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Emergency and Clinical Care



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"GOOD TO GREAT"

Revised: 8/17/21

Emergency and Clinical Care Grade 12

Course Description: Emergency and Clinical Care is a course that describes how to respond to emergencies before medical help arrives. The course is designed to give the student the knowledge of how to recognize and respond to an emergency. The intent of the course is to help the student feel more confident in his/her ability to act appropriately in the event of an emergency. Students are prepared to 1) obtain a patient's medical history, 2) take and record vital signs relative to medical/dental treatment, and 3) acquire cardiopulmonary resuscitation certification.

Scope and Sequence

Timeline	Concepts
<p>Marking Period 1 (15 class periods; 41 minutes per period)</p> <p>(20 class periods; 41 minutes per period)</p> <p>(20 class periods; 41 minutes per period)</p>	<p>Unit 1: Introduction, Action and Assessment: Action in an Emergency</p> <ul style="list-style-type: none"> ● Introduction to Emergency Care and Emergency Service Agencies ● Finding out What's Wrong <p>Unit 2: CPR, AED and Shock</p> <ul style="list-style-type: none"> ● Cardiopulmonary resuscitation ● Automated External Defibrillation ● Shock <p>Unit 3: Bleeding, wounds and burns</p> <ul style="list-style-type: none"> ● Bleeding ● Wounds ● Burns
<p>Marking Period 2 (15 class periods; 41 minutes per period)</p> <p>(15 class periods; 41 minutes per period)</p> <p>(15 class periods; 41 minutes per period)</p>	<p>Unit 4: Injuries</p> <ul style="list-style-type: none"> ● Head and Spinal Injuries ● Chest, Abdominal and Pelvic Injuries ● Bone, Joint, and Muscle Injuries ● Extremity Injuries <p>Unit 5: Sudden Illness and Poisons</p> <ul style="list-style-type: none"> ● Sudden Illnesses ● Poisoning and Misuse of Substances ● Bites and Stings <p>Unit 6: Exposure and Rescue</p> <ul style="list-style-type: none"> ● Cold-Related Emergencies ● Heat-Related Emergencies ● Rescuing and Moving Victims ● Mental Illness and Abuse

Universal Instructional Strategies Used in All Units of this Course

Activities: Including G/T, SE, and ELL Differentiation

Multi-Tiered System of Supports/ Differentiation and UDLG=Universal Design for Learning Guide:

Special education students:

Adhere to all modifications and health concerns stated in each Individualized Educational Plan (IEP).

D-1: Provide clear and concise instructions. Provide consistency of structure. Provide fair and challenging assessments. Provide scaffolding of assignments to encourage engagement of all levels.

UDLG 2.1 Clarify vocabulary and symbols

D-2: Provide additional time for the completion of tasks. Allow written work to include phrases or short sentences. Encourage on task behavior. Read directions to students.

Give students a MENU option, allowing students to pick assignments from different levels based on difficulty.

UDLG 5-Provide options for expression and communication.

D-3: Modify Unit content to meet student ability. Provide pictorial or graphic representation on the content area.

Use the NEWSELA software, which can revise the reading Lexile level to meet students at current reading level.

Accommodating Instructional Strategies, Reading Aloud, Graphic Organizers, Reading Study Guides, one-on-one instruction, class website (Google Classroom), Handouts, Definition List, Syllabus, Large Print, Outlines.

Utilize Snap-n-Read and Co-writer.

D-4: Reduce the number of questions that need to be answered on assignments and tests.

D-5: Provide one-step commands when applicable. Allow students to answer orally when applicable.

D-7: Use positive reinforcement for work completed.

English Language Learners (ELL) students:

Use the Britannica launch pack software; give students the option to change the language of the article to the student's native language for most articles.

D-ESL-1. Provide students with translations of key terms prior to presenting each chapter. Encourage student use of dictionaries.

Snap and Read Google extension addition. It will be read to the student in the language selected.

D-ESL-2. Allow for longer pauses when asking questions and encourage students to restate what was said in their own words.

Vocabulary Spelling City word banks.

Use visuals whenever possible to support classroom instruction and classroom activities.

UDLG 5-Provide options for expression and communication.

D-6: Provide flexible groupings based on student abilities and languages spoken.

Teacher modeling and written instruction for every assignment.

UDLG 2.4-Promote understanding across languages.

At risk of failure students:

Give students a MENU option, allowing students to pick activities based on interests that address the objectives and standards of the unit.

UDLG 5-Provide options for expression and communication.

Modified Instructional Strategies, Reading Alouds, Graphic Organizers, Reading Study Guides, small learning group instruction, class website (Google Classroom), Syllabus, inclusion of more visuals and films, Field Trips, Google Expeditions, Peer Support, one-on-one instruction.

D-SLD-1. Encourage students to maintain a daily log that describes their academic performance, what activities they worked on in class.

D-SLD-2. Provide students with structured questions that they will be successful in answering.

Constant parental contact and mandatory tutoring appointments.

Academic contracts.

UDLG 7.3-Minimize threats and distractions

Gifted and Talented students:

Modified Instructional Strategies, Socratic Seminar, Group discussion, Think-Pair-Share, Individual assignments graded on a more rigorous rubric, Multimedia Projects, working with more primary source documents and completing Case Studies.

Student led classroom instruction and Project Based Learning.

UDLG 8.2-Vary demands and resources to optimize challenge

UDLG 9.4-Develop self-assessment and reflection.

Students with a 504:

Adhere to all modifications and health concerns stated in 504 plans. Then assess the academics of the student to implement the necessary modifications as described in this document.

Utilize Snap-n-Read and Co-writer.

Syllabus

Teacher creates and distributes an overview of the course to students and parents at the beginning of the course.

Student-Self Assessment: Bio-Poem

Socratic seminar/group classroom discussion:

Divide the class into groups of three or four, and instruct each on the parameters of their assignment.

Games: Quizlet

Games used to reinforce key medical terms and also serve as study guides.

Individual Contracts

The teacher gives each student a list of tasks to complete that are based on their ability level. As students work to complete all tasks, they also work with other students who also need remediation on the same skill or concept.

Video

Video clips can be used to enhance learning of the topic area.

Homework and Practice

Homework and Practice will be assigned to give students extra practice with skills or concepts that have already been presented or demonstrated. Typical Homework and Practice will entail reading the chapter and creating an outline or answering the objectives at the beginning of chapter.

Summarizing and Note Taking

Student summarizes information presented by teacher or classmates.

Silent reading, Read Aloud, Jigsaw or Read and Respond

Independent Study

Students are given the opportunity to investigate a project independently with guidance and support from the teacher.

Note booking/Journaling writing assignments in Google Classroom/Reinforcing Efforts

Students keep a journal that allows them to reflect on the content they are learning throughout the unit. Students make connections to what they have learned, set goals, and reflect on what they have learned. Students may also ask questions they still have about the content. Teacher to reflect bi-weekly in student's journals, providing positive recognition and answer questions and concerns.

Exit Ticket: Journal Entry: 3-2-1

Students will write three key terms learned, two ideas they'd like to learn about, and one mastered skill.

Free Write and Share

Students write in response to a stimulus (topic or question oriented), then share their writing with the class.

Lecture: 5 + 1

Teacher transmits information with the use of audio visuals for five minutes; students summarize and reflect on information for one minute.

Direct Instruction, Lecture

Accountable talk

Word Wall

Reciprocal teaching or peer teaching and collaboration

Role play/simulations/hands on learning and quest speakers

ARES: Model, practice and perform skills learned on ARES manikin, vital signs

Anatamage Table-Practice knowledge of human diseases

Conferencing one-on-one with student at least once per making period

Reinforcing effort and targeted feedback

Effective Questioning

QFT-Question Formulation Technique or Free Write and Share:

Provide students with a stimulus, topic or assignment. Ask them to write down as many questions as possible without discussion. Share, Reflect

Student Goal Setting / Behavior Change Portfolio

	<p><u>Student Organization Participation</u> Student organizations (career and technical) can be an integral component of a health program. A student organization is an excellent vehicle for providing leadership development and technical reinforcement for this instructional program content. Health Occupations Students of America (HOSA) is the official recognized organization for those enrolled in the Rutgers, SHRP health science courses of study.</p>
<p>Universal Learning Activities Used in All Units:</p>	<p><u>Simulations/Hands-on Learning/Identifying similarities and differences: Anatomage Table:</u> Independent work or in groups of two, the student will perform an assignment for the Simulations-Anatomage Table which can consist of:</p> <ul style="list-style-type: none"> -View one of the 600 clinical cases and 3D image as per student interest or class topic of the week. Review medical notes. Record medical terms that are not understood and look up definitions. Record summary of the patient, pathology results and diagnosis. -Quiz mode- test knowledge -Full Annotations-determine body system as per student interest or class topic of the week; display section, determine name of a part, press on part to determine if correct. -Interactive cutting and segmentation-using tools practice dissection and view internal structures of body part of choice or body part related to class discussions of the week. -View gross anatomy of one of the four cadavers of student's choice. Record observations -View regional anatomy of the student's choice. Record observations. <p>The above assignment will be followed up with a log/journal entry in google classroom.</p> <p><u>Reinforcing Efforts</u> Students keep a journal that allows them to reflect on the content they are learning throughout the unit. Students make connections to what they have learned, set goals, and reflect on what they have learned. Students may also ask questions they still have about the content. Teacher to reflect bi-monthly in student's journals, providing positive recognition and answer questions and concerns.</p> <p><u>Gallery Walk</u> Students explore multiple texts or images that are placed around the room. This strategy will be used to have students share their work with peers, examine multiple historical documents, or respond to a collection of quotations. Silently record feedback on sticky notes with either praise, question or polish.</p> <p><u>Student Goal Setting</u></p> <p><u>Student self-assessment: Inventories or surveys</u></p> <p><u>Charrette:</u></p>

