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| COURSE: Health Education | GRADE(S): 8 th Grade |
| UNIT: Breathing & Heart Emergencies | TIMEFRAME: 12 Lessons |

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| NATIONAL STANDARDS: | |
| STANDARD 1: | Students will comprehend concepts related to health promotion and disease prevention to enhance health. |
| STANDARD 2: | Students will analyze the influence of family, peers, culture, media, technology and other factors on health behaviors. |
| STANDARD 4: | Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks. |
| STANDARD 5: | Students will demonstrate the ability to use decision-making skills to enhance skills. |
| STANDARD 7: | Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks. |
| STANDARD 8: | Students will demonstrate the ability to advocate for personal, family, and community health. |

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| STATE STANDARDS: | |
| 10.2. Healthful Living | |
| 10.2.9.D. | Analyze and apply a decision-making process to adolescent health and safety issues. |
| 10.3. Safety and Injury Prevention | |
| 10.3.9.A. | Analyze the role of individual responsibility for safe practices and injury prevention in the home, school and community. |
| 10.3.9.B. | Describe and apply strategies for emergency and long-term management of injuries. |
| <i>Reading Assessment Anchors:</i> | |
| R8.A.2 Understand nonfiction appropriate to grade level. | |
| R8.A.2.1 Identify and apply the meaning of vocabulary in nonfiction. | |
| R8.A.2.3 Make inferences, draw conclusions, and make generalizations based on text. | |
| R8.A.2.4 Identify and explain main ideas and relevant details. | |

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| UNIT OBJECTIVES: | CONTENT: |
| Demonstrate the steps for checking an unconscious adult victim. | <ul style="list-style-type: none"> I. Check the Victim <ul style="list-style-type: none"> - Determine responsiveness: <ul style="list-style-type: none"> o Tap and shout to see if the person responds. If no response, call 911 and yell for help. o Look, listen, and feel for breathing (about 5 seconds). o If the person is not breathing or you can't tell, position victim on back, support head and neck, and roll towards you. o Open airway using head tilt and chin lift. o Look, listen, and feel for breathing for about 5 seconds. o If no breathing, give 2 slow breaths. Each breath lasting 1 to 1 ½ seconds. o Check for signs of circulation o Check for severe bleeding. |

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| <p>Sequence the steps in the pathway from life to death.</p> <p>Summarize causes of breathing emergencies.</p> <p>Comprehend the signals of breathing emergencies.</p> <p>Break down and perform the steps of adult rescue breathing.</p> | <ul style="list-style-type: none"> - Steps in the Pathway from Life to Death <ul style="list-style-type: none"> o Loss of Meaningful Communication o Loss of Conscious o Loss of Airway o Loss of Breathing o Loss of Circulation o Clinical Death 4-6 minutes; reversible o Biological Death over 4-6 minutes; irreversible II. Rescue breathing (artificial respiration) <ul style="list-style-type: none"> - Breathing air into someone's lungs when natural breathing has stopped or a person cannot breathe on their own. - Percentages of oxygen: <ul style="list-style-type: none"> o The air you take in with every breath is about 21% oxygen, but your body uses only a small part of that. o The air you breathe out of your lungs and into the lungs of the victim is about 16% oxygen, more than enough to help keep someone alive. - Causes of Breathing Emergencies: <ul style="list-style-type: none"> o Airway obstruction o Damage to muscles or bones of the chest o Electric shock o Drowning o Reactions to poisons, drugs, insects, food o Anxiety, excitement (hyperventilation) o Asthma - Signals of Breathing Emergencies: <ul style="list-style-type: none"> o Breathing is unusually slow or rapid o Breaths are unusually deep or shallow o Victim is gasping for breath o Victim is wheezing, gurgling, or making high-pitched noises o Victim's skin is unusually moist o Victim's skin has a flushed, pale, or bluish appearance o Victim feels short of breath o Victim feels dizzy or light-headed o Victim feels pain in chest or tingling in hands or feet - Steps for Rescue Breathing: <ul style="list-style-type: none"> o The emergency number has been called. o If, when you check, the person is not breathing: <ul style="list-style-type: none"> ▪ Open airway (head tilt/chin lift) and pinch nose shut ▪ Give 2 slow breaths ▪ Check for signs of circulation. If a pulse is present, but the person is still not breathing: <ul style="list-style-type: none"> ➤ Give 1 breathe every 5 seconds (12 in a |
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The student will break down and perform clearing an airway obstruction for a conscious adult victim.

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Explain how the heart functions.

Explain terms related to heart disease.

IV. Clearing Airway Obstruction

- If a conscious choking victim becomes unconscious or you cannot get air into the victim (the chest does not rise or fall). After re-tilting the head of the victim and attempting to give 2 slow breaths, you must clear the airway (check the mouth for object).

- First Aid for Clearing Airway Obstruction for an unconscious Adult:
 - o Position shoulders over hands, and perform 30 chest compressions at a rate of 100 times per minute.
 - o After performing chest compressions, check the mouth for an object, if you see one take it out. Do not perform a blind finger sweep.
 - o After checking the mouth, if you do not see an object, give 2 slow breaths.
 - o Continue with this cycle until the object comes out, check for breathing and circulation. If no breathing, continue with rescue breathing, if no breathing and no circulation continue with CPR.

