in first aid in becoming certificated as a health educator.

OUTCOMES

Students in grades 7, 8, and 9 should:

- learn how to lessen the possibilities for the occurrence of those emergencies that are most likely to affect junior high school students.
- learn how to deal with the emergencies which may occur in everyday living that require first aid.
- learn how to use the various kinds of first aid dressings, bandages, and other materials and equipment.
- develop an appreciation of the first aid procedures which will help to save lives and minimize injury.
- develop confidence in administering first aid in many kinds of emergency situations.
- acquire skills in improvising procedures whenever necessary.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEM F
REFER TO STRAND V, FIRST AID AND SURVIVAL EDUCATION, GRADES 4, 5, 6, FOR INTRODUCT			
I. Bandaging Skills	There are many everyday emergencies, e.g., cuts, burns, and lacerations which require bandaging. In order for bandages to be effective they must be applied correctly.	Have students list some actual injuries they encountered within the past month. . How were they treated? . Who administered the first aid? . Which ones required the attention of the physician? Show the filmstrip *Dressings and Bandages Used in First Aid* which is produced by McGraw-Hill Films. Have the students make a display of the kinds of dressings and bandages used in first aid.	The New Yo of Health the New Yo Commission page 18½" chart on f bound in c used as a table. It in Spanish dressings as other a
A. Dressing	A dressing is any material applied directly over a wound or a burn.	What is a compress? How does it differ from a bandage? Why should it be sterile? What is a dressing?	Most dress gauze whic pressurize very abso to circula Cotton, i may be use Cotton sh directly c

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
) V, FIRST AID AND SURVIVAL EDUCATION, GRADES 4, 5, 6, FOR INTRODUCTION.		
There are many everyday emergencies, e.g., cuts, burns, and lacerations which require bandaging. In order for bandages to be effective they must be applied correctly.	Have students list some actual injuries they encountered within the past month. . How were they treated? . Who administered the first aid? . Which ones required the attention of the physician? Show the filmstrip *Dressings and Bandages Used in First Aid* which is produced by McGraw-Hill Films. Have the students make a display of the kinds of dressings and bandages used in first aid.	The New York State Department of Health in conjunction with the New York Civil Defense Commission has prepared a 102-page 18½" x 28½" color flip chart on first aid. It is bound in covers which can be used as a stand on a desk or a table. It is also available in Spanish. It deals with dressings and bandages as well as other aspects of first aid.
A dressing is any material applied directly over a wound or a burn.	What is a compress? How does it differ from a bandage? Why should it be sterile? What is a dressing?	Most dressings are made of gauze which is sterilized under pressurized steam. Gauze is very absorbent and permits air to circulate over the wound. Cotton, if wrapped in gauze, may be used as a compress. Cotton should not be placed directly over a wound, however.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUP
1. Functions	Dressings have several major functions.	What are the major purposes of dressings?	Dressi follow
		How do they tend to lessen pain from an injury?	. to . to con
		Why should the first aider be concerned about infections?	. to wou . to arou . to in
	Dressings should be sterile in order to prevent contamination of the wound.	Discuss and demonstrate ways materials may be sterilized for use as compresses.	If an unconta Steril of any all li
	Improper handling of dressings may cause them to become contaminated, which, in turn, will contaminate the wound.	What are the best kinds of materials to use?	usuall or the ultravi
		Demonstrate how a compress may be removed from a package and applied to the injury without contamination. Allow students to practice applying compresses on each other.	may be tion i or hot prolong (dry he incine informa steril
		Show how a compress may be refolded without contaminating the inner surfaces.	Frobish *of bact* W.B. Sa
		Have a speaker from a first aid supply company discuss the industrial sterilization of first aid products. Take a field	If ste availab should germs remove

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
Dressings have several major functions.	What are the major purposes of dressings? How do they tend to lessen pain from an injury? Why should the first aider be concerned about infections?	Dressings are essential for the following purposes. . to control hemorrhage . to protect the wound from contamination by bacteria . to absorb fluids from the wound . to raise the temperature around the wound . to relieve pain, especially in the case of burns
Dressings should be sterile in order to prevent contamination of the wound. Improper handling of dressings may cause them to become contaminated, which, in turn, will contaminate the wound.	Discuss and demonstrate ways materials may be sterilized for use as compresses. What are the best kinds of materials to use? Demonstrate how a compress may be removed from a package and applied to the injury without contamination. Allow students to practice applying compresses on each other. Show how a compress may be refolded without contaminating the inner surfaces. Have a speaker from a first aid supply company discuss the industrial sterilization of first aid products. Take a field	If an object is sterile it is uncontaminated by germs. Sterilization means the freeing of any object or substance from all life of any kind. This is usually accomplished by heat, or the use of chemicals or ultraviolet radiation. Heat may be applied for sterilization in three ways: by steam or hot water (moist heat); by prolonged baking in an oven (dry heat); by complete incineration. For detailed information on the means of sterilization read: Martin Frobisher, Jr., *Fundamentals of bacteriology*. Philadelphia, W.B. Saunders Company, 1962. If sterile compresses are not available, a clean fabric should be used. Some of the germs on the fabric may be removed by scorching with a

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLE
		trip to a first aid supply company. Contact Johnson and Johnson Company, New Brunswick, New Jersey, or Laerdal Medical Corporation, 136 Marbledale Road, Tuckahoe, N.Y. 10707.	flame, ir under clo hot oven, soap and it thorou
2. Kinds	There are many different kinds of dressings. Certain kinds of injuries require special types of dressings.	List and discuss the kinds of wounds which require a dressing. Have the class list the injuries which may require a special dressing. . What makes it special? . Describe the special dressing.	Gauze squ sizes ran square to They are packages sterility many laye Gauze squ primarily In order shake the corner of off the c of the co through t touch or the dress the wound is placed be secure
a. Commercial dressings	Commercially made dressings include: . adhesive bandages . bandage compress . gauze compresses of various sizes.	Demonstrate: (1) how to remove and apply an adhesive bandage, (2) how to remove and apply a bandage compress.	Adhesive available The adhes with one protect t adhesive a dressin small cut

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
	trip to a first aid supply company. Contact Johnson and Johnson Company, New Brunswick, New Jersey, or Laerdal Medical Corporation, 136 Marbledale Road, Tuckahoe, N.Y. 10707.	flame, ironing, heating it under close observation in a hot oven, or washing it with soap and water and then drying it thoroughly.
There are many different kinds of dressings.	List and discuss the kinds of wounds which require a dressing.	Gauze squares come in various sizes ranging from a 1-inch square to a 3½-inch square. They are sealed in individual packages which ensure their sterility. They are made of many layers of folded gauze. Gauze squares are used primarily for burns and wounds.
Certain kinds of injuries require special types of dressings.	Have the class list the injuries which may require a special dressing. . What makes it special? . Describe the special dressing.	In order to remove the compress shake the compress into one corner of the envelope, tear off the corner, grasp the edge of the compress, and pull it through the opening. Do not touch or breathe on the side of the dressing to be placed on the wound. Once the dressing is placed over the wound it may be secured with a bandage.
Commercially made dressings include: . adhesive bandages . bandage compress . gauze compresses of various sizes.	Demonstrate: (1) how to remove and apply an adhesive bandage, (2) how to remove and apply a bandage compress.	Adhesive compresses are available in various sizes. The adhesive is usually covered with one layer of crinoline to protect the adhesive. The adhesive compress acts as both a dressing and a bandage for small cuts or scratches.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	S
	Adhesive compresses usually consist of a pad of sterile gauze placed in the middle of a strip of adhesive. The bandage compress consists of a pad made of several layers of sterile gauze sewed to the middle of a strip of gauze or muslin.	Have students practice use of these dressings on simulated wounds.	Rea A *F* l The com squ usu or may ori con
b. Improvised dressings	Improvised dressings can be made from many materials including handkerchiefs, towels, and shirts.	Have students list materials which may be used for a compress, those which may be used for bandages, and those which may be used for a dressing. Have students make a list of materials which should not be used in dressings and indicate the reasons. Have students make first aid kits. Include improvised dressings, compresses, and bandages. Have members of the class bring in sufficient numbers of shoe boxes so that each class member may make his own basic first aid kit.	Acc sit ste ava the imp