This technique is used for students to share their work with a partner to gain feedback prior to the final product. Presenter presents project ideas and driving questions while the partner is quiet (3 min.). Framing question-Presenter asks a specific question to frame the feedback (1 min.). Feedback-Partner gives suggestions. Presenter listens. Feedback needs to be helpful, specific and kind (2 min.). Open discussion-Dialogue with both suggestions and feedback. (2min). Total =8 min.

Panel Presentation and Critique

When possible, present to a panel of experts or to peers to gain suggestions and critique on work presented or created.

Unit 1	Introduction, Action and Assessment: Action in an Emergency	Grade(s)	12
Overview/Rationale			
The focus of this unit is on understanding the first aid to take in emergency agencies. Students will also learn safety precautions to prevent accidents.			
New Jersey Student Learning Standards			
<ul style="list-style-type: none"> ● 9.3.HL.1 Determine academic subject matter, in addition to high school graduation requirements, necessary for pursuing a health science career ● 9.3. HL.3 Identify existing and potential hazards to clients, co-workers, visitors and self in the healthcare workplace. ● 9.3. HL.5 Analyze the legal and ethical responsibilities, limitations and implications of actions within the healthcare workplace. ● 9.3. LW-EFM.1 Demonstrate effective communication skills (e.g., writing, speaking , listening and nonverbal communication) while utilizing communications equipment and platforms common to emergency and fire management systems. ● 9.3. LW-EFM.2 Manage an incident scene as the first responder using emergency response skills. ● 9.3. LW-EFM.4 Demonstrate an understanding of the objectives and a commitment to the mission of emergency and fire management services. ● 9.3. LW-EFM.5 Execute safety procedures and protocols associated with local state and federal regulations. ● 9.3. LW-EFM.7 Describe the legal regulatory and organizational guidelines governing emergency and fire management services. ● 9.3. LW-EFM.9 Execute protocols for handling emergency situations that range from minor medical and fire emergencies to area-wide incidents. ● 9.3. LW-EFM.10 Demonstrate the use and various applications of the equipment commonly used in emergency and fire management services. 			
Career Readiness, Life Literacies, and Key Skills			
<ul style="list-style-type: none"> ● 9.1.12.CFR.1: Compare and contrast the role of philanthropy, volunteer service, and charities in community development and quality of life in a variety of cultures. ● 9.1.12.CFR.2: Summarize causes important to you and compare organizations you seek to support to other organizations with similar missions ● 9.1.12.CFR.3: Research companies with corporate governance policies supporting the common good and human rights. ● 9.2.5.CAP.3: Identify qualifications needed to pursue traditional and non-traditional careers and occupations. ● 9.2.5.CAP.4: Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements. ● 9.2.8.CAP.9: Analyze how a variety of activities related to career preparation (e.g., volunteering, apprenticeships, structured learning experiences, dual enrollment, job search, scholarships) impacts postsecondary options. ● 9.2.12.CAP.2: Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs. ● 9.2.12.CAP.6: Identify transferable skills in career choices and design alternative career plans based on those skills. ● 9.2.12.CAP.7: Use online resources to examine licensing, certification, and credentialing requirements at the local, state, and national levels to maintain compliance with industry requirements in areas of career interest. ● 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a). 			

- 9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4. 12prof.CR2b, 2.2.12.LF.8).
- 9.4.12. CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1. 12acc.C1b, 2.2.12. PF.3).
- 9.4.12. CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1. 3E.12profCR3.a).
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP3. Attend to personal health and financial well-being.
- CRP4. Communicate clearly and effectively and with reason.
- CRP5. Consider the environmental, social and economic impacts of decisions.
- CRP6. Demonstrate creativity and innovation.
- CRP7. Employ valid and reliable research strategies.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP9. Model integrity, ethical leadership and effective management.
- CRP10. Plan education and career paths aligned to personal goals.
- CRP11. Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.

Technology/Computer Science and Design Thinking	Interdisciplinary Standards
<p>8.1.12.A.1 Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.</p> <p>8.1.12. D.1 Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.</p> <p>9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specified task (e.g., W.11-12.6.).</p> <p>9.4.12.TL.4: Collaborate in online learning communities or social networks or virtual worlds to analyze and propose a resolution to a real-world problem.</p>	<p>NJSLSA.R1: Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.</p> <p>NJSLSA.R4: Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning and tone.</p> <p>NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p>NJSLSA.W5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.</p> <p>NJSLSA.W6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.</p> <p>RI.11-12.1. Accurately cite strong and thorough textual evidence, (e.g., via discussion, written response, etc.), to support analysis of what the text says explicitly as well as inferentially, including determining where the text leaves matters uncertain.</p> <p>RI.11-12.2. Determine two or more central ideas of a text, and analyze their development and how they</p>

interact to provide a complex analysis; provide an objective summary of the text.

Science HS-LS1-3. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.

HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.

HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.

HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

Health 2.1.12.D.6 Demonstrate first-aid procedures, including Basic Life Support and automatic external defibrillation, caring for head trauma, bone and joint emergencies, caring for cold and heat injuries, and responding to medical emergencies.

21st Century Skills: Check all that apply

	Civic Literacy	X	Communication
	Global Awareness	X	Critical Thinking and Problem Solving
X	Health Literacy	X	Collaboration
	Financial, Economic, Business, & Entrepreneurial Literacy	X	Creativity and Innovation
	Environmental Literacy		Other:

Essential Question(s)

- How does early intervention impact a medical emergency event?
- How do emergency action skills impact a career?
- How do you apply first aid in an emergency event?

Enduring Understandings

- The main focus in dealing with emergencies are handling the immediate crisis, preventing further harm or injury, and providing security and comfort until help arrives.

- The basic rules of first aid include remaining calm, providing reassurance, and not moving the person unless absolutely necessary to protect the person from further danger.
- Properly applied, first aid might mean the difference between life and death, between rapid recovery and a long hospitalization, or between temporary and a permanent disability.

Student Learning Targets/Objectives

Unit 1

Lesson 1- Introduction to Emergency Care and Emergency Services / Background Information

- Explain the importance of first aid and how first aid can make a difference to a victim of injury or sudden illness.
- Describe the value of first aid to self and others in remote areas and identify who needs first aid.
- Describe the difference between personal first aid kit and a workplace first aid kit, as well as the supplies that should be in each.
- Describe the legal and ethical issues involved in giving first aid, including the duty act, consent, and standard of care and the Good Samaritan Law.
- Compare and contrast the different types of consent.
- Explain the importance of injury prevention; giving concrete examples.
- Describe how the emergency medical system works.
- Explain the purpose of OEM, CERT, FEMA, NERT and Ready.gov in emergency preparation.
- Differentiate between emergency services offered on the local, county, state, national and international level.
- Explain at least ten essential supplies for a disaster kit and create a first aid kit.

Lesson 2-Action at an Emergency

- Define the characteristics of an emergency and the actions that should be taken by a bystander.
- Describe the possible behaviors of a bystander and the reasons behind the behaviors.
- Describe when to call 911/EMS and what information to give.
- Identify situations that require medical care and reactions that might be displayed by rescuers before, during and after an emergency.
- Identify hazardous conditions that may be present in an emergency situation and the risks of infectious and communicable diseases.
- Describe the standard precautions first aiders should take to prevent coming into direct contact with infectious agents.
- Explain the four conditions that affect the growth of bacteria and five ways that microorganisms are spread.
- Demonstrate the procedure for hand washing and the procedure for glove removal.
- Explain the following terms: asepsis, aseptic, autoclave, disinfection, bloodborne pathogens, infection control, isolation, nosocomial infection, pathogen, sterilization, transmission.
- Differentiate between bacteria and virus
- Give examples of at least five ways to prevent becoming infected with a bloodborne pathogen or communicable disease.
- List the stages of grieving and describe ways to assist a dying victim and survivors.