V. Heart

- The Physical Heart
 - o Size of a fist that lies between the lungs in the center of chest, weighs less than a pound.
 - o Muscular organ that beats more than 3 billion times in an average life-time.
 - o Separated into right and left halves:
 - Right side: blood that contains little to no oxygen enters and is pumped to lungs (picks up oxygen) this blood then travels to left side
 - Left side: oxygen rich blood is pumped to all parts of the body.
 - o Heart needs a constant supply of oxygen to behave normally (beating evenly and easily with a steady rhythm).
 - o 60 to 80 beats per minute is the normal adult pulse rate.

- Heart Attack: When one or more of the blood vessels that supply blood to the heart becomes blocked, the heart stops working effectively.

- Cardiac Arrest: The heart stops beating due

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| | <p>to not getting enough oxygen rich blood.</p> <ul style="list-style-type: none"> - <u>Heart Disease</u>: Leading cause of death for adults in the United States. The rate has dropped over 30% due to Americans leading healthier lifestyles. <ul style="list-style-type: none"> o Develops slowly, victims may not be aware of it for years. o Fatty deposits build up on inner walls of arteries, narrowing the arteries, causing less oxygen rich blood to flow to the heart. o Risk Factors for Heart Disease: <ul style="list-style-type: none"> ▪ <i>Uncontrollable</i> (those that cannot be changed) <ul style="list-style-type: none"> ➤ Heredity ➤ Gender (males are at a greater risk) ➤ Age ▪ <i>Controllable</i> (those that can be changed) <ul style="list-style-type: none"> ➤ Smoking ➤ High blood pressure ➤ High blood cholesterol ➤ Obesity ➤ Physical inactivity |
| <p>Summarize the risk factors for heart disease.</p> | |
| <p>Explain signs of symptoms of a heart attack.</p> | <ul style="list-style-type: none"> - Signs and Symptoms of a Heart Attack <ul style="list-style-type: none"> o Persistent pain in the chest o Breathing difficulty o Sweating o Change in pulse rate o Nausea o Skin appearance - Facts on Heart Attack <ul style="list-style-type: none"> o About 1 million people suffer a heart attack each year. o Many lives are lost because people deny they are having a heart attack and delay calling for help. o Recognizing the signals of a heart attack and calling for help (ambulance) before the heart stops are critical elements in saving lives. |
| <p>Apply the steps for caring for a heart attack.</p> | <ul style="list-style-type: none"> - Care for a Heart Attack <ul style="list-style-type: none"> o Recognize the signals of a heart attack o Convince the victim to stop activity and rest. o Help the victim rest comfortably o Try to obtain information about the victim's condition. o Comfort the victim o Call the local emergency number for help. o Assist with medication, if prescribed. o Monitor the victim's condition. o Be prepared to give CPR if the victim's |