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
Adhesive compresses usually consist of a pad of sterile gauze placed in the middle of a strip of adhesive.	Have students practice use of these dressings on simulated wounds.	Read: American National Red Cross. *First Aid Textbook.* pp. 109-110.
The bandage compress consists of a pad made of several layers of sterile gauze sewed to the middle of a strip of gauze or muslin.		The common sizes of the bandage compress are 2, 3, and 4-inches square. The dressing is usually made so that by cutting or breaking a stitch the pad may be unfolded to twice the original size. It is a self-contained compress and bandage.
Improvised dressings can be made from many materials including handkerchiefs, towels, and shirts.	Have students list materials which may be used for a compress, those which may be used for bandages, and those which may be used for a dressing. Have students make a list of materials which should not be used in dressings and indicate the reasons. Have students make first aid kits. Include improvised dressings, compresses, and bandages. Have members of the class bring in sufficient numbers of shoe boxes so that each class member may make his own basic first aid kit.	Accidents frequently occur in situations where standardized sterile compresses are not available. In such situations the first aider must be able to improvise a dressing.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPL
		Demonstrate how compresses may be made from a rolled bandage.	
B. Bandage	A bandage is a strip of gauze or other material used for wrapping a wound.		
1. Functions	Bandages have many uses such as wrappings for dressings and splints, and to give support.	Have class list and demonstrate the many uses of a bandage.	Bandages . to ho . to an . as a suppo . to pa an in . to ap wound
2. Principles of bandaging	A bandage should be applied snugly, but should not be too tight or too loose. The tips of the fingers and toes should be left exposed wherever possible so that color changes may be observed. A bandage should be applied with the injured limb in the position in which it is to be carried.	Discuss: . Basic principles of bandaging . Bandages which are too tight or too loose . Why bandages should be properly applied . Precautions which should be taken	If the b the bloo of the e seriousl resultin tions in paralysi skin dis applied cyanotic Pain may extremit numbness A first with neg care has

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
	Demonstrate how compresses may be made from a rolled bandage.	
A bandage is a strip of gauze or other material used for wrapping a wound.		
Bandages have many uses such as wrappings for dressings and splints, and to give support.	Have class list and demonstrate the many uses of a bandage.	Bandages are used: . to hold dressings in place . to anchor a splint . as a wrapping to give support to a joint . to partially immobilize an injured part . to apply pressure to a wound to control bleeding
A bandage should be applied snugly, but should not be too tight or too loose. The tips of the fingers and toes should be left exposed wherever possible so that color changes may be observed. A bandage should be applied with the injured limb in the position in which it is to be carried.	Discuss: . Basic principles of bandaging . Bandages which are too tight or too loose . Why bandages should be properly applied . Precautions which should be taken	If the bandage is too tight, the blood supply to the ends of the extremities may be seriously interferred with, resulting in grave complications including gangrene and paralysis. The color of the skin distal to a bandage applied too tightly will be cyanotic (bluish) or pale. Pain may be present, the extremity may become cold, and numbness and tingling may occur. A first aider may be charged with negligence if reasonable care has not been used.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPP
			If wet provisi shrinka result too tig circula
			A banda cause a come of bleedin serious
			SEE APP
II. Control of Bleeding	Serious bleeding needs to be controlled as quickly as possible because: . serious shock may occur . death can occur from loss of blood		Serious frequen razors, bullets acciden
A. Types of bleeding	Bleeding may vary from that of minor cuts and scratches to hemorrhage from major arteries and veins. The control of bleeding is the first major responsibility of the first aider. Internal bleeding is treated the same as shock, and the symptoms will appear the same as in shock.	Explain the characteristics of blood coming from an artery, vein, capillary, lung, and other internal organs. Show: McGraw-Hill filmstrips on *Bleeding and Shock* and *Wounds*. Simulaids are wound and bleeding simulations. This company has three kits available containing first	Arteria terized blood w wound i profuse Venous ized by red blo profuse Capilla terized oozing

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
		If wet dressings are used, provision should be made for shrinkage. Shrinkage may result in the bandage becoming too tight and closing off circulation. A bandage that is too loose may cause a dressing or splint to come off. If used to control bleeding, it may result in serious hemorrhage.
		SEE APPENDIX D.
Serious bleeding needs to be controlled as quickly as possible because: . serious shock may occur . death can occur from loss of blood		Serious bleeding and wounds frequently result from glass, razors, sharp metal, scissors, bullets, machinery, and car accidents.
Bleeding may vary from that of minor cuts and scratches to hemorrhage from major arteries and veins. The control of bleeding is the first major responsibility of the first aider. Internal bleeding is treated the same as shock, and the symptoms will appear the same as in shock.	Explain the characteristics of blood coming from an artery, vein, capillary, lung, and other internal organs. Show: McGraw-Hill filmstrips on *Bleeding and Shock* and *Wounds*. Simulaids are wound and bleeding simulations. This company has three kits available containing first	Arterial bleeding is characterized by a flow of bright red blood which comes from the wound in spurts and may be very profuse. Venous bleeding is characterized by a steady flow of dark red blood which may also be profuse. Capillary bleeding is characterized by bright red blood oozing into the tissues. The

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPL
		aid teaching aids. Of value for this unit would be the 36 assorted stick-on wounds.	blood dr wound an puddle i there. Blood th will be Blood co may be b coffee g long the stomach.
	The first aider should always treat for shock even though symptoms may not be present.	Why is it advisable to treat for shock even though it does not appear to be present?	Traumati with inj from wou etc. In caused b quantiti external cavity. Manual.
B. Direct pressure control	Most external bleeding can be controlled by applying pressure directly over the wound. Pressure dressings may be used to effectively control mild bleeding from: . capillaries . veins . arteries	Demonstrate how to apply direct pressure over a wound using a sterile dressing. Have students work in pairs and practice the application of direct pressure to simulated wounds. Demonstrate the application of pressure for the control of bleeding using a sterile gauze pad and roller bandage	A steri or a cl is plac firm pr the han Cole, W *First a manageme* Henders *medical*