Lesson 3- Finding out what's wrong

- Describe the sequence of victim assessment for responsive and unresponsive victims.
- Describe the importance of and the steps in a scene size-up and explain triage.
- Describe the AVPU scale and its purpose. (Alert, Voice, Pain, Unconscious)
- Describe the steps in the primary check for a responsive and unresponsive victim.
- Describe the steps in a secondary check for victims with a significant cause of injury.
- List the parts of the mnemonic DOTS (Deformity, Open Wounds, Tenderness, and Swelling) and the parts of a SAMPLE history.
- Describe what to do until help arrives.

Assessments

- Pre and Formative

Applied Education Systems: Health Center 21: <https://aeseducation.com> Module pre-test, worksheets and activities

Unit Group Scenarios and discussion

Topical On-line quiz

Journal writing reflection on items learned.

Unit assignments

Lesson quiz

Wolgin Worksheet pages

Wolgin Textbook Chapter Review

- Summative

Unit test and module test/quizzes

Online end of the semester/Cumulative Rutgers Final Exam

- Authentic

Writing assignment

Project (Disaster Kit, PowerPoint on Emergency Services at local, state, etc. levels., HOSA skill performance guidelines.)

Wolgin Textbook, Critical Thinking Questions, Journal entry

Journal writing: reflection on items learned.

First Aid Skill Performance: Checking scene for safety/HOSA CPR List

Teaching and Learning Actions

Instructional Strategies

Applied Education Systems: Health Center 21: <https://aeseducation.com> Modules on CPR and Basic Life Support; Emergency Care; Bloodborne Pathogens Site contains lessons, power points, video clips, worksheets, activities, quiz and tests.

Socratic seminar/group classroom discussion:

Divide the class into groups of three or four, and instruct each on the parameters of their assignment. End with class-wide sharing out.

Student Self-Assessment-Skills check

Modeling of strategies and skills/Simulation and Hands-on Learning-Skill practice/Role Play-Performance of skills using

CAE ARES Manikin:

Independent work or in groups of two, the student will perform an assignment utilizing the CAE ARES Manikin which can consist of:

- Communication skills with a patient
- Primary and Secondary Check
- Practice Vital Sign skills: blood pressure, pulse, respirations
- Wound care
- Case study treatment
- Advanced Life Support
- CPR performance
- Defibrillation performance
- Stethoscope performance
- Pupil condition observation

The above assignment will be followed up with a log/journal entry in google classroom, recording results and observations of patient assessment.

	<p><u>Simulations/Hands-on Learning/Identifying similarities and differences: Anatomage Table:</u></p> <p>Independent work or in groups of two, the student will perform an assignment for the Simulations-Anatomage Table which can consist of:</p> <ul style="list-style-type: none"> -View one of the 600 clinical cases and 3D image as per student interest or class topic of the week. Review medical notes. Record medical terms that are not understood and look up definitions. Record summary of the patient, pathology results and diagnosis. -Quiz mode- test knowledge -Full Annotations-determine body system as per student interest or class topic of the week; display section, determine name of a part, press on part to determine if correct. -Interactive cutting and segmentation-using tools practice dissection and view internal structures of body part of choice or body part related to class discussions of the week. -View gross anatomy of one of the four cadavers of student's choice. Record observations -View regional anatomy of the student's choice. Record observations. <p>The above assignment will be followed up with a log/journal entry in google classroom.</p>
<p>Activities:</p>	<p><u>Activities-Unit 1</u></p> <p><u>Lesson 1- Introduction to Emergency Care and Emergency Service Agencies</u></p> <p>Ch 1- Students to review Table 1-1 Ten Leading Causes of Death by Age Group and pick one type of mortality to research to determine mechanism of injury or etiology of the illness and what factors might have been modifiable to alter the course of disease or injury.</p> <p>Group class discussion: Instruct each group to create a brief scenario depicting a situation where first aid should be administered. Have the group perform the scenario for the others in the class.</p> <p>Note booking/Journaling in Google Classroom: Have each student research injuries where first aid was administered and write a brief, one-page recommendation on what could have been done to prevent the injury from occurring.</p> <p>Medical Terminology Review: Ask students to describe the difference between expressed and implied consent and the steps they should take when confronted with victims in each situation.</p> <p>Project: Research government agencies related to emergency response on the local, state, national and international level. Create and present a powerpoint on emergency services offered on the local, county, state, national and international level.</p> <p>View and discuss the web sites for the following agencies: Orange-OEM, Essex County-CERT, FEMA, NERT and Ready.gov</p> <p>Create a list or draw a picture of essential supplies for a disaster kit and a first aid kit.</p>

Complete Unit Quiz

Lesson 2-Action at an Emergency

Ch 2- Discussion: Students can share their own experiences with a family member diagnosed with a terminal illness to discuss the grieving process

You tube video on Scene Size-up https://www.youtube.com/watch?v=PPBz_3II_mk

Have students search the internet for cases in which first aid was necessary or draw from the news reports of the day to answer questions related to Scene Size-Up: What type of PPE needed? What safety hazards can be identified? What is the mechanism of injury or nature of illness? How many crew members or ambulance rigs may be necessary?

Note booking/Journaling in Google Classroom: Instruct each student to write a script of a call made to 911. Have students use textbooks to make sure they include all pertinent information. Students can invent their own emergency situation to report.

Medical Terminology Review: Ask students to describe the difference between bloodborne diseases and airborne diseases. Have students research some known diseases in each category.

Group activity:

Instruct each group to create a brief scenario depicting an emergency. Have one student be the victim, while the other students act as the bystanders. Instruct one student to be a bystander who decides to help, and another student who is a bystander who does not help. Have groups perform their scenarios for the others in the class. Have group members describe their roles and their motivations.

ARES: Model, practice and perform skills learned on ARES manikin, especially Primary and Secondary Check.

Simulations-Anatomage Table-Practice knowledge of human anatomy

Pretest on First Aid, "What do you know?"

View and discuss American Red Cross Video Clip Deciding to Act

View, discuss and record notes from American Red Cross: Unit 1, Before Giving Care and Checking an Injured or Ill Person.

View and discuss, Standard First Aid, CPR, and AED. New York, NY: McGraw-Hill Higher Education, 2005. Print and DVD Clips, Chapters 1 and 2

Summarize notes from CPR and AED for Community and Workplace. Eugene, OR: American Safety & Health Institute, 2009. Print, DVD Clips and PowerPoint 1-14 and 80 to 128, page 2

Zigzag read the Wolgin textbook Chapter 6-Safety.

Independently complete worksheet pages from Wolgin workbook Chapter 6-Safety.

Complete Wolgin Chapter 6 review questions and discuss.

Complete Wolgin Chapter 6 Critical Thinking Questions into journal notebook.

Exit Ticket: sentences on new terminology discussed in class.

Discuss the importance of first aid in saving a life.

Model and practice how to contact emergency medical services, such as 911.

Discuss the legal issues involved in giving first aid, including the duty act, consent, and standard of care and the Good Samaritan Law.

Model and practice "how to check the scene"; the procedure for hand washing; the procedure for glove removal; how to check the victim's ABC's for life-threatening problems.

Create a list of important questions that must be answered when evaluating an emergency.

Review Health Occupation Students of America (HOSA) guidelines for handwashing and glove removal.

View American Red Cross Video Clip on preventing the transmission of blood borne pathogens.

View, discuss and summarize notes from CPR and AED for Community and Workplace. Eugene, OR: American Safety & Health Institute, 2009. Print, pages 4-5, DVD Clips and PowerPoint #15-27

Create powerpoint on skills for handwashing and glove removal based on HOSA guidelines.

Zigzag read the Wolgin textbook Chapter 5-Infection Control.

Independently complete worksheet pages from Wolgin workbook Chapter 5.

Complete Wolgin Chapter 5 review questions and discuss.

Complete Wolgin Chapter 5 Critical Thinking Questions into journal notebook.

Exit Ticket: sentences on new terminology discussed in class.

Journal writing: reflection on items learned.

Complete Unit Quiz

Lesson 3- Finding out what's wrong

Ch 3- Students should either use models or themselves to identify all major bones of the extremities. Students can practice taking pulses and compare right and left radial artery pulses as well as compare pulses taken proximally with distal pulses. Why may differences occur? Have students measure blood pressure in supine, sitting, and standing. What may account for differences?

Ch 4- Students should practice performing a "primary check", "physical exam", and SAMPLE history on each other. Partners can pretend to be having a medical illness such as a myocardial infarction, asthma, or a behavioral emergency, or have experienced a traumatic injury to the hip or knee. There are many YouTube videos that students can view and then practice recording a SAMPLE history
<https://www.youtube.com/watch?v=cwyJHy8zaE4>

Note booking/Journaling in Google Classroom:

Instruct students to create outlines for themselves from the information in the chapter to use later when working in small groups. The outlines will assist them in following the proper victim assessment steps.

Group activities:

Divide the class into groups of three or four, and instruct each group to take turns assessing emergency victims and situations. Allow students to use the outlines they created as a writing assignment to assist them in following the proper steps.

