12th Grade HEALTH unit 4 Cardiac Emergencies

Content Area: **Health & PE**
Course(s):
Time Period: **January**
Length: **2 Weeks**
Status: **Published**

Targeted Standards

	Health-enhancing behaviors can contribute to an individual reducing and avoiding health risks.
	Medicines treat or relieve diseases or pain and are prescribed by a physician or accessed over the counter.
	Public health policies are created to influence health promotion and disease prevention and can have global impact.
2.3.12.HCDM.4	Evaluate emerging methods to diagnose and treat diseases and health conditions that are common in young adults in the United States and in other countries (e.g., hepatitis, stroke, heart attacks, cancer,).
2.3.12.HCDM.5	Analyze local, state, and international public health efforts to prevent and control diseases and health conditions (e.g., vaccinations, immunizations, medical exams, gene editing, artificial organ systems, prosthesis).

Rationale & Transfer Goals

This unit is designed to save a person's life from a heart attack. Students will be able to quickly identify signs of heart related emergencies and give treatment until further help arrives. Understanding how the heart and its electrical system works will play a major role in saving a life.

Enduring Understandings - What are the most essential conclusions that students should be guided towards throughout this unit?

The cardiac chain of survival.

Signs and symptoms of heart attacks

How CPR pumps oxygen through the body.

Use of an AED

Essential Questions - What are the questions that will guide critical thinking about the content in this unit? Essential Questions should be thought starters toward the enduring understandings.

What are health risks for your heart?

How can you improve your cardiovascular health?

Why is early CPR and AED use important to saving someone’s life?

Content/Objectives

Content - What students will know

How the hearts' electrical system works.

Signs of a heart attack

CPR; adult-child-infant

AED; adult-child-infant

Unconscious choking victims

Skills - What students will be able to do

Demonstrate basic CPR

Demonstrate effective use of an AED

Instructional Activites

Activities/Strategies - How we teach content and skills

Video: " The Heart and its Electrical System"

Skills practice of CPR

Skills practice of AED

Skills practice unconscious choking.

Evidence (Assessments) - How we know students have learned

Performance

Summative: Dramatization

Students will be graded on performance of CPR scenarios and AED use

Test and Quizzes

Formative: Written Test

Students will be given quizzes and a standard test from the Red Cross Organization

Participation

Summative: Sample Assessment Item

Students will be graded on effective use of practice time on Manikins and participating in class scenarios.

Spiraling for Mastery - Where does this unit spiral back to other units or previous years?

Content or Skill for this Unit

Defining what “emergencies” are.

Identifying victims

Communicating signs and symptoms of emergencies and victims

How and when to give proper care

Value of saving lives

Effective CPR

Spiral Focus from Previous Unit

Team building

Effective communication

Cooperative games

Literacy activities

Instructional Activity

- Health literacy activities

  Group scenarios

  Manikin demonstrations

  Performance tasks on manikin

  Projects on disease and transmission

21st Century Skills - What are the 21st Century Skills that are a part of this unit?

- • 9.4.2.CI.1: Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
- • 9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).
- • 9.4.8.GCA.1: Model how to navigate cultural differences with sensitivity and respect (e.g., 1.5.8.C1a).
- 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).
- • 9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).
- 9.4.5.DC.5: Identify the characteristics of a positive and negative online identity and the lasting implications of online activity.

Interdisciplinary Connections - How does this content impact the following groups

ELA

ELA

NJSLSA.R1. Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

NJSLSA.R7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

RH.9-10.7. Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text, to analyze information presented via different mediums.

RST.9-10.2. Determine the central ideas, themes, or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

RST.9-10.3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.

RST.9-10.7. Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating understanding of the subject under investigation.

- standards supporting written and print communication across all areas of the course

MATH

Math
Creating Equations A -CED
A. Create equations that describe numbers or relationships. 1. Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.

Modeling with Geometry G-MG
A. Apply geometric concepts in modeling situations. 1. Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).

Interpreting Categorical and Quantitative Data S-ID N-ILN
A. Summarize, represent, and interpret data on a single count or measurement variable
1. Represent data with plots on the real number line (dot plots, histograms, and box plots).

Making Inferences and Justifying Conclusions S-IC
B. Make inferences and justify conclusions from sample surveys, experiments, and observational studies

math processes related to fitness and health data, geometry in gameplay, and quantitative representations

Science

Science

HS-LS1-3. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. [Clarification Statement: Examples of investigations could include heart rate response to exercise]

HS-LS2-3. Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.

HS-LS2-8. Evaluate evidence for the role of group behavior on individual and species' chances to survive and reproduce.

- Connections to study of exercise physiology and associated anatomy
- Basic understanding of communicability of diseases in discussion of wellness

Key Resources

Red Cross Organization Participant Book.

- Picture sheet
- Skills cards
- Blankets
- Disposable gloves
- breathing barriers