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
	aid teaching aids. Of value for this unit would be the 36 assorted stick-on wounds.	blood drips steadily from the wound and gradually forms a puddle in the tissues and clots there. Blood that comes from the lungs will be bright red and frothy. Blood coming from the stomach may be bright red or resemble coffee grounds depending on how long the blood has been in the stomach.
The first aider should always treat for shock even though symptoms may not be present.	Why is it advisable to treat for shock even though it does not appear to be present?	Traumatic shock is associated with injury to body tissues from wounds, fractures, burns, etc. In most instances it is caused by the loss of large quantities of blood either externally or within body cavity. See American Red Cross Manual, pp. 25-31.
Most external bleeding can be controlled by applying pressure directly over the wound. Pressure dressings may be used to effectively control mild bleeding from: . capillaries . veins . arteries	Demonstrate how to apply direct pressure over a wound using a sterile dressing. Have students work in pairs and practice the application of direct pressure to simulated wounds. Demonstrate the application of pressure for the control of bleeding using a sterile gauze pad and roller bandage	A sterile dressing (compress) or a clean folded handkerchief is placed over the wound and firm pressure is applied with the hand Cole, W.H. & Puestow, C.B. *First aid: diagnosis and management.* pp. 113-114. Henderson, John. *Emergency medical guide.* pp. 146-147.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUP
	Pressure dressings may be used to control severe wounds to arteries or veins after bleeding is under control.	and Simulaids wound simulations. Have students practice the application of pressure dressing with their partners.	Care r the ba may ob to the
C. Pressure points	Pressure point control causes the bleeding to diminish but does not stop it. A body location where pulse is felt is a pressure point. A pressure point occurs where an artery comes close to the surface of the skin and passes over an underlying bone.	Have students locate the various pressure points on themselves. Which pressure points can be used to control bleeding? Why are the others of little practical value? Show the students how to take a pulse. Have them practice taking a pulse.	The tw are of are: 1. pr of th bo 2. pr gr ag
D. Tourniquet	The tourniquet should be used only for extremely severe hemorrhage that cannot be controlled by any other method. The use of a tourniquet is justified if: . large arteries have been severed in an extremity . an extremity is partially or completely severed.	Discuss: . When may a tourniquet be used? . When and where should it never be used? List precau ions to be observed in contemplating the use of a tourniquet. What may a tourniquet be made from? What material should be avoided?	Basic tourni . pla wou abo . app to . not pat soc . att inj tou

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
Pressure dressings may be used to control severe wounds to arteries or veins after bleeding is under control.	and Simulaids wound simulations. Have students practice the application of pressure dressing with their partners.	Care must be taken not to make the bandage too tight since it may obstruct the flow of blood to the rest of the limb.
Pressure point control causes the bleeding to diminish but does not stop it.	Have students locate the various pressure points on themselves.	The two pressure points which are of greatest practical value are: 1. pressure on the inner half of the upper arm, pressing the vessel against the bone 2. pressure just below the groin pressing the vessel against the pelvic bone
A body location where pulse is felt is a pressure point.	Which pressure points can be used to control bleeding?	
A pressure point occurs where an artery comes close to the surface of the skin and passes over an underlying bone.	Why are the others of little practical value?	
	Show the students how to take a pulse. Have them practice taking a pulse.	
The tourniquet should be used only for extremely severe hemorrhage that cannot be controlled by any other method.	Discuss: . When may a tourniquet be used? . When and where should it never be used?	Basic procedure for applying a tourniquet would include: . placing it close to the wound (about 1-2 inch) and above it. . applying it tightly enough to stop bleeding. . not removing it...taking patient to a physician as soon as possible . attaching a note to the injured indicating a tourniquet is in place.
The use of a tourniquet is justified if: . large arteries have been severed in an extremity . an extremity is partially or completely severed.	List precautions to be observed in contemplating the use of a tourniquet.	
	What may a tourniquet be made from?	
	What material should be avoided?	

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPL
		Demonstrate the proper use of a tourniquet. Have students practice applying a tourniquet to a partner.	In teac teacher use of as to e when it
			See Red pp. 114
III. Conditions Caused by Extremes in Temperatures	Many emergencies result from exposure to extremes of temperature including burns, scalds, frostbite, heat exhaustion, heat cramps, and sunstroke.	Have students list conditions which may result from extremes in temperatures. (Include both hot and cold.)	
A. Burns	Burns are injuries to tissue caused by: . high temperatures . electricity . radioactive substances . chemicals	What are burns? What causes burns?	Burns v involvi the ski involvi Both th intensi determi burns.
	Burns are tissue lesions classified according to the severity as: . first degree - redness . second degree - blisters . third degree - charring	How are burns classified?	Burns a accordi serious burns, t the out epiderm by redd and pai present

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
	Demonstrate the proper use of a tourniquet. Have students practice applying a tourniquet to a partner.	In teaching this area the teacher should *discourage* the use of the tourniquet as well as to emphasize its *proper* use when it *must* be used. See Red Cross First Aid Manual, pp. 114-117.
Many emergencies result from exposure to extremes of temperature including burns, scalds, frostbite, heat exhaustion, heat cramps, and sunstroke.	Have students list conditions which may result from extremes in temperatures. (Include both hot and cold.)	
Burns are injuries to tissue caused by: . high temperatures . electricity . radioactive substances . chemicals	What are burns? What causes burns?	Burns vary from minor ones involving the outer layers of the skin to severe ones involving underlying tissues. Both the extent and the intensity of damage to tissues determine the seriousness of burns.
Burns are tissue lesions classified according to the severity as: . first degree - redness . second degree - blisters . third degree - charring	How are burns classified?	Burns are classified by degree according to their depth or seriousness. In first degree burns, the damage is limited to the outer layer of the epidermis and is characterized by reddening, warmth, swelling, and pain. Blisters are not present.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES
1. Thermal burns	Burns caused by excessive heat are called thermal burns.	Have the class define thermal burns. List the major and most common causes of thermal burns. . How can these be prevented? . What is the basic first aid for all thermal burns?
	First aid for thermal burns consists of: . covering the burn with a dry, sterile compress . treating for shock	Discuss first aid treatment for burns. Refer to bandaging, Section I. . Why cover the burn with a dry compress? Why not a wet compress?

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
		In second degree burns, damage extends through the epidermis and involves the dermis. There is deep red swelling, pa n, and blistering. There is leakage of plasma from the blood into the tissues causing the top layers of the skin to rise and form blisters. In third degree burns there is destruction of both the epidermis and the dermis. The surface may be charred, coagulated, or white and lifeless.
Burns caused by excessive heat are called thermal burns.	Have the class define thermal burns. List the major and most common causes of thermal burns. . How can these be prevented? . What is the basic first aid for all thermal burns?	Read: American National Red Cross. *First aid textbook*. pp. 70-78. Henderson, John. *Emergency medical guide*. pp. 210-219.
First aid for thermal burns consists of: . covering the burn with a dry, sterile compress . treating for shock	Discuss first aid treatment for burns. Refer to bandaging, Section I. . Why cover the burn with a dry compress? Why not a wet compress?	First aid consists of relieving pain, preventing shock, and *preventing infection*. The exclusion of air from the burn helps to relieve pain. The application of a thick sterile dressing will help to relieve and prevent contamination. The administration of fluids is all important.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLE
	"Burn shock" may result in death. First aid procedures should be started immediately to prevent or control shock.	. Why is treatment for shock essential in first aid for burns?	
2. Electrical burns	An electrical burn may result from: . electricity arcing between the power source and the victim . being struck by lightning. The major problem in electrical burns is the secondary effects that involve the heart and respiration, which may require more immediate treatment than the burn itself.	What is an electrical burn? What causes electrical burns? What precautions should the first aider take regarding electrical burns? What are the first aid procedures for electrical burns? How do these procedures differ from thermal burns?	Electrica frequentl homes. C a charged a common First aid person fr electrica artificia cardiac m burned ar dressing, electrica should be Read: Cole, W *First a managem* Henders *medical* 210-219
3. Chemical burns	Chemical burns result from contact with: . strong acids . alkalies . corrosives	How do chemical burns differ from thermal or electrical burns? Discuss the causes and prevention of chemical burns.	Examples burn the acid, hyd acid, lye ammonia,