Medical Terminology Review:

	<p>Have students write out full descriptions of the many mnemonic devices presented in this lesson.</p> <p>Complete Unit 1 Test</p>
Experiences (virtual and live field trips)	<ul style="list-style-type: none"> ● Suggested Guest Speaker: OHS Athletic Trainer to discuss first aid. ● Local First Aid Squad or Ambulance or an EMT or another emergency responder. ● Hands on interaction with CAE ARES manikin.
Resources	
<ul style="list-style-type: none"> ● Tytgerson, S. & Thygerson A., (n.d.). <i>First Aid, CPR, and AED Essentials, Sixth Edition</i>, Brigham Young University, ISBN-13: 9781449626624 ● Karren, K. (2012). <i>First aid for colleges and universities (10th ed.)</i>. Boston: Benjamin Cummings. ISBN-13: 9780321732590 ● <u>Applied Education Systems: Health Center 21</u>: https://aeseducation.com Modules on CPR and Basic Life Support; Emergency Care; Bloodborne Pathogens Site contains lessons, power points, video clips, worksheets, activities, quiz and tests. ● Wolgin, Francine. <i>Being a Nursing Assistant</i>. 8th ed. Saddle River, NJ: Prentice Hall Health, 2000. Print. Chapter 5-Infection Control, Chapter 6-Safety, Chapter 13-Emergency Care ● Pulliam, Jolynn, and Francine Wolgin. <i>Workbook: Being a Nursing Assistant</i>. 8th ed. Upper Saddle River, NJ: Prentice Hall, 2000. Print. Chapter 5-Infection Control, Chapter 6-Safety Chapter 13-Emergency Care ● Unit 1: American Red Cross Video Clip Deciding to Act ● Unit 1: American Red Cross: Unit 1, Before Giving Care and Checking an Injured or Ill Person: http://con1.classes.redcross.org/learningcontent/PHSS/PHSS/Flanker/flanker_p6/Unit1/video_introduction.html ● Unit 1: Standard First Aid, CPR, and AED. New York, NY: McGraw-Hill Higher Education, 2005. Print and DVD Clips, Chapters 1 and 2 ● Unit 1: CPR and AED for Community and Workplace. Eugene, OR: American Safety & Health Institute, 2009. Print, DVD Clips and PowerPoint 1-14 and 80 to 128, page 2 ● Unit 1: Websites for Orange-OEM, Essex County-CERT, FEMA, NERT and Ready.gov ● Laptops or computer ● Internet access ● Simulations-Anatomage Table ● CAE ARES Manikin; CPR Mannequins and face shields ● First Aid Equipment for bandaging and splints. ● Sample AED device. ● Sample First AID kit. ● Sample choking mannequin. ● Soap, water and paper towels. ● Disposable gloves and face masks. 	
Pacing/ Time Frame:	Unit 1: First Aid, Emergency Safety and Action- 15 class periods; 41 minutes per period.

Unit 2	CPR, AED and Shock	Grade(s)	12
Overview/Rationale			
The focus of this unit is on understanding how to perform CPR and rescue breathing on an adult, child and infant. They will also practice first aid procedures and CPR.			
New Jersey Student Learning Standards			
<ul style="list-style-type: none"> ● 9.3.HL.1 Determine academic subject matter, in addition to high school graduation requirements, necessary for pursuing a health science career ● 9.3. HL.3 Identify existing and potential hazards to clients, co-workers, visitors and self in the healthcare workplace. ● 9.3. HL.5 Analyze the legal and ethical responsibilities, limitations and implications of actions within the healthcare workplace. ● 9.3. LW-EFM.1 Demonstrate effective communication skills (e.g., writing, speaking , listening and nonverbal communication) while utilizing communications equipment and platforms common to emergency and fire management systems. ● 9.3. LW-EFM.2 Manage an incident scene as the first responder using emergency response skills. ● 9.3. LW-EFM.4 Demonstrate an understanding of the objectives and a commitment to the mission of emergency and fire management services. ● 9.3. LW-EFM.5 Execute safety procedures and protocols associated with local state and federal regulations. ● 9.3. LW-EFM.7 Describe the legal regulatory and organizational guidelines governing emergency and fire management services. ● 9.3. LW-EFM.9 Execute protocols for handling emergency situations that range from minor medical and fire emergencies to area-wide incidents. ● 9.3. LW-EFM.10 Demonstrate the use and various applications of the equipment commonly used in emergency and fire management services. 			
Career Readiness, Life Literacies, and Key Skills			
<ul style="list-style-type: none"> ● 9.2.5.CAP.4: Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements. ● 9.2.8.CAP.9: Analyze how a variety of activities related to career preparation (e.g., volunteering, apprenticeships, structured learning experiences, dual enrollment, job search, scholarships) impacts postsecondary options. ● 9.2.12.CAP.2: Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs. ● 9.2.12.CAP.6: Identify transferable skills in career choices and design alternative career plans based on those skills. ● 9.2.12.CAP.7: Use online resources to examine licensing, certification, and credentialing requirements at the local, state, and national levels to maintain compliance with industry requirements in areas of career interest. ● 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1. 12prof.CR3a). ● 9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4. 12prof.CR2b, 2.2.12.LF.8). ● 9.4.12. CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1. 12acc.C1b, 2.2.12. PF.3). ● 9.4.12. CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1. 3E.12profCR3.a). ● CRP1. Act as a responsible and contributing citizen and employee. 			

- CRP2. Apply appropriate academic and technical skills.
- CRP3. Attend to personal health and financial well-being.
- CRP4. Communicate clearly and effectively and with reason.
- CRP5. Consider the environmental, social and economic impacts of decisions.
- CRP6. Demonstrate creativity and innovation.
- CRP7. Employ valid and reliable research strategies.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP9. Model integrity, ethical leadership and effective management.
- CRP10. Plan education and career paths aligned to personal goals.
- CRP11. Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.

Technology/Computer Science and Design Thinking	Interdisciplinary Standards
<p>8.1.12.A.1 Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.</p> <p>8.1.12. D.1 Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.</p> <p>9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specified task (e.g., W.11-12.6.).</p> <p>9.4.12.TL.4: Collaborate in online learning communities or social networks or virtual worlds to analyze and propose a resolution to a real-world problem.</p>	<p>NJSLSA.R1: Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.</p> <p>NJSLSA.R4: Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning and tone.</p> <p>NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p>NJSLSA.W5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.</p> <p>NJSLSA.W6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.</p> <p>RI.11-12.1. Accurately cite strong and thorough textual evidence, (e.g., via discussion, written response, etc.), to support analysis of what the text says explicitly as well as inferentially, including determining where the text leaves matters uncertain.</p> <p>RI.11-12.2. Determine two or more central ideas of a text, and analyze their development and how they interact to provide a complex analysis; provide an objective summary of the text.</p> <p>Science HS-LS1-3. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>

HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.

HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.

HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

Health 2.1.12.D.6 Demonstrate first-aid procedures, including Basic Life Support and automatic external defibrillation, caring for head trauma, bone and joint emergencies, caring for cold and heat injuries, and responding to medical emergencies.

Essential Question(s)

- How does following the chain of survival in a medical emergency impact a victim?
- How can cardiopulmonary resuscitation (CPR) and automated external defibrillation (AED) emergency action skills impact a victim?
- How should you react in an emergency and why?

Enduring Understandings

- A heart attack occurs when the heart muscle tissue dies and because the blood supply is severely reduced or stopped, if too severe cardiac arrest can occur.
- Following the five links in the chain of survival help to improve survival from cardiac arrest.
- A victim's chances of survival are dramatically improved through early and effective CPR and defibrillation.

Student Learning Targets/Objectives

Unit 2

Lesson 1-CPR-Respiratory and Circulatory System Emergencies -Ch 5-

- Research factors affecting high quality CPR and how manual CPR differs from mechanical CPR in terms of survival rates and perform high quality CPR and explain when CPR is needed.
- Research the connection between socioeconomic status and health outcomes following cardiac arrest.
- Describe the difference between a heart attack and cardiac arrest and the steps in the chain of survival
- Demonstrate the recovery position of an unresponsive victim
- Explain the value of rescue breathing and demonstrate how to give rescue breaths.
- Demonstrate how to provide choking care and describe what choking is; demonstrate the universal sign for choking.

- Identify types of airway obstructions and describe and demonstrate the proper first aid procedure and stance for delivering first aid to a choking adult, child and infant.
- Explain the indications that a person is choking if they don't give the universal signal.

Lesson 2- Automated External Defibrillation-Ch 6-

- Demonstrate and practice using the AED and describe why AEDs are available in many public facilities and how they function.
- View YouTube Video-Using the AED under different circumstances
<https://www.procp.org/training/video/adult-aed>
- Describe the basic workings of the human heart and identify the differences between ventricular fibrillation and ventricular tachycardia.
- Describe basic procedures for cardiac arrest victims.

