GEORGIA | PEACH STATE PATHWAYS

Career, Technical, & Agricultural Education

HEALTHCARE SCIENCE

COURSE: Concepts of Emergency Medicine

UNIT: 13.1 Respiratory System

INTRODUCTION

Annotation:

This unit will cover the anatomy, physiology, and pathophysiology of the respiratory system.

Grade(s):

	9th
	10th
X	11th
X	12th

Time:

- Two 50 minute periods

Author:

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Additional Author(s):

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Students with Disabilities:

For students with disabilities, the instructor should refer to the student's IEP to be sure that the accommodations specified are being provided. Instructors should also familiarize themselves with the provisions of Behavior Intervention Plans that may be part of a student's IEP. Frequent consultation with a student's special education instructor will be beneficial in providing appropriate differentiation.

FOCUS STANDARDS

GPS Focus Standards: Please list the standard and elements covered.

HS-CEM-5:

Students will demonstrate knowledge of the different systems of the body and how they relate to patient care.

a. Summarize the importance of the Emergency Medical Services Provider's knowledge of the body's anatomy and physiology in relation to providing competent care and accurate communication to other health care providers.

b. Demonstrate knowledge of the body's anatomy and physiology to provide competent patient care and accurate communication to other health care providers.

GPS Academic Standards:

SAP1: Students will analyze anatomical structures in relationship to their physiological functions.

SAP3: Students will assess the integration and coordination of body functions and their dependence on the endocrine and nervous systems to regulate physiological activities.

ELA11C1: The student demonstrates understanding and control of the rules of the English language, realizing that usage involves the appropriate application of conventions and grammar in both written and spoken formats.

National / Local Standards / Industry / ISTE:

UNDERSTANDINGS & GOALS

Enduring Understandings:

- Students will understand the anatomy and physiology of the respiratory system, common diseases and processes of the respiratory system, how these diseases are treated and how, if possible, each can be prevented.

Essential Questions:

- Why is the respiratory system important?
- What are common disorders and diseases related to the respiratory system?
- How can common disorders of the respiratory system be managed?

Knowledge from this Unit:

- Student can identify structures of the respiratory system.
- Student can explain the function of the respiratory system.
- Student can describe the cause(s), signs/symptoms, and treatment of three common disorders or diseases related to the respiratory system.

Skills from this Unit:

- Student can recognize respiratory distress and describe findings using appropriate medical terminology.
- Student can recognize and treat a basic anxiety attack.

ASSESSMENT(S)

Assessment Method Type: Select one or more of the following. Please consider the type(s) of differentiated instruction you will be using in the classroom.

____ Pre-test
X Objective assessment - multiple-choice, true- false, etc.
__ Quizzes/Tests
__ Unit test
____ Group project
____ Individual project
X Self-assessment - May include practice quizzes, games, simulations, checklists, etc.
__ Self-check rubrics
__ Self-check during writing/planning process
__ Journal reflections on concepts, personal experiences and impact on one's life
__ Reflect on evaluations of work from teachers, business partners, and competition judges
__ Academic prompts
__ Practice quizzes/tests
____ Subjective assessment/Informal observations
__ Essay tests
__ Observe students working with partners
__ Observe students role playing
____ Peer-assessment
__ Peer editing & commentary of products/projects/presentations using rubrics
__ Peer editing and/or critiquing
____ Dialogue and Discussion
__ Student/teacher conferences
__ Partner and small group discussions
__ Whole group discussions
__ Interaction with/feedback from community members/speakers and business partners
____ Constructed Responses
__ Chart good reading/writing/listening/speaking habits
__ Application of skills to real-life situations/scenarios
____ Post-test

Assessment(s) Title:

- Respiratory System Unit Exam

Assessment(s) Description/Directions:

- Respiratory System Unit Exam: administer exam upon completion of unit.

Attachments for Assessment(s): Please list.

- Respiratory System Unit Exam

LEARNING EXPERIENCES

Instructional planning: Include lessons, activities and other learning experiences in this section with a brief description of the activities to ensure student acquisition of the knowledge and skills addressed in the standards. Complete the sequence of instruction for each lesson/task in the unit.