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| <p><u>Worksheet:</u> After practicing the eight check steps to checking an unconscious victim, students will complete a "Check the Victim" worksheet By: Jamie Oster PMSD Materials book</p> <p>Partner skill testing of eight check steps using Actar mannequins. (Self Management)</p> <p><u>Overhead:</u> Steps in the Pathway from Life to Death.</p> <p>Brainstorm causes of breathing emergencies and signals of breathing emergencies.</p> <p><u>Overhead:</u> Breathing Emergencies</p> <p><u>Group Activity:</u> Students watch a Rescue 911 #5 video, an adult victim suffering an asthma attack. The victim stops breathing on their own and rescue breathing is performed. The students list the steps for rescue breathing as a group. (Interpersonal Communication and Decision-Making Skills)</p> <p>After completing a heart attack role-play scenario, students will self-check their ability to care for a heart attack victim. Rubric by: Jamie Oster</p> <p>Video: American Red Cross Community CPR: <i>Adult Rescue Breathing</i></p> <p>Partner adult rescue breathing skill test (Interpersonal Communication & Decision-Making)</p> <p><u>Worksheet:</u> Community First Aid & Safety, "Give Rescue Breathing" pp. 48-49.</p> <p>Brainstorm causes of choking (Interpersonal Communication)</p> <p>Community First Aid & Safety, "Give Abdominal Thrusts" p. 45.</p> <p><u>Overheads:</u> Deaths from Choking Common Causes of Choking</p> <p><u>Worksheets:</u> American Red Cross Community CPR,</p> | <p>On the board, students will sequence the steps in the pathway from life to death. In a small group, students will summarize at least five causes of breathing emergencies.</p> <p>Group discussion on the causes and signals of breathing emergencies.</p> <p>Each student will write a brief paragraph describing when to perform adult rescue breathing.</p> <p>Each student will correctly skill test on adult rescue breathing as per AHA Standards.</p> <p>Each student will score proficient on a teacher prepared written exam.</p> <p>In a group discussion, students will identify at least five common causes of choking.</p> <p>In a brief paragraph, each student will explain the difference between partial and complete airway obstruction.</p> <p>Teacher observation of students performing abdominal thrusts for a conscious choking adult as per AHA standards.</p> <p>Teacher observation of students performing the steps for clearing airway obstruction for an unconscious adult as per AHA standards.</p> <p>Each student will write a brief paragraph or draw/color a diagram explaining how blood flows through the heart/body.</p> <p>Each student will match the terms heart attack, cardiac arrest, and heart disease with their correct definition.</p> <p>Each student will create a mind map of the risk factors for heart disease.</p> <p>Teacher observation of students performing the steps for caring for a heart attack victim according to American Red Cross Standards.</p> <p>Students will pair and share the signs and symptoms of a heart attack.</p> <p><i>Each student will write a brief paragraph discussing the relationship between the philosophy of resuscitation and CPR.</i></p> <p>Each student will perform the adult CPR skill test – as</p> |
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| <p>"Conscious Choking Adult."</p> <p>Partner skill testing on the Heimlich Maneuver (Interpersonal Communication & Decision-Making)</p> <p><u>Videos:</u> American Red Cross Community CPR Video: <i>Conscious Choking Adult</i></p> <p><i>Dr. Henry Heimlich on Choking</i></p> <p>Teacher/student demonstrates the steps to clear an airway obstruction for an unconscious adult victim (Decision-Making)</p> <p><u>Activity:</u> Place an empty milk jug against a volunteer's abdomen and perform upward abdominal thrusts. By performing upward abdominal thrusts on the empty milk jug, students will understand the purpose of performing abdominal thrusts on a choking victim. (Self Management)</p> <p><u>Handout:</u> Community First Aid & Safety, "Give Abdominal Thrusts" pp. 54-55</p> <p><u>Video:</u> American Red Cross Community CPR Video: <i>Unconscious Choking Adult</i></p> <p><u>Lecture:</u> The heart and how it works, heart attack, cardiac arrest, and heart disease. (Accessing Information)</p> <p>Community First Aid & Safety, "Preventing Heart Disease" pp. 72-75.</p> <p><u>Worksheets:</u> "Preventing Heart Disease" by: Jamie Oster PMSD Materials Book</p> <p>"Personal Survey" Overheads: Signs and Symptoms of a Heart Attack, Care for a Heart Attack (Analyzing Internal Influences)</p> <p><u>Videos:</u> American Red Cross Community CPR Video: <i>Signs and Symptoms of a Heart Attack</i></p> <p><u>Role play:</u> Caring for a heart attack victim (Analyzing External Influences & Interpersonal</p> | <p>per American Heart Association's Standards.</p> <p>REMIEDIATION:</p> <p>Pair with accelerated students while practicing.</p> <p>Allow more time to practice Allow students to re-take the individual "Check the Victim" skill test</p> <p>Give students a list of the common causes of choking.</p> <p>Have students list the differences between the two types of airway obstructions.</p> <p>Partner work</p> <p>Group work</p> <p>Partner work (review/partner check the steps to perform CPR).</p> <p>Re-test</p> <p>ENRICHMENT:</p> <p>Help those students who are having difficulty skill testing.</p> <p>Demonstrate the steps for checking an unconscious adult victim at an assembly for the entire school.</p> <p>Pair accelerated students with those who are having difficulty.</p> <p>Interview someone in the healthcare profession (i.e. paramedics, nurses, etc.) about the effectiveness of clearing airway obstructions.</p> <p>Write a research paper on the functions of the heart.</p> <p>Create a list of physical activities a person can perform to increase his/her physical activity to decrease the chances of developing heart disease.</p> <p>Take a CPR/AED class with a local ambulance group or Boy Scouts/Girl Scouts.</p> <p>Research the similarities/differences between CPR for pets and humans. Once the research is conducted, share your knowledge with the class.</p> |
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| <p>Communication)</p> <p>Brainstorm reasons why an adult's heart may stop beating (Analyzing External Influences & Interpersonal Communication)</p> <p><u>Video:</u> American Red Cross Community CPR Video: <i>CPR Steps for an Adult</i></p> <p>Teacher/student demonstrations of the steps to perform Adult CPR (Decision-Making & Self-Management)</p> <p>Hand position practice sheet for chest compressions (Self-Management)</p> <p>Partner practice on the steps to perform Adult CPR (Decision-Making & Interpersonal Communication)</p> <p>Mentally rehearse the step to perform Adult CPR (mental imagery/overt behavior) (Decision-Making & Self-Management)</p> <p>Administer the AHA Heartsaver Plus exam</p> <p><i>Teacher directed differentiated instructional projects and activities are ongoing and based on student need.</i></p> <p>RESOURCES:</p> <p><i>Community First Aid & Safety, American Red Cross, Mosby, Baltimore 1993</i></p> <p><i>Instructor's Manual Basic Life Support 2000, American Heart Association</i></p> <p>WEBSITES:</p> <p>http://www.redcross.org/hss</p> <p>http://www.americanheart.org/presenter.jhtml?identifier=1200000 (2006)</p> | |
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