Lesson 3- Shock-Ch 7-

- Compare and contrast cardiogenic shock with anaphylactic shock and explain the care needed for a victim in shock.
- Describe the signs and symptoms of anaphylaxis and the care needed for anaphylaxis.
- Describe the difference between perfusion and hypoperfusion.
- List and describe the non-cardiovascular and cardiovascular causes of shock and psychogenic shock.
- Describe the difference between compensated and decompensated shock.

Assessments

Pre and Formative

Applied Education Systems: Health Center 21: <https://aeseducation.com> Module pre-test, worksheets and activities

Unit Group Scenarios and discussion

Topical On-line quiz

Journal writing reflection on items learned.

Unit assignments

Lesson quiz

Wolgin Worksheet pages

Wolgin Textbook Chapter Review

Summative

Unit test-American Red Cross BLS-Basic Life Support Written and Skill Test

Online end of the semester Rutgers Cumulative Final Exam

Authentic

Writing assignment

Wolgin Textbook, Critical Thinking Questions, Journal entry

Journal writing: reflection on items learned.

First Aid Skill Performance:

- Check the victim's ABC's for life-threatening problems
- Handwashing
- Glove placement and removal
- Mask placement and removal
- Recovery position of an unresponsive victim
- CPR
- AED
- First Aid for choking

Teaching and Learning Actions

Instructional Strategies

Unit 2**Lesson 1-CPR-Respiratory and Circulatory System Emergencies**

Note booking/Journaling in Google Classroom:

Instruct students to research the various foods and objects that cause severe or mild airway obstruction in adults, children and infants, and write a brief, one-page comparison report summarizing the most common occurrences of airway obstruction in adults, children and infants.

Group activities:

Divide the class into groups of three or four, and instruct each group to create a brief scenario depicting a cardiac arrest or choking emergency and perform the scenario for the others in the class.

Medical Terminology Review:

Ask students to describe the difference between ventricular fibrillation, V-fib, and ventricular tachycardia, V-tach and how each abnormality is detected.

Complete lesson quiz.

View, discuss and record notes from American Red Cross: Unit 2, Cardiac Emergencies and CPR, Unit 3, AED and Unit 4, Breathing Emergencies.

ARES: Model, practice and perform skills learned on ARES manikin.

Simulations-Anatomage Table-Practice knowledge of human anatomy

Model and practice the recovery position of an unresponsive victim

Model and practice how to give rescue breaths.

Model and practice the universal sign for choking.

Model and practice the proper first aid procedure and stance for delivering first aid to a choking adult, child and infant.

Model and practice CPR

Lesson 2-AED

Note booking/Journaling in Google Classroom:

Instruct students to research public access defibrillation (PAD) laws and the FDA's approval of "home use" AEDs, and write a one-page report about why these movements are important to the care of cardiac arrest victims.

Group activities:

Divide the class into groups of three or four, and instruct each group to act out a scene in which an AED might be used. Have one student assume the role of the victim, another person using the AED, and another as a bystander. This activity can be done several times, having students assume the different roles.

ARES: Model, practice and perform AED skills learned on ARES manikin.

Medical Terminology Review:

Ask students to describe the difference between cardiac arrest and heart attack, and determine whether there are also differences in the immediate care of victims who suffer from either.

Simulations-Anatomage Table-Practice knowledge of human anatomy, view case study of heart attack

Complete lesson quiz.

Model and practice the use of an AED

Zigzag read Wolgin textbook 288-289 choking, 282-288 shock and CPR, Chapter 13 and 18.

Complete Wolgin. Workbook: Ch 13 and 18

View and discuss from Standard First Aid, CPR, and AED. New York, NY: McGraw-Hill Higher Education, 2005. Print and DVD Clips, Chapters 3 and 5

View, discuss and record notes from CPR and AED for Community and Workplace. Eugene, OR: American Safety & Health Institute, 2009. Print, DVD Clips and PowerPoint 32-35 cardiovascular disease, 27-31 choking, 52-79 CPR, 129-160 choking, 538-540.

Create an on-line Quizlet on skill performance and terminology.

Journal writing: reflection on items learned.

Lesson 3- Shock

Note booking/Journaling in Google Classroom:

Instruct students to research the four types of cardiovascular shock: cardiogenic, hypovolemic or hemorrhagic, neurogenic and septic; and write a compare and contrast essay on all four types.

Group activities:

Divide the class into three groups. Assign each group the task of acting out a scene where they are caring for a general shock victim, an anaphylactic shock victim, or a psychogenic shock victim. Have each group perform their scenario for the other members of the class.

ARES: Model, practice and perform skills learned on ARES manikin, especially first aid for shock

Simulations-Anatomage Table-Practice knowledge of human anatomy

Medical Terminology Review:

Ask students to describe the difference between perfusion and hypoperfusion

Complete lesson quiz and Unit test.

<p>Activities: Including G/T, SE, and ELL Differentiation</p>	<p><u>Applied Education Systems: Health Center 21:</u> https://aeseducation.com Modules on CPR and Basic Life Support; Emergency Care; Bloodborne Pathogens Site contains lessons, power points, video clips, worksheets, activities, quiz and tests.</p> <p><u>Socratic seminar/group classroom discussion:</u> Divide the class into groups of three or four, and instruct each on the parameters of their assignment.</p> <p><u>Modeling of strategies and skills/Simulation and Hands-on Learning-Skill practice/Role Play-Performance of skills using CAE ARES Manikin:</u> Independent work or in groups of two, the student will perform an assignment utilizing the CAE ARES Manikin which can consist of:</p> <ul style="list-style-type: none"> -Communication skills with a patient -Advanced Life Support -Airway obstruction -CPR performance -Defibrillation performance -Shock -Recovery Position -Case study treatment <p>-The above assignment will be followed up with a log/journal entry in google classroom, recording results and observations of patient assessment.</p>
<p>Experiences (Virtual and live field trips)</p>	<p>Suggested Guest Speaker: OHS Athletic Trainer to discuss first aid. Local First Aid Squad or Ambulance or an EMT or another emergency responder. Hands on interaction with CAE ARES manikin and Anatomage Table</p>

Resources

- Tyggerson, S. & Thygerson A., (n.d.). *First Aid, CPR, and AED Essentials, Sixth Edition*, Brigham Young University, ISBN-13: 9781449626624
- Karren, K. (2012). *First aid for colleges and universities (10th ed.)*. Boston: Benjamin Cummings. ISBN-13: 9780321732590
- Applied Education Systems: Health Center 21: <https://aeseducation.com> Modules on CPR and Basic Life Support; Emergency Care; Bloodborne Pathogens Site contains lessons, power points, video clips, worksheets, activities, quiz and tests.
- Wolgin, Francine. *Being a Nursing Assistant*. 8th ed. Saddle River, NJ: Prentice Hall Health, 2000. Print. Chapter 5-Infection Control, Chapter 6-Safety, Chapter 13-Emergency Care
- Pulliam, Jolynn, and Francine Wolgin. *Workbook: Being a Nursing Assistant*. 8th ed. Upper Saddle River, NJ: Prentice Hall, 2000. Print. Chapter 5-Infection Control, Chapter 6-Safety Chapter 13-Emergency Care,
- Unit 2: American Red Cross Video Clip located in bonus section of the DVD, " Bloodborne Pathogens- preventing disease transmission" Standard First Aid,
- Unit 2: CPR and AED for Community and Workplace. Eugene, OR: American Safety & Health Institute, 2009. Print, pages 4-5, DVD Clips and PowerPoint #15-27
- Unit 2: American Red Cross: Unit 2, Cardiac Emergencies and CPR:
http://con1.classes.redcross.org/learningcontent/PHSS/PHSS/Flanker/flanker_p6/Unit2/video_introduction.html
- Unit 2: American Red Cross: Unit 3, AED-
http://con1.classes.redcross.org/learningcontent/PHSS/PHSS/Flanker/flanker_p6/Unit3/Unit_objectives.html

- Unit 2: American Red Cross: Unit 4, Breathing emergencies - http://con1.classes.redcross.org/learningcontent/PHSS/PHSS/Flanker/flanker_p6/Unit4/Unit_objectives.htm
- Unit 2 Wolgin, Francine. Being a Nursing Assistant. 8th ed. Saddle River, NJ: Prentice Hall Health, 2000. Print. 288-289 choking, 282-288 shock and CPR, Chapter 13 and 18
- Unit 2: Pulliam, Jolynn, and Francine Wolgin. Workbook: Being a Nursing Assistant. 8th ed. Upper Saddle River, NJ: Prentice Hall, 2000. Print. Ch 13 and 18
- Unit 2: Standard First Aid, CPR, and AED. New York, NY: McGraw-Hill Higher Education, 2005. Print and DVD Clips, Chapters 3 and 5
- Unit 2: CPR and AED for Community and Workplace. Eugene, OR: American Safety & Health Institute, 2009. Print, DVD Clips and PowerPoint 32-35 cardiovascular disease, 27-31 choking, 52-79 CPR, 129-160 choking, 538-540
- Laptops or computer
- Internet access
- Resource: Simulations-Anatome Table
- CAE ARES Manikin and CPR Mannequins and face shields
- Sample AED device.
- Sample First AID kit.
- Sample choking mannequin.
- Soap, water and paper towels.
- Disposable gloves and face masks.

