



HEALTHCARE SCIENCE

COURSE: 25.552 Applications of Therapeutic Services

UNIT: 13.1 Digestive System



INTRODUCTION

Annotation:

In this unit students will analyze the anatomy, physiology and basic pathophysiology of the digestive system and apply knowledge in performance of evaluating, monitoring, and treatment of client(s) and/or simulations. As a performance task, students will develop a brochure about a digestive system disorder and present to the class. Students will learn new vocabulary related to the digestive system. Students will have the opportunity to visit interactive websites for the digest system.

Grade(s):

	9 th
X	10 th
X	11 th
X	12 th

Time:

- 4 -50 minute periods
- Day 1: Introduce lesson, vocabulary, multimedia presentation
- Day 2: Activities
- Day 3: Management of patients with abdominal complications
- Day 4: Finish activities, review test material

Author:

- Tiffany Lacey, RN

Additional Author(s):

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:

HS-ATS-8:

The student will analyze the anatomy, physiology and basic pathophysiology of each of the body's systems and apply knowledge in performance of evaluating, monitoring, and treatment of client(s) and/or simulations.

- A.** Analyze anatomical structures in relationship to their physiological functions.
- C.** Assess the integration and coordination of body functions and their dependence on the endocrine and nervous systems to regulate physiological activities.
- D.** Analyze the interdependence of the body's systems as related to wellness, disease, and disorders.
- F.** Discuss the etiology of two common diseases in each body system and how to treat and/or prevent them.

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.

SAP4: Students will analyze the physical, chemical, and biological properties of process systems as these relate to transportation, absorption and excretion, including the cardiovascular, respiratory, digestive, excretory and immune systems.

National / Local Standards / Industry / ISTE:



UNDERSTANDINGS & GOALS

Enduring Understandings:

- Describe the location and function of the organs of the digestive system
- List specific diagnostic tests associated with disorders of the digestive system
- Trace food from the beginning of the digestive process to the end
- Describe common disorders of the digestive system
- Describe procedures/actions related to the care of patients with disorders of the digestive system

Essential Questions:

- How can each body system be independent among itself but still rely on other body systems to function?
- How are disease processes within each of those systems treated and/or prevented?
- How is the respiratory system interdependent on other body systems?

Knowledge from this Unit:

- The components of the digestive system
- The function of each digestive system structure
- The physiological and chemical aspects of digestion
- How the digestive system depends on other body systems

Skills from this Unit:

- Be able to locate organs of the digestive system and describe their function.
- Students will also be able to describe procedures and actions related to the digestive system.

ASSESSMENT(S)

Assessment Method Type:

- ☐ 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:

Digestive System Graphic Organization

Assessment(s) Description/Directions:

Graphic Organizer can be used as a quiz by having student complete. Accessory information can be left blank as well. Quiz can be oral. Graphic organized can be enlarged to poster size. Students can be placed in small groups to practice describing the process of digestion in preparation for the oval or written quiz. Students can be asked to describe the digestion of a particular food or your can use index cards with the different organs on them and have students tell you or write what goes on In that structure.

Attachments for Assessment(s):



LEARNING EXPERIENCES

Sequence of Instruction

1. Identify the Standards. Standards should be posted in the classroom for each lesson.
2. Review Essential Questions.
3. Identify and review the unit vocabulary.
4. Assessment Activity.

1. Acquisition: Assess the student's current knowledge of the GI system
 - a. KWL CHART – DIGESTIVE SYSTEM [KWL - Digestive System](#)
2. VOCABULARY: INTRODUCE THE STUDENT TO VOCABULARY ASSOCIATED WITH THE DIGESTIVE SYSTEM
 - a. DIGESTIVE SYSTEM WORD WALL [DIGESTIVE SYSTEM VOCABULARY](#)
3. GIVE DIGESTIVE SYSTEM BROCHURE ASSIGNMENT AND RUBRIC
4. LECTURE