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
"Burn shock" may result in death. First aid procedures should be started immediately to prevent or control shock.	. Why is treatment for shock essential in first aid for burns?	
An electrical burn may result from: . electricity arcing between the power source and the victim . being struck by lightning. The major problem in electrical burns is the secondary effects that involve the heart and respiration, which may require more immediate treatment than the burn itself.	What is an electrical burn? What causes electrical burns? What precautions should the first aider take regarding electrical burns? What are the first aid procedures for electrical burns? How do these procedures differ from thermal burns?	Electrical burns occur more frequently in industry than in homes. Coming in contact with a charged electrical wire is a common cause. First aid involves freeing the person from contact with the electrical wire, giving artificial respiration and cardiac massage, covering the burned area with a sterile dressing, and treating for electrical shock. Medical aid should be sought immediately. Read: Cole, W.H. & Puestow, C,B. *First aid: diagnosis and management.* pp. 131-132. Henderson, John. *Emergency medical guide.* pp. 167-170; 210-219.
Chemical burns result from contact with: . strong acids . alkalies . corrosives	How do chemical burns differ from thermal or electrical burns? Discuss the causes and prevention of chemical burns.	Examples of chemicals that will burn the skin include sulfuric acid, hydrochloric acid, nitric acid, lye, caustic soda, lime, ammonia, and phosphorus.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLE
	Containers of many household chemicals list first aid procedures on their label.	Have students list the chemicals found in their home (or commonly found in most homes) which can potentially cause burns. How should these chemicals be kept? Do the labels on the containers list first aid procedures? Why?	The chemi off with water. are avail they shou removing dressing the perso Acid burn with a di bicarbona burns sho dilute so
	First aid procedures include: . washing away the chemical with water . neutralizing the chemical	Discuss first aid procedures for various kinds of chemicals.	Read: America *First a* Henders *medical*
4. Sunburn	Overexposure to the sun may produce very serious burns.	What are the causes of sunburn? What precautions should be taken when using sun lamps?	Sunburns first or injured a exposed t healing i
	Sunburn is caused by overexposure to ultraviolet rays from the sun or a sunlamp. Most cases of sunburn are the result of failure to observe simple precautions in the sun.	Can one get a sunburn on a cloudy day? Why? How effective are commercial preparations in protection from sunburn? Relieving pain?	Read: America *First a* Cole, W *First a* *managem* Henders *medical*

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
Containers of many household chemicals list first aid procedures on their label.	Have students list the chemicals found in their home (or commonly found in most homes) which can potentially cause burns. How should these chemicals be kept? Do the labels on the containers list first aid procedures? Why?	The chemical should be washed off with large quantities of water. If first aid directions are available on the label, they should be followed. After removing the chemical, a sterile dressing should be applied and the person taken to a physician. Acid burns should be washed with a dilute solution of bicarbonate of soda. Alkali burns should be washed with a dilute solution of vinegar.
First aid procedures include: . washing away the chemical with water . neutralizing the chemical	Discuss first aid procedures for various kinds of chemicals.	Read: American National Red Cross. *First aid textbook.* pp. 78-79. Henderson, John. *Emergency medical guide.* pp. 218-219.
Overexposure to the sun may produce very serious burns.	What are the causes of sunburn? What precautions should be taken when using sun lamps?	Sunburns are normally of the first or second degree. The injured area should not be exposed to the sun again unless healing is complete.
Sunburn is caused by overexposure to ultraviolet rays from the sun or a sunlamp. Most cases of sunburn are the result of failure to observe simple precautions in the sun.	Can one get a sunburn on a cloudy day? Why? How effective are commercial preparations in protection from sunburn? Relieving pain?	Read: American National Red Cross. *First aid textbook.* pp. 77-78. Cole, W.H. & Puestow, C.B. *First aid: diagnosis and management.* Henderson, John. *Emergency medical guide.* pp. 213-214.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPL
			Lyght, *manual therap*
			Complete ments, c cannot b the fact are wash and bath
B. Heat exhaustion and sun stroke	The distinction between sun stroke and heat exhaustion is that in exhaustion the body temperature remains about normal whereas in stroke it is high. Heat exhaustion is the most common condition resulting from exposure to excessive heat.	Have the class distinguish between heat stroke and heat exhaustion. What are the causes of: . heat stroke? . heat exhaustion? Why does the body temperature rise during heat stroke? What is the first aid for heat stroke?	Heat str conditio disturba regulati body. T sweating tremendo ture wh Individu are mor conditi Symptoms headache ness; na temperat higher); ness; ar shock ar may foll
		What is the first aid for heat exhaustion? How are the treatments alike? How do they differ?	Heat exh resultin excessiv terized varying collapse

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
		Lyght, C.E. ed. *The Merck manual of diagnosis and therapy*. pp. 1171-1174.
		Complete protection from ointments, creams, and lotions cannot be obtained because of the fact that these substances are washed away by perspiration and bathing.
The distinction between sun stroke and heat exhaustion is that in exhaustion the body temperature remains about normal whereas in stroke it is high.	Have the class distinguish between heat stroke and heat exhaustion.	Heat stroke or sun stroke is a condition where there is a disturbance of the heat-regulating mechanisms of the body. There is a cessation of sweating which results in a tremendous rise in body temperature which might cause death. Individuals over the age of 40 are more susceptible to this condition.
Heat exhaustion is the most common condition resulting from exposure to excessive heat.	What are the causes of: . heat stroke? . heat exhaustion?	
	Why does the body temperature rise during heat stroke?	
	What is the first aid for heat stroke?	Symptoms include flushed face; headache; rapid pulse; dizziness; nausea; very high temperature (108 degrees or higher); vomiting; unconsciousness; and convulsion. Profound shock and circulatory collapse may follow and lead to death.
	What is the first aid for heat exhaustion?	Heat exhaustion is a condition resulting from exposure to excessive heat and is characterized by prostration and varying degrees of circulatory collapse.
	How are the treatments alike? How do they differ?	

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SU
			The sy includ nausea pale, sweati salt shallo pressu body t
C. Frostbite	Frostbite is injury to tissues resulting from freezing. Frostbite is similar to a burn in that cells and tissues have been destroyed. Frostbite can occur without a person being aware of it.	Define frostbite. What causes frostbite? List situations where frostbite is most likely to occur. Include everyday activities, sports, occupations, etc. Discuss some of the misconceptions about frostbite, its care and after effects.	Frostb to col Long p cold w tight ute to ears, are mo People those bevera prone Frostb and nu yellow ful ti felt a freeze Superf may re
		What is a chilblain? How does it compare with frostbite?	A chil mation toes, cold.