Pacing/ Time Frame:

Unit 2: CPR, AED and Shock: 20 class periods, 41 minutes per period.

Unit 3	Bleeding, wounds and burns	Grade(s)	12
Overview/Rationale			
The focus of this unit is on understanding how to perform first aid on an adult, child and infant for burns, bleeding and wounds. They will also practice first aid procedures.			
New Jersey Student Learning Standards			
<ul style="list-style-type: none"> ● 9.3.HL.1 Determine academic subject matter, in addition to high school graduation requirements, necessary for pursuing a health science career ● 9.3. HL.3 Identify existing and potential hazards to clients, co-workers, visitors and self in the healthcare workplace. ● 9.3. HL.5 Analyze the legal and ethical responsibilities, limitations and implications of actions within the healthcare workplace. ● 9.3. LW-EFM.1 Demonstrate effective communication skills (e.g., writing, speaking , listening and nonverbal communication) while utilizing communications equipment and platforms common to emergency and fire management systems. ● 9.3. LW-EFM.2 Manage an incident scene as the first responder using emergency response skills. ● 9.3. LW-EFM.4 Demonstrate an understanding of the objectives and a commitment to the mission of emergency and fire management services. ● 9.3. LW-EFM.5 Execute safety procedures and protocols associated with local state and federal regulations. ● 9.3. LW-EFM.7 Describe the legal regulatory and organizational guidelines governing emergency and fire management services. ● 9.3. LW-EFM.9 Execute protocols for handling emergency situations that range from minor medical and fire emergencies to area-wide incidents. ● 9.3. LW-EFM.10 Demonstrate the use and various applications of the equipment commonly used in emergency and fire management services. 			
Career Readiness, Life Literacies, and Key Skills			
<ul style="list-style-type: none"> ● 9.2.5.CAP.4: Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements. ● 9.2.8.CAP.9: Analyze how a variety of activities related to career preparation (e.g., volunteering, apprenticeships, structured learning experiences, dual enrollment, job search, scholarships) impacts postsecondary options. ● 9.2.12.CAP.2: Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs. ● 9.2.12.CAP.6: Identify transferable skills in career choices and design alternative career plans based on those skills. ● 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1. 12prof.CR3a). ● 9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4. 12prof.CR2b, 2.2.12.LF.8). ● 9.4.12. CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1. 12acc.C1b, 2.2.12. PF.3). ● 9.4.12. CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1. 3E.12profCR3.a). ● CRP1. Act as a responsible and contributing citizen and employee. ● CRP2. Apply appropriate academic and technical skills. ● CRP3. Attend to personal health and financial well-being. ● CRP4. Communicate clearly and effectively and with reason. 			

- CRP5. Consider the environmental, social and economic impacts of decisions.
- CRP6. Demonstrate creativity and innovation.
- CRP7. Employ valid and reliable research strategies.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP9. Model integrity, ethical leadership and effective management.
- CRP10. Plan education and career paths aligned to personal goals.
- CRP11. Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.

Technology/Computer Science and Design Thinking	Interdisciplinary Standards
<ul style="list-style-type: none"> ● 8.1.12.A.1 Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources. ● 8.1.12. D.1 Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work. ● 9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specified task (e.g., W.11-12.6.). ● 9.4.12.TL.4: Collaborate in online learning communities or social networks or virtual worlds to analyze and propose a resolution to a real-world problem. 	<p>NJSLSA.R1: Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.</p> <p>NJSLSA.R4: Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning and tone.</p> <p>NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p>NJSLSA.W5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.</p> <p>NJSLSA.W6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.</p> <p>RI.11-12.1. Accurately cite strong and thorough textual evidence, (e.g., via discussion, written response, etc.), to support analysis of what the text says explicitly as well as inferentially, including determining where the text leaves matters uncertain.</p> <p>RI.11-12.2. Determine two or more central ideas of a text, and analyze their development and how they interact to provide a complex analysis; provide an objective summary of the text.</p> <p>Science HS-LS1-3. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>

HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.

HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.

HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

Essential Question(s)

- How can a person provide proper first aid for bleeding, burns and wounds?
- How can a lay person determine when medical care is required for wounds?
- How can we prevent more injuries from occurring during an emergency?

Enduring Understandings

- Regardless of the type of bleeding or wound, the most important step to take is to control the bleeding.
- Rapid blood loss of 1 quart or more can lead to shock or death.
- A person providing first aid, needs to understand when to recommend that a victim seeks medical care.
- The extent of a burn injury can be determined by using the rule of nines.

Student Learning Targets/Objectives

Unit 3

Lesson 1-Bleeding

Ch 8-

- Trace blood flow through major arteries and veins around the body
- List and describe the three types of external bleeding and explain and demonstrate how to control bleeding with direct pressure, elevation and pressure points.
- Describe the difference and care for internal vs. external bleeding and recognize the signs of internal bleeding.
- Describe how to care for and monitor victims of severe internal bleeding and the care for minor internal bleeding (bruising).

Lesson 2-Wounds

- Research for pictures of wounds on the internet and identify them as a degloving injury, laceration, puncture wound, abrasion, avulsion, or amputation.
- Research the steps involved in replantation of a severed digit or hand
- Review You Tube videos on wound bandaging <https://www.youtube.com/watch?v=Nzc1YSnSRpE> and discuss the types of open wounds and why some wounds need moist dressings
- Describe basic care procedures for open wounds and identify signs of infection in an open wound and precautions against tetanus.

- Classify amputations and describe basic care for amputations.
- Describe basic care for blisters; impaled objects and the procedures for the removal of slivers, fish hooks and cactus spines.
- Describe the types of and basic care procedures for closed wounds and identify the types of wounds that require medical attention and sutures.
- Distinguish the types of injuries caused by gunshots and describe the basic care procedures and legal considerations for gunshot wounds.

Lesson 3- Burns

- Research different types of dressings and match the appropriate size to the type of injury
- Correctly identify pictures of burned individuals into first-, second-, or third-degree burns and utilize the “rule of nines” to make burn size estimations.
- Research sunscreens to explain the concept of SPF
- Describe the different types of burns and how burns are evaluated.
- Evaluate and identify thermal burns and describe how to care for thermal burns.
- Evaluate, identify and care for chemical burns, arc burns and true electrical burns.

Assessments

Pre and Formative

Unit Group Scenarios and discussion

Topical On-line quiz

Journal writing reflection on items learned.

Unit assignments

Lesson quiz

Wolgin Worksheet pages

Wolgin Textbook Chapter Review

Applied Education Systems: Health Center 21: <https://aeseducation.com> Module pre-test, worksheets and activities

Summative

Unit test

Online Rutgers, Cumulative Final Exam at end of semester

Authentic:

Writing assignment

Project (Disaster Kit, PowerPoint on Emergency Services at local, state, etc. levels., HOSA skill performance guidelines.)

Wolgin Textbook, Critical Thinking Questions, Journal entry

Journal writing: reflection on items learned.

First Aid Skill Performance:

- Glove placement and removal
- Mask placement and removal
- Recovery position of an unresponsive victim
- First Aid for wound care and bleeding
- First Aid for shock
- First Aid for burn care

Teaching and Learning Actions

Instructional Strategies

Lesson 3- Shock

Note booking/Journaling in Google Classroom:

Instruct students to research the four types of cardiovascular shock: cardiogenic, hypovolemic or hemorrhagic, neurogenic and septic; and write a compare and contrast essay on all four types.

Group activities:

Divide the class into three groups. Assign each group the task of acting out a scene where they are caring for a general shock victim, an anaphylactic shock victim, or a psychogenic shock victim. Have each group perform their scenario for the other members of the class.

ARES: Model, practice and perform skills learned on ARES manikin

Medical Terminology Review:

Ask students to describe the difference between perfusion and hypoperfusion

Simulations-Anatomage Table-Practice knowledge of human anatomy

Independent Assignment: One student will be assigned/select this topic to teach a 40-minute lesson and activity with class.

Complete lesson quiz and Unit test.

Unit 3**Lesson 1-Bleeding Emergencies**

Note booking/Journaling in Google Classroom:

Instruct students to research the different types and causes of bleeding (external capillary, venous, and arterial bleeding; severe internal bleeding) and write a compare and contrast essay. Instruct students to describe at least three causes of severe internal bleeding in their paper.

Group activities:

Divide the class into groups of three or four, and instruct each group to create a brief scenario depicting the emergency treatment of a different type of bleeding victim. Have one student be the victim, one the victim's friend who can provide info. to the paramedics and the other the paramedic. Have groups perform the scenario for the class.

