



## HEALTHCARE SCIENCE

**COURSE:** 25.552 Applications of Therapeutic Services

**UNIT:** 5.1 Vital Signs



### INTRODUCTION

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**Annotation:**

In this unit students will perform pre and post procedures actions accurately, and also recognize the factors that affect vital signs. The students will also demonstrate skills accurately on equipment used to monitor vital signs, record and report vital signs accurately and use temperature conversion formulas to change temperatures to Fahrenheit and Celsius scales.

**Grade(s):**

	9 <sup>th</sup>
X	10 <sup>th</sup>
X	11 <sup>th</sup>
X	12 <sup>th</sup>

**Time:**

Ten 50 minute periods

**Author:**

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**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

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## **GPS Focus Standards:**

### **HS-ATS-9:**

**The student will demonstrate the process for basic assessment (i.e. vital signs, height, weight, etc...), monitoring, reporting and recording patient/client's health status.**

- a. Consistently perform all "beginning and ending" procedures utilized in a clinical setting (i.e. wash your hands, gather equipment, provide for privacy, etc.)
- b. Evaluate factors that may affect temperature, pulse, respirations, blood pressure, height and weight including normal and abnormal values.
- c. Demonstrate the ability to utilize and accurately read manual and electronic equipment to measure vital signs, height and weight using aseptic technique as well as use other assessment instruments and equipment according to manufacturer's guidelines and accepted safety practices.
- d. Accurately use manual and electronic equipment to measure vital signs, height and weight.
- e. Report and record temperature, pulse, respirations, blood pressure, height and weight manually on graphic/flow sheets and/or electronically on mobile chart (when available) within designated time frame
- f. Apply mathematical concepts and perform mathematical calculations appropriate to clinical expectations and/or work-based learning site.

## **GPS Academic Standards:**

**MM2P4:** Students will make connections among mathematical ideas and to other disciplines.

**ELA10LSV1:** The student participates in student-to-teacher, student-to-student, and group verbal interactions.

## **National / Local Standards / Industry / ISTE:**



# UNDERSTANDINGS & GOALS

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## Enduring Understandings:

- Basic assessment procedures including blood pressure, pulse, respirations, temperature, and height/weight
- The use of manual and electronic equipment in measuring basic assessment procedures
- Basic mathematical conversion related to height, weight and body temperature
- How to properly graph basic assessment measurements
- The necessity in performing standard “beginning and ending” procedures with each skill performance

## Essential Questions:

- What are basic assessment procedures?
- What are factors that may affect vital signs?

## Knowledge from this Unit:

- How to assess for basic vital signs
- How to use manual and electronic equipment for monitoring basic assessment procedures
- Normal range parameters for blood pressure, temperature, pulse and respirations
- How to convert  $F^{\circ} \leftrightarrow C^{\circ}$
- When standard equipment use is contraindicated

## Skills from this Unit:

- Graph vital sign results on graphic/flow sheet or electronically on mobile charts within facility time frame
- Identify factors that influence changes in vital signs
- Select proper equipment size (i.e. blood pressure cuff)
- Accurately read aneroid blood pressure gauge
- Demonstrate “beginning and ending” procedures with each skill assessment
- Accurately convert  $F^{\circ} \leftrightarrow C^{\circ}$



# ASSESSMENT(S)

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## 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:

Vital Signs Test

## Assessment(s) Description/Directions:

## Attachments for Assessment(s):



# LEARNING EXPERIENCES

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## Sequence of Instruction

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

HS-ATS-9: The student will demonstrate the process for basic assessment (i.e. vital signs, height, weight, etc...), monitoring, reporting and recording patient/client's health status.

### 2. Review Essential Questions.

- What are basic assessment procedures?
- What are factors that may affect vital signs?

### 3. Identify and review the unit vocabulary.

### 4. Assessment Activity.

- a) Lecture outline Temp
- b) Have students take notes during the lecture
- c) Present the difference instruments used to measure temperature
- d) Demonstrate Temp taking
- e) Practice Temp taking
- f) Temp Test
- g) Pulse Outline
- h) Pulse Worksheet
- i) Multimedia Pulse Presentation
- j) Demonstrate Pulse Taking
- k) Pulse Test
- l) Respiration Outline / Lecture
- m) Respiration Worksheet
- n) Demonstrate Respiration counting
- o) Student Practice
- p) Respiration Test
- q) Blood Pressure Worksheet – using classroom textbook and or outline lecture
- r) Web Quest for Blood Pressure – students will develop a brochure about B/P
- s) Class Discussion using the brochures
- t) Blood Pressure Test

- u) Crossword VS
- v) Final Skill Check Off
- w) VS TEST

**Attachments for Learning Experiences:**

**Notes & Reflections:**

All information and or handouts may be altered



## **CULMINATING PERFORMANCE TASK** (Optional)

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**Culminating Unit Performance Task Title:**

- Demonstrate measuring of blood pressure
- Demonstrate measuring of radial pulse
- Demonstrate measuring of temperature (oral and aural)
- Demonstrate measuring of respirations

**Culminating Unit Performance Task Description/Directions/Differentiated Instruction:**

**Attachments for Culminating Performance Task:**

- Vital Signs Recording Sheet
- Performance Skill Check Off Sheets for T. P. R. & B/P in one session
- Performance Pulse Check Off
- Performance Apical Pulse Check Off



# UNIT RESOURCES

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**Web Resources:**

**Attachment(s):**

**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 checked="" type="checkbox"/>	Website		