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
		The symptoms of heat exhaustion include dizziness; faintness; nausea; weakness; rapid pulse; pale, cool, and moist skin; sweating is profuse which causes salt depletion and dehydration; shallow breathing; low blood pressure; slight elevation of body temperature.
Frostbite is injury to tissues resulting from freezing. Frostbite is similar to a burn in that cells and tissues have been destroyed. Frostbite can occur without a person being aware of it.	Define frostbite. What causes frostbite? List situations where frostbite is most likely to occur. Include everyday activities, sports, occupations, etc. Discuss some of the misconceptions about frostbite, its care and after effects.	Frostbite is caused by exposure to cold, especially moist cold. Long periods of inactivity in cold weather or while wearing tight and wet clothing contribute to frostbite. The nose, ears, cheeks, fingers, and toes are most frequently affected. People with poor circulation or those who have consumed beverage alcohol are more prone to frostbite. Frostbitten parts become cold and numb and take on a grayish yellow or white color. A painful tingling sensation may be felt as the part begins to freeze. Blisters may develop. Superficial or deep gangrene may result.
	What is a chilblain? How does it compare with frostbite?	A chilblain consists of inflammation and swelling of the feet, toes, or fingers caused by cold. Pain may also be present.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPL
	Extreme care must be taken when thawing out frozen tissues or else additional damage will result.	After discussing all of the topics under burns and other conditions caused by abnormal temperatures make up skits involving first aid emergencies that deal with these injuries. Skits can be written.	The pers from the as soon tissues gently a tissue s nor shou applied. be immer maintain 103 to 1 Damaged tected f drinks m victim. Read: Americ *First* Cole, *First* *manage* Hender *medica* Lyght, *manual* *therap*
IV. Foreign Substances in Body Openings	Dirt, food, and other substances may accidentally get lodged in the: . eye . ear . nose	List the body openings where foreign objects may enter.	Frequent may resu they ent Occasion of the n its loca emergenc first ai

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
Extreme care must be taken when thawing out frozen tissues or else additional damage will result.	After discussing all of the topics under burns and other conditions caused by abnormal temperatures make up skits involving first aid emergencies that deal with these injuries. Skits can be written.	The person should be removed from the freezing temperatures as soon as possible. The tissues should be rewarmed as gently as possible, thawing tissue should never be massaged nor should heat be directly applied. Frozen parts should be immersed in water which is maintained at a temperature of 103 to 107.5 degrees Fahrenheit. Damaged tissue should be protected from infection. Hot drinks may be given to the victim. Read: American National Red Cross. *First aid textbook.* pp. 82-84. Cole, W.H. & Pusstow, C.B. *First aid: diagnosis and management.* pp. 132-134. Henderson, John. *Emergency medical guide.* pp. 219-222. Lyght, C.E. ed. *The Merck manual of diagnosis and therapy.* pp. 238-240.
Dirt, food, and other substances may accidentally get lodged in the: . eye . ear . nose	List the body openings where foreign objects may enter.	Frequently foreign substances may result in discomfort when they enter body openings. Occasionally, however, because of the nature of the object or its location, it may create an emergency situation requiring first aid.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPP
A. In the eye	The eye is an extremely delicate organ.	What protective mechanisms does the eye have to help prevent objects from entering?	Specks asily moister the fo upper removed lid dow then l and to the nos
		How does the eye react to foreign substances to remove them?	
		Demonstrate the proper technique for removing foreign objects from the eye.	Another object upper l lash ge back ov
		List the steps to be taken in removing an object from the eye.	the spe easily swab.
	If the first aider is in doubt about removing the object without causing further injury, he should cover the eye by placing a sterile gauze over the closed eye and bandage it in place.	Discuss the circumstances in which the first aider should not attempt to remove objects from the eye. What procedure should the first aider follow in this event?	If the in the should closed taken t
			Read: Ameri *First* 94, 1
	Chemical substances in the eye may be a serious threat to vision.	Discuss the circumstances under which chemicals may splash into the eyes.	Cole, *First and m*
	Flush the eye with clean water if irritating chemicals should get into the eye.	List the kinds of chemicals commonly found at home or school which could be irritating to the eyes.	Hende *medic*

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
The eye is an extremely delicate organ.	What protective mechanisms does the eye have to help prevent objects from entering? How does the eye react to foreign substances to remove them?	Specks on the lower lid can easily be seen and removed with moistened gauze or cotton. If the foreign body is on the upper lid, it can sometimes be removed by drawing the upper lid down over the lower lid and then looking up, down, left, and to the right and blowing the nose gently.
	Demonstrate the proper technique for removing foreign objects from the eye. List the steps to be taken in removing an object from the eye.	Another way in which the foreign object may be removed from the upper lid is to grasp the eyelash gently and turn the lid back over a cotton swab. If the speck is seen, it can be easily removed with a cotton swab.
If the first aider is in doubt about removing the object without causing further injury, he should cover the eye by placing a sterile gauze over the closed eye and bandage it in place.	Discuss the circumstances in which the first aider should not attempt to remove objects from the eye. What procedure should the first aider follow in this event?	If the foreign body is imbedded in the eyeball, a dressing should be placed over the closed eye and the person taken to a physician. Read: American National Red Cross. *First aid textbook.* pp. 93-94, 170-172.
Chemical substances in the eye may be a serious threat to vision. Flush the eye with clean water if irritating chemicals should get into the eye.	Discuss the circumstances under which chemicals may splash into the eyes. List the kinds of chemicals commonly found at home or school which could be irritating to the eyes.	Cole, W.H. & Puestow, C.B. *First aid: diagnosis and and management.* pp. 84-85. Henderson, John. *Emergency medical guide.* pp. 73-75.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	S
			Ly *ma* *th*
		In which occupations is this most likely to occur? What precautions are taken by schools to protect students from irritating chemicals? [Industrial arts - home economics - physical education - chemistry - business education]	Eye occu acid corr Many home to t othe Flus quan cons
B. In the ear	Extreme care must be taken when removing objects from the ears because of the danger of damaging the eardrum and causing infection.	Discuss and demonstrate how foreign objects should be removed from the ear. . What are the first aid procedures? . What kinds of care should be taken to avoid further injury?	Bead fore put A dr or b the allo obje oil. this prob obje
C. In the nose	Children frequently place objects in the nose. Insects may get lodged in the nose.	List the kinds of objects which are most likely to become lodged in the nose. Discuss and demonstrate how these objects may be removed.	The gent If t disl be c

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
		Lyght, C.E. ed. *The Merck manual of diagnosis and therapy*. pp. 486-487.
	In which occupations is this most likely to occur? What precautions are taken by schools to protect students from irritating chemicals? [Industrial arts - home economics - physical education - chemistry - business education]	Eye burns involving chemicals occur in many industries where acids, alkalies, and other corrosive chemicals are used. Many chemicals found in the home can produce serious burns to the eyes; e.g., ammonia and other cleaners. Flush the eye with ample quantities of water first - consult a physician immediately.
Extreme care must be taken when removing objects from the ears because of the danger of damaging the eardrum and causing infection.	Discuss and demonstrate how foreign objects should be removed from the ear. . What are the first aid procedures? . What kinds of care should be taken to avoid further injury?	Beads, seeds, stones, and other foreign objects are frequently put into the ears by children. A drop or two of mineral, olive, or baby oil may be placed in the ear. Tilt the head to allow the oil to run out. The object will flow out with the oil. Consult a physician if this method fails. Do not probe into the ear for an object.
Children frequently place objects in the nose. Insects may get lodged in the nose.	List the kinds of objects which are most likely to become lodged in the nose. Discuss and demonstrate how these objects may be removed.	The victim should blow the nose gently to dislodge the object. If the object is not readily dislodged, a physician should be consulted.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPL
V. Other Common Emergencies	A first aider should be prepared to handle most common medical emergencies that may occur in his presence.	Elicit from students the common medical emergencies that occur in the home, school, playground, and at work. Show and discuss the filmstrip on *Nursing care of the sick and injured* which is used with lesson number 9 of the Medical Self Help Training program. See page 34.	
A. Convulsions in children			
1. Causes	The occurrence of convulsions is indicative of some underlying medical problem and is not a disease in itself.	Define convulsive reaction. List the causes of convulsive reactions.	A convul a cerebr terized involvin of consc activity sudden i duration the onse diseases whooping and pneu include sets, ep calcium, concussi substanc oxygen. occur in of a hig

