



HEALTHCARE SCIENCE

COURSE: 25.562 Concepts of Emergency Medicine

UNIT: 5.1 Integumentary System



INTRODUCTION

Annotation:

This unit will cover the anatomy, physiology, and pathophysiology of the human integumentary system. Students learn basic burn management skills.

Grade(s):

<input type="checkbox"/>	9 th
<input type="checkbox"/>	10 th
<input checked="" type="checkbox"/>	11 th
<input checked="" type="checkbox"/>	12 th

Time: Two 50 minute periods

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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.

SAP2. Students will analyze the interdependence of the integumentary, skeletal, and muscular systems as these relate to the protection, support and movement of the human body.

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.

ELAALRC3. The student acquires new vocabulary in each content area and uses it correctly.

ELA11SLV. The student participates in student-to-teacher, student-to-student, and group verbal interaction.

ELA11W2. The student demonstrates competence in a variety of genres

National / Local Standards / Industry / ISTE:



UNDERSTANDINGS & GOALS

Enduring Understandings:

Students will understand the anatomy and physiology of the integumentary system, common diseases of the integumentary system, how these diseases are treated and how, if possible, each can be prevented. Additionally, students will understand the three degrees of burns and how each can best be treated.

Essential Questions:

- What are the primary structures and functions of the integumentary system?
- What are common disorders related to the integumentary system?
- How can humans protect and care for their skin?
- How can I properly treat different types of burns?

Knowledge from this Unit:

- Student can identify structures of the integumentary system.
- Student can explain the functions of the integumentary system.
- Student can describe the cause(s), signs/symptoms, and treatment of three disorders or diseases related to the integumentary system.
- Student can describe three degrees of burns and the proper emergency management of each.

Skills from this Unit:

- Student can demonstrate technique to treat different types of burns.
- Student can use proper medical terminology to communicate information about patient's condition and treatment to other health care providers.



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
- ☒ Objective assessment - multiple-choice, true- false, etc.
 - ☐ Quizzes/Tests
 - ☒ Unit test
- ☐ Group project
- ☐ Individual project
- ☐ 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:

- Integumentary System unit exam

Assessment(s) Description/Directions:

- Integumentary System unit exam: administer upon completion of unit.

Attachments for Assessment(s): Please list.

- Integumentary 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.

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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.

ELAALRC3. The student acquires new vocabulary in each content area and uses it correctly.

ELA11SLV. The student participates in student-to-teacher, student-to-student, and group verbal interaction.

ELA11W2. The student demonstrates competence in a variety of genres

2. Review Essential Questions.

- What are the primary structures and functions of the integumentary system?
- What are common disorders related to the integumentary system?
- How can humans protect and care for their skin?
- How can I properly treat different types of burns?

3. Identify and review the unit vocabulary.

Pre-assign unit by having students read unit chapter and define terms. Take self-quizzes at <http://msjensen.cehd.umn.edu/webanatomy/integumentary/default.html> and learn parts of skin listed in vocabulary below, students may use website to help them learn the structures, there is also a printable diagram at this site students can label

Cyanosis	dermis	dilate	epidermis	erythema	jaundice
Macules	papules	pustules	sebaceous glands		blisters
sudoriferous glands		ulcer	vesicles	wheals	

4. Assessment Activity.

Lesson One

1. Warm-up Activity: Ask students if they have ever suffered a burn. What caused it? Could it have been prevented? What was the treatment?
2. Show slideshow presentation: Integumentary System, slides 1 - 35. Have students take notes.
3. Wrap-Up activity: Brainstorm how students protect themselves from the sun. Write responses on board. Discuss why skin protection is important.

Lesson Two

1. Warm-up Activity: review main points of slideshow from day one.

2. Break students into groups of 3-4. Have students create a poem, rap, or song including key words (cyanosis, erythema, jaundice, macules, papules, pustules, ulcer, vesicles, wheals). Have students perform songs for class.
3. Finish slideshow presentation on burns.
4. Wrap-up Activity: brainstorm ways to prevent burns in the home.

Attachments for Learning Experiences: Please list.

- Integumentary System Slideshow

Notes & Reflections: May include notes to the teacher, pre-requisite knowledge & skills, suggestions, etc.

- Suggested reading: A Random Act by Cindi Broaddus.
- Invite dermatologist to speak to class.



CULMINATING PERFORMANCE TASK (Optional)

Culminating Unit Performance Task Title:

Culminating Unit Performance Task Description/Directions/Differentiated

Attachments for Culminating Performance Task



UNIT RESOURCES

Web Resources:

<http://msjensen.cehd.umn.edu/webanatomy/integumentary/default.html>

Refer to integumentary system information from Applications of Healthcare Science course for additional resources.

Attachment(s): Supplemental files not listed in assessment, learning experiences, and performance task.

Materials & Equipment:

What 21st Century Technology was used in this unit:

<input checked="" type="checkbox"/>	Slide Show Software	<input type="checkbox"/>	Graphing Software	<input type="checkbox"/>	Audio File(s)
<input type="checkbox"/>	Interactive Whiteboard	<input type="checkbox"/>	Calculator	<input type="checkbox"/>	Graphic Organizer
<input type="checkbox"/>	Student Response System	<input type="checkbox"/>	Desktop Publishing	<input type="checkbox"/>	Image File(s)
<input type="checkbox"/>	Web Design Software	<input type="checkbox"/>	Blog	<input type="checkbox"/>	Video
<input type="checkbox"/>	Animation Software	<input type="checkbox"/>	Wiki	<input type="checkbox"/>	Electronic Game or Puzzle Maker
<input type="checkbox"/>	Email	<input type="checkbox"/>	Website		