- a. IDENTIFY THE STRUCTURE AND FUNCTION OF THE DIGESTIVE SYSTEM

- MOUTH
- STOMACH
- INTESTINES
- APPENDIX
- LIVER AND GALLBLADDER
- PANCREAS

ACTIVITIES: USE YARN TO MEASURE OUT THE ESOPHAGUS, STOMACH, AND INTESTINES. [HOW LONG IS THE DIGESTIVE SYSTEM](#)

- MULTIMEDIA: [HTTP://HEALTH.DISCOVERY.COM/CENTERS/DIGESTIVE/MACHINE.HTML](http://health.discovery.com/centers/digestive/machine.html)
[DIGESTIVE SYSTEM PRESENTATION](#)

- DIAGRAM: LABEL THE DIFFERENT STRUCTURES OF THE DIGESTIVE SYSTEM

- b. DISCUSS COMMON CONDITIONS RELATED TO THE DIGESTIVE SYSTEM

- MALIGNANCY
- ULCERS
- HERNIAS
- GALLBLADDER CONDITIONS
- DIARRHEA
- CONSTIPATION
- ABDOMINAL DISTENTION

C. MANAGEMENT OF PATIENTS WITH GI COMPLICATIONS/SPECIAL DIAGNOSTIC TESTS

OBSERVATIONS & BASIC MANAGEMENT

- NG TUBE
- FEEDING TUBE
- COLLECTING STOOL SPECIMENS
- ENEMAS
- RECTAL SUPPOSITORIES
- PROTOSCOPY
- SIGMOIDOSCOPY
- GASTROSCOPY
- GALLBLADDER SERIES
- ULTRASONOGRAPHY

D. DIGESTIVE DISORDER ASSIGNMENT – STUDENTS WILL CREATE A BROCHURE ABOUT ONE DISORDER OF THE DIGESTIVE SYSTEM. * SEE UNIT PERFORMANCE TASK

Attachments for Learning Experiences:

Notes & Reflections:

- You could also incorporate topics such as nutrition, hospital diets, and intake and output
- You could have students listen to and describe bowel sounds if time permit



CULMINATING PERFORMANCE TASK (Optional)

Culminating Unit Performance Task Title:

Digestive System Disorder

Culminating Unit Performance Task Description/Directions/Differentiated

Disorders of the Digestive System Assignment

Students are to create a brochure about a digestive system disorder

Attachments for Culminating Performance Task

Rubrics, Graphic Organizers\Brochure Rubric



UNIT RESOURCES

Web Resources:

- [HTTP://WWW.ENEMABAG.COM/ENEMA_VIDEOS.HTML](http://www.enemabag.com/enema_videos.html)
 - DISCOVERY EDUCATION – [WWW.UNITEDSTREAMING.COM](http://www.unitedstreaming.com) – LOG IN, AND THEN ENTER DIGESTIVE SYSTEM IN THE SEARCH BOX (THERE ARE A COUPLE OF VIDEOS TO CHOOSE FROM)
- [HTTP://KIDSHEALTH.ORG/TEEN/YOUR_BODY/BODY_BASICS/DIGESTIVE_SYSTEM.HTML](http://kidshealth.org/teen/your_body/body_basics/digestive_system.html) -
- BASIC REVIEW OF THE DIGESTIVE SYSTEM
- [HTTP://YUCKY.DISCOVERY.COM/NOFLASH/BODY/PG000126.HTML](http://yucky.discovery.com/noflash/body/pg000126.html) - INTERESTING FACTS
- ABOUT THE DIGESTIVE SYSTEM
- [HTTP://WWW.MEDTROPOLIS.COM/VBODY.ASP](http://www.medtropolis.com/vbody.asp) - VIRTUAL TOUR OF THE DIGESTIVE
- SYSTEM
- [HTTP://WWWINNERBODY.COM/ANIM/MOUTH.HTML](http://www.innerbody.com/anim/mouth.html) - ANIMATION OF SWALLOWING HOW THE EPIGLOTTIS WORKS

Attachment(s):

Materials & Equipment:

What 21st Century Technology was used in this unit:

<input 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 checked="" type="checkbox"/>	Website		