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
A first aider should be prepared to handle most common medical emergencies that may occur in his presence.	Elicit from students the common medical emergencies that occur in the home, school, playground, and at work. Show and discuss the filmstrip on *Nursing care of the sick and injured* which is used with lesson number 9 of the Medical Self Help Training program. See page 34.	
The occurrence of convulsions is indicative of some underlying medical problem and is not a disease in itself.	Define convulsive reaction. List the causes of convulsive reactions.	A convulsion is a disorder of a cerebral function, characterized by recurrent attacks involving changes in the state of consciousness, motor activity, or sensory phenomena, sudden in onset and brief in duration. They may appear at the onset of acute infectious diseases such as scarlet fever, whooping cough, tonsillitis, and pneumonia. Other causes include gastrointestinal upsets, epilepsy, low blood calcium, congenital defects, concussion, poisoning from such substances as lead, or lack of oxygen. Convulsions frequently occur in children as a result of a high body temperature.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPP
	Muscle spasms and twitching of varying degrees of severity may be present.	Discuss the symptoms of convulsions in children.	Convuls for sev minutes a stupo fall as
2. First aid	The major objective is to protect the child from injury.	Discuss the first aid for convulsions.	The chi positio will no Clothin If he v be turn
			A physi as soon
B. Epilepsy	Epilepsy is probably the most common condition in which convulsions are seen. Epilepsy is a condition characterized by convulsive reactions.	Discuss the nature of epileptic convulsions.	"Epilep rise to of brai nature, usually often a bance i involun tions." *The Mer and the* New Jer Dohme R 1966.
			Epilepsy cerebra resulte or othe

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
Muscle spasms and twitching of varying degrees of severity may be present.	Discuss the symptoms of convulsions in children.	Convulsive reactions may last for several seconds to a few minutes. The child may be in a stuporous condition or may fall asleep.
The major objective is to protect the child from injury.	Discuss the first aid for convulsions.	The child should be put in a position and location where he will not injure himself. Clothing should be loosened. If he vomits, his head should be turned to the side. A physician should be called as soon as possible.
Epilepsy is probably the most common condition in which convulsions are seen. Epilepsy is a condition characterized by convulsive reactions.	Discuss the nature of epileptic convulsions.	"Epilepsy is a condition giving rise to periodic disturbances of brain function, diverse in nature, abrupt in onset, usually brief in duration, and often accompanied by a disturbance in consciousness and involuntary muscular contractions." Lyght, C.E. ed. *The Merck manual of diagnosis and therapy.* 11th ed. Rahway, New Jersey. Merck, Sharp & Dohme Research Laboratories. 1966. p. 1008. Epilepsy may be a result of a cerebral lesion which may have resulted from a birth trauma or other injury.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUP
	Protecting the victim from injury is the primary objective of first aid in epilepsy.	Discuss and demonstrate first aid procedures for convulsions. What is the greatest danger to the epileptic?	First preven injuri placed vent t bitten should around injury help s Read: Clar eds. pp.
C. Head injuries in children	Head injuries are one of the most common emergencies of childhood. Most head injuries occur from falls. Head injuries should never be neglected.	What are some causes of head injuries in children? Why do they occur? List the first aid procedures for head injuress.	Freque don't organi and th a peri semico of the unequa The ch flat, Medica as qui
D. Acute gastric indigestion	Acute gastric indigestion may be a sign of an infectious disease or appendicitis. Appendicitis should always be suspected.	What is meant by gastric disturbance? Is it always "indigestion"?	Gastri the re . eat rap . imp cho . emo eat

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
Protecting the victim from injury is the primary objective of first aid in epilepsy.	Discuss and demonstrate first aid procedures for convulsions. What is the greatest danger to the epileptic?	First aid is aimed primarily at preventing the individual from injuring himself. A gag may be placed between the teeth to prevent the tongue from being bitten. Constrictive clothing should be loosened and objects around him removed so that injury will not result. Medical help should be obtained. Read: Clark, R.L. & Cumley, R.W. eds. *The book of health.* pp. 354-355.
Head injuries are one of the most common emergencies of childhood. Most head injuries occur from falls. Head injuries should never be neglected.	What are some causes of head injuries in children? Why do they occur? List the first aid procedures for head injuress.	Frequently, simple concussions don't result in permanent organic damage to the brain and the child will recover after a period of unconsciousness or semiconsciousness. The pupils of the eyes frequently are unequal in size. The child should be kept lying flat, warm, and comfortable. Medical aid should be obtained as quickly as possible.
Acute gastric indigestion may be a sign of an infectious disease or appendicitis. Appendicitis should always be suspected.	What is meant by gastric disturbance? Is it always "indigestion"?	Gastric disturbances may be the result of: . eating too much or too rapidly . improper or inadequate choice of food . emotional upset during eating

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLE
			. excess . eating fat c
	Any abdominal distress which lasts longer than two hours should be referred to a physician.	List and discuss the first aid for gastric disturbances.	See Appe pertainir temperatu
		Eating and drinking should be avoided Do not place hot packs on the abdomer laxative, enema, or other medication.	
E. Dizziness	Dizziness is a disturbed sense of space relationship with a sensation of unsteadiness. Dizziness may b a symptom of some other d sturbance. Although dizziness may in itself not be serious, the person may cause other injuries to himself as a result of being dizzy.	Have students describe dizziness. List the different kinds of sensations students have experienced. Make a list of possible causes of dizziness. Why is dizziness likely to be dangerous? Discuss first aid procedures for dizziness.	"Dizzines which the subjectiv ment in s moving ar resulting equilibri *The Merck* *and thera* New Jerse Dohme Res 1966. pp It become advancing causes ir bances, t motion si bances, c bances, b infectiou

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
		. excessive smoking or drinking . eating foods with too high a fat content
Any abdominal distress which lasts longer than two hours should be referred to a physician.	List and discuss the first aid for gastric disturbances.	See Appendix A for information pertaining to taking body temperature.
	Eating and drinking should be avoided during this time. Do not place hot packs on the abdomen. Do not take a laxative, enema, or other medication.	
Dizziness is a disturbed sense of space relationship with a sensation of unsteadiness. Dizziness may be a symptom of some other disturbance. Although dizziness may in itself not be serious, the person may cause other injuries to himself as a result of being dizzy.	Have students describe dizziness. List the different kinds of sensations students have experienced. Make a list of possible causes of dizziness. Why is dizziness likely to be dangerous? Discuss first aid procedures for dizziness.	"Dizziness is a disturbance in which the individual has a subjective impression of movement in space, or of objects moving around him, with resulting tendency to loss of equilibrium." Lyght, C.E. ed. *Merck manual of diagnosis and therapy*. 11th ed. Rahway, New Jersey. Merck, Sharp & Dohme Research Laboratories. 1966. pp. 1025-1026. It becomes more frequent with advancing age. There are many causes including ear disturbances, the effects of drugs, motion sickness, eye disturbances, cardiovascular disturbances, blood problems, infectious disease, and tumors.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPP
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F. Unconsciousness	Unconsciousness is a state of insensibility with no sensory impressions. There are many and varied causes of unconsciousness.	List the causes of unconsciousness. Why are "red," "white," and "blue" important to the first aider in dealing with unconsciousness? List and discuss the first aid procedures for each of the three major kinds of unconsciousness.	In "red person face a pulse. apople alcoho First down; apply head; In "whi chief and a result injury keep th positi lower body.
	Unconsciousness must always be considered a serious condition and the victim should be examined by a physician to determine the cause.	See Appendices B and C for information regarding how to take pulse and respiration.	In "blu person found obstru heart poison artifi breath victim warm.