Sequence of Instruction

1. Identify the Standards. Standards should be posted in the classroom for each lesson.

HS-CEM-5. Students will demonstrate knowledge of the different systems of the body and how they relate to patient care.

SAP1. Students will analyze anatomical structures in relationship to their physiological functions.

SAP3. Students will assess the integration and coordination of body functions and their dependence on the endocrine and nervous systems to regulate physiological activities.

ELA11C1. The student demonstrates understanding and control of the rules of the English language, realizing that usage involves the appropriate application of conventions and grammar in both written and spoken formats.

2. Review Essential Questions.

- Why is the respiratory system important?
- What are common disorders and diseases related to the respiratory system?
- How can common disorders of the respiratory system be managed?

3. Identify and review the unit vocabulary.

Pre-assign unit by having students read chapter in text and define terms. Have students take self-quizzes on http://msjensen.cehd.umn.edu/webanatomy/respiratory/default.html

Alveoli	Asthma	Bronchi	Bronchioles	Bronchitis
Chronic obstructive pulmonary disease (COPD)				Cilia
Emphysema	Epiglottis	Expiration	Inspiration	Laryngitis
Larynx	Lung cancer	Nasal cavities	nasal septum	Pharynx
Pleurisy	Pneumonia	Rhinitis	Sinuses	Sinusitis
Trachea	Tuberculosis (TB)		Ventilation	Internal respiration
External respiration				

4. Assessment Activity. LESSON ONE/TWO/THREE

1. Warm-up Activity: Ask students how much oxygen they think they are currently breathing. How much they are exhaling? Discuss why the answers to these questions explain how mouth-to-mouth (or mask) respirations are effective. (For days two and three, briefly recap the highlights of the previous day's presentation).

2. Review anatomy and physiology of respiratory system using websites such as the Virtual Autopsy http://www.le.ac.uk/pa/teach/va/anatomy/case2/frmst2.html or add this information to the slide show.

3. Show slideshow presentation on respiratory system and have students take notes. Break up lecture with brief activities at any point such as:

- During notes on asthma, have students attempt to breathe through a drinking straw.
- Have a breath-holding contest with prize for student who can hold breath longest (note: have students plug noses and tilt heads up so you can watch their mouths to see if they are cheating!)

- Have a contest to blow out a candle from increasing distances (if candle not allowed in school, can modify--blow a sheet of paper off a table, for example).
- During notes on pleurisy, have students attempt to slide two sheets of plastic wrap together. Then, apply petroleum jelly between sheets. Discuss difference.

4. Wrap-up Activity: Call out a sign or symptom of a respiratory disorder and have students "diagnose" the disorder (anxiety/asthma/bronchitis/emphysema).

Attachments for Learning Experiences: Respiratory System Slideshow Presentation

Attachments for Learning Experiences:

Notes & Reflections:

- Invite respiratory therapist to speak to class.
- Demonstrate insertion of an OPA (oropharyngeal) and/or NPA (nasopharyngeal) if airway mannequin available.

CULMINATING PERFORMANCE TASK (Optional)

Culminating Unit Performance Task Title: Ethical and Legal Responsibilites

Culminating Unit Performance Task Description/Directions/Differentiated

Attachments for Culminating Performance Task

UNIT RESOURCES

Web Resources:

- http://msjensen.cehd.umn.edu/webanatomy/respiratory/default.html Interactive website self-assessment of respiratory system structures.
- Refer to respiratory system information from Applications of Healthcare Science course for additional resources.

Attachment(s):

Materials & Equipment:

What 21st Century Technology was used in this unit:

X	Slide Show Software		Graphing Software		Audio File(s)
	Interactive Whiteboard		Calculator		Graphic Organizer
	Student Response System		Desktop Publishing		Image File(s)
	Web Design Software		Blog		Video
	Animation Software		Wiki		Electronic Game or Puzzle Maker
	Email	X	Website		