



HEALTHCARE SCIENCE

COURSE: 25.552 Applications of Therapeutic Services

UNIT: 15.1 Nervous System



INTRODUCTION

Annotation:

In this unit students will analyze the anatomical structure of the nervous system and learn how it regulates and controls other body systems; disease processes of the nervous system and goals of therapy/rehab.

Grade(s):

X	9 th
X	10 th
X	11 th
X	12 th

Time:

Five 50 minute periods

Author:

Libbye Sills RN, MEd

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.

- 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.
- e. Discuss the goals of therapy and care rehabilitation.
- f. Discuss the etiology of two common diseases in each body system and how to treat and/or prevent them.

GPS Academic Standards:

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

National / Local Standards / Industry / ISTE:



UNDERSTANDINGS & GOALS

Enduring Understandings:

- Function of the nervous system
- Differences between central and peripheral nervous system
- Parts of the brain
- Cranial nerves and their importance to body function
- Disorders/diseases of the nervous system

Essential Questions:

- Why is the nervous system so important?
- How many nerves do we have in our body?
- Can I function if my nerves are damaged?

Knowledge from this Unit:

- The main divisions of the central nervous system.
- The parts of the brain
- The structure of the brain and spinal cord
- Functions of the central and peripheral nervous system
- Common disorders/diseases of the nervous system

Skills from this Unit:

- Identify the parts of the brain and spinal cord
- Differentiate between central and peripheral nervous system function
- Identify diseases and disorders of the nervous system
- Identify cranial nerves and the function of each



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:

Nervous System Unit Exam

Assessment(s) Description/Directions:

Nervous System crossword review

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.**
 - a) Discuss structure and function of the nervous system.
 - b) Discuss the relationship of the nervous system to other systems as it relates to wellness, disease, and disorders.
 - c) Discuss the goals of therapy and care rehabilitation for each of the body's systems.
 - d) Discuss the etiology of two common diseases in each body system and how to treat and/or prevent them with

Students Activities:

- Define key terms
- Complete assigned worksheets
- Complete assigned color plate
- Lecture notes
- Research on cranial nerves

Attachments for Learning Experiences:

[Nervous System multi-media lecture presentation](#)

Notes & Reflections:



CULMINATING PERFORMANCE TASK (Optional)

Culminating Unit Performance Task Title: [Cranial Nerve book](#)

Culminating Unit Performance Task Description/Directions/Differentiated:

Attachments for Culminating Performance Task:

[Cranial Nerve book rubric](#)



UNIT RESOURCES

Web Resources:

- <http://faculty.washington.edu/chudler/cranial.html> (gives an overview of the nervous system and goes into specifics on the cranial nerves)
- <http://www.murrayschools.org/MHS/chartman/anatomy/resources.html> great interactive anatomy website

Attachment(s):

Materials & Equipment:

- Textbook
- Multimedia Presentation
- Worksheets
- Color plates
- Cranial nerve worksheet
- Construction paper/glue/scissors
- Review sheets

What 21st Century Technology was used in this unit:

<input checked="" type="checkbox"/>	Slide Show Software
<input type="checkbox"/>	Interactive Whiteboard
<input type="checkbox"/>	Student Response System
<input type="checkbox"/>	Web Design Software
<input type="checkbox"/>	Animation Software
<input type="checkbox"/>	Email

<input type="checkbox"/>	Graphing Software
<input type="checkbox"/>	Calculator
<input type="checkbox"/>	Desktop Publishing
<input type="checkbox"/>	Blog
<input type="checkbox"/>	Wiki
<input checked="" type="checkbox"/>	Website

<input type="checkbox"/>	Audio File(s)
<input type="checkbox"/>	Graphic Organizer
<input type="checkbox"/>	Image File(s)
<input type="checkbox"/>	Video
<input type="checkbox"/>	Electronic Game or Puzzle Maker