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
		Have the person lie down and rest. If the attack does not pass quickly, medical aid should be obtained. A subsequent medical check-up is imperative.
Unconsciousness is a state of insensibility with no sensory impressions. There are many and varied causes of unconsciousness.	List the causes of unconsciousness. Why are "red," "white," and "blue" important to the first aider in dealing with unconsciousness? List and discuss the first aid procedures for each of the three major kinds of unconsciousness.	In "red" unconsciousness, the person has a red or flushed face accompanied by a strong pulse. It usually occurs in apoplexy, sun stroke, chronic alcoholism, and diabetes. First aid: lay the victim down; raise his head slightly; apply cold applications to his head; keep him warm and quiet. In "white" unconsciousness the chief symptoms are a pale face and a weak pulse. It frequently results from severe hemorrhage, injury, or shock. First aid: keep the victim in a lying position with his head slightly lower than the rest of his body. Keep him warm and quiet.
Unconsciousness must always be considered a serious condition and the victim should be examined by a physician to determine the cause.	See Appendices B and C for information regarding how to take pulse and respiration.	In "blue" unconsciousness the persons skin is blue. It is found in cases of respiratory obstruction (asphyxia), acute heart attack, and cases of poisoning. First aid: apply artificial respiration if breathing has ceased. Keep the victim in a lying position and warm.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPL
G. Motion sickness	Motion sickness is more commonly referred to as: . seasickness . air sickness . space sickness . car sickness Motion sickness is caused by exposure to unusual environmental forces on the body. These forces do not affect all people equally. Some people have never experienced motion sickness.	List and discuss the causes of motion sickness. What part does the psychological make-up of the person play relative to motion sickness? Why is an understanding of motion sickness important? What is the prevention for motion sickness? Have students study and report to class on how the space program is dealing with motion sickness, weightlessness, and related problems.	Most lik sickness ments of head is more tha neously. strong s circular which pl in the m Nausea a symptoms general may be p Preventi is easie than tre appears. available prescrip relieve sickness
H. Toothache	A toothache results when the pulp of the tooth becomes irritated. A toothache is usually a symptom of tooth decay or possible infection and all cases should be seen by a dentist as soon as possible.	Have class list some of the causes of a toothache. Refer to Strand I, Dental Health.	"A tooth pathologi with gra disinteg and denti involveme the pulp Lyght, C *manual o* 11th ed. Merck, S Laborato 377.

MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
Motion sickness is more commonly referred to as: . seasickness . air sickness . space sickness . car sickness	List and discuss the causes of motion sickness. What part does the psychological make-up of the person play relative to motion sickness? Why is an understanding of motion sickness important?	Most likely to induce motion sickness are rotational movements of the body in which the head is subject to rotation in more than one plane simultaneously. Motion produces strong stimuli upon the semicircular canals of the ear which play an important role in the maintenance of balance.
Motion sickness is caused by exposure to unusual environmental forces on the body. These forces do not affect all people equally. Some people have never experienced motion sickness.	What is the prevention for motion sickness? Have students study and report to class on how the space program is dealing with motion sickness, weightlessness, and related problems.	Nausea and vomiting are primary symptoms. Dizziness, headache, general discomfort, and fatigue may be present. Prevention of motion sickness is easier and more worthwhile than treatment after nausea appears. There are medicines available on a physician's prescription which may help to relieve or prevent motion sickness.
A toothache results when the pulp of the tooth becomes irritated. A toothache is usually a symptom of tooth decay or possible infection and all cases should be seen by a dentist as soon as possible.	Have class list some of the causes of a toothache. Refer to Strand I, Dental Health.	"A toothache results from a pathological process associated with gradual dissolution and disintegration of the enamel and dentin, with eventual involvement, if untreated, of the pulp of the affected tooth." Lyght, C.E. ed. *The Merck manual of diagnosis and therapy.* 11th ed. Rahway, New Jersey. Merck, Sharp & Dohme Research Laboratories. 1966. pp. 371-377.

OUTLINE OF CONTENT	MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPP
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MAJOR UNDERSTANDINGS AND FUNDAMENTAL CONCEPTS	SUGGESTED TEACHING AIDS AND LEARNING ACTIVITIES	SUPPLEMENTARY INFORMATION FOR TEACHERS
		The acid produced by bacteria and yeasts found in the mouth can initiate the tooth decay. Poor dental hygiene is an important contributing factor. Since a toothache is a serious symptom of a dental health problem, first aid should be to seek proper treatment from a qualified dentist.

APPENDIX A

Measuring Body Temperature

Body temperature may vary a degree or so in a perfectly well person, but may be slight disorders as appendicitis. Therefore, everyone should know how to take a person's temperat sistent elevations should be reported to a physician.

Normal body temperature is 98.6° F. by mouth and about 1 degree higher by rectum. By about 97.4° F. There are different kinds of thermometers. An oral thermometer has a long comparison to the short, blunt bulb of a rectal thermometer. The thermometer should always using it to make sure it has been shaken down. It should be given several sharp, downward wrist to force the liquid through the constriction into the bulb.

The thermometer should be left in place for 3 minutes when taking an oral or rectal te 10 minutes when taking it under the armpit (making sure to hold the arm close to the body). temperature by rectum, the bulb should be lubricated and gently inserted about 1½-inches.

APPENDIX B

Counting the Human Pulse

The pulse varies with normal everyday activities. However, it may go up with fever an become weak as in hemorrhage or shock. Therefore, a first aider should know how to take a

The pulse rate for infants and children ranges from 82-180 beats per minute. For adul generally ranges between 60-80. It is usually somewhat higher for women than it is for men most often taken at the wrist joint. Two or more fingers should be placed over the pulse a taking the pulse should not place his thumb over the victim's pulse because he may be feeli beat.

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ot place his thumb over the victim's pulse because he may be feeling his own pulse

APPENDIX C

Determining the Rate of Respiration

The respiratory rate also varies with one's daily activities. However, it may go up of fever or severe hemorrhage, or may even stop, as in asphyxia. For this reason, the fi how to take respirations.

The normal respiration rate for adults is about 18-20 breaths per minute and for chi 40-45 breaths per minute. Respirations are counted by observing the number of times the in 1 minute. Each respiration consists of a complete breathing cycle consisting of one r one fall (expiration) of the chest wall. The measuring of respirations can be done by ho arm across his chest and feeling for the elevation of his chest each time he breathes.

APPENDIX D

Bandages

Some injuries require support or need to have dressings held in place. Therefore, a know how to make and use various bandages.

The bandages most frequently used are the triangular (sometimes folded to form a cra (gauze, elastic, or muslin). The triangular is made from a 40-inch piece of old sheeting should be a part of the first aid kit. It can be used for slings or to hold dressings in Red Cross Manual describes many ways to use it. Folded as a cravat (or using any improvi can be used to control hemorrhage, hold dressings in place, or tie items together.

Roller bandages come in different materials and different sizes (from 12-inch to 40- sterile) it can be used as both a dressing and bandage. As elastic it can be used as sup types of rolled bandages are circular, recurrent, figure eight, and spiral. A descriptio appears in the American Red Cross First Aid Manual.

APPENDIX C

Determining the Rate of Respiration

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MULTIMEDIA RESOURCES

FIRST AID AND SURVIVAL EDUCATION
Grades 7, 8, 9

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Image in the mirror. Local Chapter of the American National Red Cross. 27 min. black &
with the correct body mechanics and good posture for the nurse and patient.

One minute to three. Local Chapter of the American National Red Cross. 26 min. black &
with the role of the home nurse in maintaining health, observing symptoms of illness, ar
nursing care.

Passport to tomorrow. Local Chapter of the American National Red Cross. 28 min. black &
with modern medicines and supplies, and how to give medicines according to the doctor's

Prairie schooner, space age model. Local Chapter of the American National Red Cross. 22
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grooming of the bed patient.

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Local Chapter of the American National Red Cross. 28 min. black & white. Film deals s and supplies, and how to give medicines according to the doctor's orders.

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Teaching Kits

The United States Department of Defense, in conjunction with the United States Departm and Welfare, has prepared a Medical Self-Help Instructor's Kit. This kit consists of containing all the necessary materials in basic health survival principles. The kit guide; a course introduction; eleven lesson play books, the reference manual *Family g care;* eleven 35 mm. filmstrips; and examination booklets and grading templates. The that would be valuable in first aid instruction for grades 7, 8, and 9 would include Bandaging and Nursing Care of the Sick and Injured. There is also a set of eleven 16 available, one for each lesson. In addition, there is a 13½ minute color film narrat "If Disaster Strikes," which explains the program and shows the value of Medical Self New York State Department of Health or the New York State Civil Defense Commission sh how to get the Medical Self-Help Training Kits and student supplies which are availab

The Instructional Materials Laboratories, Inc., located at 18 East 41 Street, New Yor available a programmed instructional School First Aid Course that was developed by Jo Each classroom unit kit contains 30 student programmed text manuals; 1 classroom demo first aid products; 1 full color filmstrip with complete teacher script and test ques programmed text guide; 30 progress test booklets; 30 safety checklists for home prepa completion cards; and 2 achievement certificates. The cost for this kit is approxima sets (to supplement classes larger than 30) containing materials for 10 students are approximately $4.00.

Flip Charts

Flip Chart for the Self-Help and Neighbor Help for the Injured Course. A 102-page, 1 chart in color which is used as a teaching aid for the Self-Help course. It is bou be used as a stand on a desk or a table. It is available in English and Spanish. 1963 by the New York State Department of Health for the New York State Civil Defens information write: The New York State Department of Health, 84 Holland Avenue, Alb

Flip Chart for the Training Course for Medical Aides in Aid Stations. A 100-page, 18 chart in color which is used with the text *Guide for medical aids in aid stations.* covers which can be used as a stand on a desk or a table. This chart was prepared 1964 by the New York State Department of Health for the New York State Civil Defens information write: The New York State Department of Health, 84 Holland Avenue, Alb

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on with the United States Department of Health, Education and Welfare and the Instructional
es, Inc. of New York. These kits are described below.

Department of Defense, in conjunction with the United States Department of Health, Education
repared a Medical Self-Help Instructor's Kit. This kit consists of a cardboard suitcase
necessary materials in basic health survival principles. The kit contains an instructor's
troduction; eleven lesson play books, the reference manual *Family guide-emergency health*
filmstrips; and examination booklets and grading templates. The filmstrips and lessons
able in first aid instruction for grades 7, 8, and 9 would include those on Bleeding and
ing Care of the Sick and Injured. There is also a set of eleven 16 mm. color-sound films
each lesson. In addition, there is a 13½ minute color film narrated by Danny Thomas,
es," which explains the program and shows the value of Medical Self-Help Training. The
artment of Health or the New York State Civil Defense Commission should be contacted for
ical Self-Help Training Kits and student supplies which are available without charge.

Materials Laboratories, Inc., located at 18 East 41 Street, New York, N.Y. 10017, has
mmed instructional School First Aid Course that was developed by Johnson and Johnson.
kit contains 30 student programmed text manuals; 1 classroom demonstration kit of
1 full color filmstrip with complete teacher script and test questions; 1 teacher's
ide; 30 progress test booklets; 30 safety checklists for home preparedness; 30 course
nd 2 achievement certificates. The cost for this kit is approximately $12.00. Adjunct
classes larger than 30) containing materials for 10 students are available for
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Self-Help and Neighbor Help for the Injured Course. A 102-page, 18½-inch x 28½-inch
ich is used as a teaching aid for the Self-Help course. It is bound in covers which can
d on a desk or a table. It is available in English and Spanish. It was prepared in
ork State Department of Health for the New York State Civil Defense Commission. For
: The New York State Department of Health, 84 Holland Avenue, Albany, New York 12208.

Training Course for Medical Aides in Aid Stations. A 100-page, 18½-inch x 28½-inch
ich is used with the text *Guide for medical aids in aid stations*. It is bound in
be used as a stand on a desk or a table. This chart was prepared as a teaching aid in
ork State Department of Health for the New York State Civil Defense Commission. For
: The New York State Department of Health, 84 Holland Avenue, Albany, New York 12208.

Mannequins

Resusci-Anne and Resusci-Andy. These are life-size mannequins that are used in resuscit however, they can be used in other phases of first aid. They are available from the G Equipment Company, 37 East 21st Street, Linden, New Jersey 07037, or the Laerdal Medi 136 Marbledale Road, Tuckahoe, New York 10707. The approximate cost of a mannequin i

Respertrain. A half-bodied mannequin for use in resuscitation training. Available from Laboratories, Inc., 729 Canal Street, Stamford, Connecticut. The approximate cost is $

Resusa-Kate. A 24-inch full-bodied mannequin of a child for use in resuscitation traini Simulaids, Woodstock, New York 12498. The approximate cost is $22.50.

Injury Simulation Kits

Injury simulations kits containing make up that can be used to simulate injuries are ava Simulaids, Woodstock, New York 12498, and the Alderson Research Laboratories, Inc., 7 Stamford, Connecticut. Many different kinds of kits are available. Kits range in pri $250.00.

susci-Andy. These are life-size mannequins that are used in resuscitation training; be used in other phases of first aid. They are available from the Guardian Safety , 37 East 21st Street, Linden, New Jersey 07037, or the Laerdal Medical Corporation, ad, Tuckahoe, New York 10707. The approximate cost of a mannequin is $198.00.

f-bodied mannequin for use in resuscitation training. Available from Alderson Research ., 729 Canal Street, Stamford, Connecticut. The approximate cost is $198.00.

inch full-bodied mannequin of a child for use in resuscitation training. Available from ock, New York 12498. The approximate cost is $22.50.

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kits containing make up that can be used to simulate injuries are available from ock, New York 12498, and the Alderson Research Laboratories, Inc., 729 Canal Street, icut. Many different kinds of kits are available. Kits range in price from $20.00 to