ARES: Model, practice and perform skills learned on ARES manikin

Medical Terminology Review:

Ask students to describe the difference between capillary, venous and arterial bleeding.

Simulations-Anatomage Table-Practice knowledge of human anatomy

Independent Assignment: One student will be assigned/select this topic to teach a 40-minute lesson and activity with class

Complete lesson quiz.

View, discuss and record notes from American Red Cross: Unit 7, Soft tissue injuries.

Zigzag read the Wolgin textbook 291 to 292 and summarized notes.

Complete Wolgin. Workbook: Ch 13 on corresponding topic area.

Create an on-line Quizlet on skill performance and terminology.

View, discuss and summarize notes: Standard First Aid, CPR, and AED. New York, NY:

McGraw-Hill Higher Education, 2005. Print and DVD Clips, Chapters 4 and 6

Model and practice controlling bleeding with direct pressure, elevation Model and pressure points

Exit ticket on five new terms learned.

Journal writing: reflection on items learned.

Lesson 2- Wounds

Note booking/Journaling in Google Classroom:

Instruct students to research the different types of gunshot wounds and the types of bullets, firearms, injuries, and treatment options associated with each.

Group activities:

Divide the class into groups of three or four, and instruct each group to create a brief scenario depicting a scene in which a victim sustains a specific type of wound. Have one student be the victim, another the paramedic and the others as bystanders. Have groups perform the scenario for the class.

ARES: Model, practice and perform skills learned on ARES manikin

Independent Assignment: One student will be assigned/select this topic to teach a 40-minute lesson and activity with class

Medical Terminology Review:

Have students make flashcards to review the meaning of bandage, dressing, abrasion, laceration, incision, puncture, avulsion and amputation.

Simulations-Anatomage Table-Practice knowledge of human anatomy

Complete lesson quiz.

Lesson 3-Burns

Note booking/Journaling in Google Classroom:

Have students research how physicians determine the depth of a burn and write a one-page essay describing the process. Have students present their findings.

Group activities:

Divide the class into four groups. Assign each group the task of acting out how they would care for either a first-degree, second-degree, third-degree or chemical burn. Instruct each group to do one thing wrong during their presentation. Have other groups identify what each group does incorrectly during the care of a particular burn.

Independent Assignment: One student will be assigned/select this topic to teach a 40-minute lesson and activity with class

Medical Terminology Review:

Ask students to research the difference among first-degree, second-degree, third-degree and chemical burns. Have students make a chart for quick reference.

Complete lesson quiz and Unit test.

<p>Activities:</p>	<p><u>Applied Education Systems: Health Center 21:</u> https://aeseducation.com Modules on CPR and Basic Life Support; Emergency Care; Bloodborne Pathogens Site contains lessons, power points, video clips, worksheets, activities, quiz and tests.</p> <p><u>Socratic seminar/group classroom discussion:</u> Divide the class into groups of three or four, and instruct each on the parameters of their assignment.</p> <p><u>Note booking/Journaling in Google Classroom</u></p> <p><u>Modeling of strategies and skills/Simulation and Hands-on Learning-Skill practice/Role Play-Performance of skills using</u> <u>CAE ARES Manikin:</u> Independent work or in groups of two, the student will perform an assignment utilizing the CAE ARES Manikin which can consist of: -Communication skills with a patient -Bleeding control/treatment -Wound care -Burn care -Case study treatment The above assignment will be followed up with a log/journal entry in google classroom, recording results and observations of patient assessment.</p>
<p>Experiences (Virtual and live field trips)</p>	<p>Hands on interaction with CAE ARES manikin and Anatomage Table Suggested Guest Speaker: OHS Athletic Trainer to discuss first aid. Local First Aid Squad or Ambulance or an EMT or another emergency responder.</p>
<p>Resources</p>	
<ul style="list-style-type: none"> ● Tyygerson, S. & Thygerson A., (n.d.). <i>First Aid, CPR, and AED Essentials, Sixth Edition</i>, Brigham Young University, ISBN-13: 9781449626624 ● Karren, K. (2012). <i>First aid for colleges and universities (10th ed.)</i>. Boston: Benjamin Cummings. ISBN-13: 9780321732590 ● <u>Applied Education Systems: Health Center 21:</u> https://aeseducation.com Modules on CPR and Basic Life Support; Emergency Care; Bloodborne Pathogens Site contains lessons, power points, video clips, worksheets, activities, quiz and tests. ● Wolgin, Francine. <i>Being a Nursing Assistant</i>. 8th ed. Saddle River, NJ: Prentice Hall Health, 2000. Print. Chapter 5-Infection Control, Chapter 6-Safety, Chapter 13-Emergency Care ● Pulliam, Jolynn, and Francine Wolgin. <i>Workbook: Being a Nursing Assistant</i>. 8th ed. Upper Saddle River, NJ: Prentice Hall, 2000. Print. Chapter 5-Infection Control, Chapter 6-Safety Chapter 13-Emergency Care, 3 Unit 3: American Red Cross: Unit 7, Soft Tissue Injuries - http://con1.classes.redcross.org/learningcontent/PHSS/PHSS/Flanker/flanker_p6/Unit7/Unit_objectives.html ● Laptops or computer ● Simulations-Anatomage Table ● CAE ARES Manikin ● Internet access ● First Aid Equipment for bandaging and splints. ● Sample First AID kit. ● Soap, water and paper towels. ● Disposable gloves and face masks. 	
<p>Pacing/ Time Frame:</p>	<p>Unit 3: Bleeding, wounds and burns: 20 class periods; 41 minutes per period.</p>

Unit 4	Injuries	Grade(s)	12
Overview/Rationale			
The focus of this unit is on understanding how to recognize and perform emergency care for injuries. They will also practice first aid procedures.			
New Jersey Student Learning Standards			
<ul style="list-style-type: none"> ● 9.3.HL.1 Determine academic subject matter, in addition to high school graduation requirements, necessary for pursuing a health science career ● 9.3. HL.3 Identify existing and potential hazards to clients, co-workers, visitors and self in the healthcare workplace. ● 9.3. HL.5 Analyze the legal and ethical responsibilities, limitations and implications of actions within the healthcare workplace. ● 9.3. LW-EFM.1 Demonstrate effective communication skills (e.g., writing, speaking , listening and nonverbal communication) while utilizing communications equipment and platforms common to emergency and fire management systems. ● 9.3. LW-EFM.2 Manage an incident scene as the first responder using emergency response skills. ● 9.3. LW-EFM.4 Demonstrate an understanding of the objectives and a commitment to the mission of emergency and fire management services. ● 9.3. LW-EFM.5 Execute safety procedures and protocols associated with local state and federal regulations. ● 9.3. LW-EFM.7 Describe the legal regulatory and organizational guidelines governing emergency and fire management services. ● 9.3. LW-EFM.9 Execute protocols for handling emergency situations that range from minor medical and fire emergencies to area-wide incidents. ● 9.3. LW-EFM.10 Demonstrate the use and various applications of the equipment commonly used in emergency and fire management services. 			
Career Readiness, Life Literacies, and Key Skills			
<ul style="list-style-type: none"> ● 9.2.5.CAP.4: Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements. ● 9.2.8.CAP.9: Analyze how a variety of activities related to career preparation (e.g., volunteering, apprenticeships, structured learning experiences, dual enrollment, job search, scholarships) impacts postsecondary options. ● 9.2.12.CAP.2: Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs. ● 9.2.12.CAP.6: Identify transferable skills in career choices and design alternative career plans based on those skills. ● 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1. 12prof.CR3a). ● 9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4. 12prof.CR2b, 2.2.12.LF.8). ● 9.4.12. CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1. 12acc.C1b, 2.2.12. PF.3). ● 9.4.12. CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1. 3E.12profCR3.a). ● CRP1. Act as a responsible and contributing citizen and employee. ● CRP2. Apply appropriate academic and technical skills. ● CRP3. Attend to personal health and financial well-being. ● CRP4. Communicate clearly and effectively and with reason. ● CRP5. Consider the environmental, social and economic impacts of decisions. 			

- CRP6. Demonstrate creativity and innovation.
- CRP7. Employ valid and reliable research strategies.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP9. Model integrity, ethical leadership and effective management.
- CRP10. Plan education and career paths aligned to personal goals.
- CRP11. Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.

Technology/Computer Science and Design Thinking	Interdisciplinary Standards
<p>8.1.12.A.1 Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.</p> <p>8.1.12. D.1 Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.</p> <p>9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specific task (e.g., W.11-12.6.).</p> <p>9.4.12.TL.4: Collaborate in online learning communities or social networks or virtual worlds to analyze and propose a resolution to a real-world problem.</p>	<p>NJSLSA.R1: Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.</p> <p>NJSLSA.R4: Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning and tone</p> <p>NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p>NJSLSA.W5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.</p> <p>NJSLSA.W6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.</p> <p>RI.11-12.1. Accurately cite strong and thorough textual evidence, (e.g., via discussion,,written response, etc.), to support analysis of what the text says explicitly as well as inferentially, including determining where the text leaves matters uncertain.</p> <p>RI.11-12.2. Determine two or more central ideas of a text, and analyze their development and how they interact to provide a complex analysis; provide an objective summary of the text.</p> <p>Science HS-LS1-3. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>

HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.

HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.

HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

Health 2.1.12.D.6 Demonstrate first-aid procedures, including Basic Life Support and automatic external defibrillation, caring for head trauma, bone and joint emergencies, caring for cold and heat injuries, and responding to medical emergencies.

Essential Question(s)

- How can a person provide proper first aid for head, spinal, chest, abdominal, and pelvic injuries?
- How does one identify a bone, joint, muscle or extremity injury?
- How can you secure an injury during an emergency?

Enduring Understandings

- If not treated, injuries that seem minor could become life threatening.
- Any head injury is potentially serious.
- All victims with chest injuries should have their breathing checked and rechecked.
- Bone, joint and muscle injuries are among the most common reasons to seek medical care; although rarely fatal, they often result in short- or long-term disability.

Student Learning Targets/Objectives

Unit 4

Lesson 1- Head and Spinal Injuries

- Identify and describe the care for scalp wounds, skull fracture, and brain injuries.
- Identify and describe the care for injuries affecting the eye, ear and nose.
- Identify and describe the care for dental and spinal injuries.
- Describe at least two situations when a head or spinal injury is possible and explain the importance of supporting the head and neck when a spinal injury is suspected and how to minimize movement of a victim's head and spine.
- Describe first aid for spinal injury, broken ribs, impaled objects in the chest, and sucking chest wounds, pelvic injuries, open and closed abdominal injuries, concussions, scalp, cheek, nose, eye, ear, mouth, and jaw and teeth injuries.

- Describe seven ways to prevent head and spinal injuries.

Lesson 2-Chest, Abdominal and Pelvic Injury Emergencies

- Identify and describe the care for closed and open chest injuries; closed and open abdominal injuries; and pelvic injuries.
- Explain why chest, abdominal and pelvic injuries can be fatal.

Lesson 3-Bone, Joint and Muscle Injuries

- Identify and describe the care for closed and open fractures; muscle injuries and joint injuries.
- Give examples of injuries that can occur to the musculoskeletal system.
- Describe the RICE procedures and how to use it.
- Identify, describe and demonstrate the care for injuries of the shoulder, elbow, hand, finger, hip joint, thigh, knee and lower leg.
- Describe and demonstrate the first aid for fractures, dislocations, sprains, strains, contusions and cramps
- Demonstrate the use of splint on an extremity.

Assessments

Pre and Formative

Unit Group Scenarios and discussion

Topical On-line quiz

Journal writing reflection on items learned.

Unit assignments

Lesson quiz

Wolgin Worksheet pages

Wolgin Textbook Chapter Review

Applied Education Systems: Health Center 21: <https://aeseducation.com> Module pre-test, worksheets and activities

Summative

Unit test

On line-at the end of the semester/ Rutgers Cumulative Final Exam

Authentic

Writing assignment

Project (Disaster Kit, PowerPoint on Emergency Services at local, state, etc. levels., HOSA skill performance guidelines.)

Wolgin Textbook, Critical Thinking Questions, Journal entry

Journal writing: reflection on items learned.

First Aid Skill Performance

Teaching and Learning Actions

Instructional Strategies

Unit 4

Lesson 1-Head and Spine Injury Emergencies Ch 12- Discuss signs that indicate either temporary vs. permanent brain injury
Review muscle and sensory testing that may indicate spinal cord injury

Note booking/Journaling in Google Classroom:
Many of the injuries presented and discussed in this lesson could occur during a sporting event. Have students write a scenario of an injury occurring at a sporting event. Then have

another student write a response indicating the steps that should be taken in response to the injury.

Group activities:

Divide the class into four groups. Have groups practice the steps in managing head and spinal injuries to check for spinal injuries in responsive and unresponsive victims.

Independent Assignment: One student will be assigned/select this topic to teach a 40-minute lesson and activity with class

ARES: Model, practice and perform skills learned on ARES manikin

Medical Terminology Review:

Have students research the difference between a concussion and a contusion.

Simulations-Anatomage Table-Practice knowledge of human anatomy

Complete lesson quiz

View, discuss and summarize notes: Standard First Aid, CPR, and AED. New York, NY: McGraw-Hill Higher Education, 2005. Print and DVD Clips, Chapter 7.

Demonstrate and practice first aid for spinal injury.

Describe the first aid for concussions, scalp, cheek, nose, eye, ear, mouth, and jaw and teeth injuries.

Demonstrate and practice minimizing movement of a victim's head and spine.

Exit ticket: Describe seven ways to prevent head and spinal injuries.

Journal writing: reflection on items learned.

Lesson 2-Chest Abdominal and Pelvic Emergencies

Ch 13- research the differences between thoracic and abdominal injuries determine differences in signs and symptoms; differences in mechanism of injury, and what organ is most involved in each type of injury with blunt trauma

Note booking/Journaling in Google Classroom:

Have students research the various organs in the body to determine whether they are hollow or solid. Students can make a T-chart listing the hollow organs on one side and solids on the other.

Group activities:

Have each person work with a partner to go through the assessment for chest injuries and abdominal injuries. One student plays the role of the first aider and the other is the victim. Students can switch before beginning the second chart.

Independent Assignment: One student will be assigned/select this topic to teach a 40-minute lesson and activity with class

Medical Terminology:

Have students use the information they found in the "Note booking/Journaling in Google Classroom" section. Have students group the organs by location. They should note whether they are found in the abdomen, chest or another location.

Complete lesson quiz View, discuss and summarize notes: Standard First Aid, CPR, and AED. New York, NY: McGraw-Hill Higher Education, 2005. Print and DVD Clips, Chapter 7. Demonstrate and practice first aid for broken ribs, impaled objects in the chest, and sucking chest wounds, pelvic injuries, open and closed abdominal injuries. Describe the first aid for concussions, scalp, cheek, nose, eye, ear, mouth, and jaw and teeth injuries. Demonstrate and practice minimizing movement of a victim's head and spine. Exit ticket: Describe seven ways to prevent head and spinal injuries. Journal writing: reflection on items learned.

Lesson 3-Bone, Joint and Muscle Emergencies

Note booking/Journaling Note booking/Journaling writing assignments in Google Classroom in Google Classroom: Have students write a three paragraph compare and contrast essay.
1st paragraph: open vs. closed fractures
2nd paragraph: dislocations and sprains
3rd paragraph: strains and cramps.

Group activities:

Have each student work with a partner to go through the CSM steps presented in Skill Drill 14-1 and through RICE procedures for a victim who might have a fractured leg.

Independent Assignment: One student will be assigned/select this topic to teach a 40-minute lesson and activity with class

ARES: Model, practice and perform skills learned on ARES manikin

Medical Terminology Review:

Have students create flashcards containing the names of fractures on one side and a written definition and picture on the other.
Simulations-Anatomage Table-Practice knowledge of human anatomy
Complete lesson quiz

	<p>View, discuss and summarize notes: American Red Cross: Unit 8, Injuries to muscles, bones and joints.</p> <p>View, discuss and summarize notes: Standard First Aid, CPR, and AED. New York, NY: McGraw-Hill Higher Education, 2005. Print and DVD Clips, Chapter 8.</p> <p>Explain, model and practice “RICE.”</p> <p>Model and practice the use of splint on an extremity.</p> <p>Exit ticket on five new terms learned.</p> <p>Journal writing: reflection on items learned.</p> <p>Portfolio assessment critique.</p> <p><u>Lesson 4-Extremity Injuries</u></p> <p><u>Ch 14 and 15:</u> collect pictures of different fractures types and then outline their acute treatment</p> <p>Ch 16: map specific joint injuries to type of immobilization</p> <p>Note booking/Journaling in Google Classroom: Have students write a brief paper describing when it is appropriate to use heat, cold or both with an extremity injury. Students can report their findings to the class or hand in their paper as an individual writing assignment.</p> <p>Group activities: Have each student work with a partner to practice the RICE procedures for an injured elbow, hand, leg and ankle.</p> <p>Independent Assignment: One student will be assigned/select this topic to teach a 40-minute lesson and activity with class</p> <p>Medical Terminology Review: Have students locate visual images of contusions, strains, sprains, tendinitis, dislocations, and fractures. Then, have students write captions for each image.</p> <p>Complete lesson quiz and unit test.</p>
<p>Activities:</p>	<p><u>Applied Education Systems: Health Center 21:</u> https://aeseducation.com Modules on CPR and Basic Life Support; Emergency Care; Bloodborne Pathogens Site contains lessons, power points, video clips, worksheets, activities, quiz and tests.</p> <p><u>Socratic seminar/group classroom discussion:</u> Divide the class into groups of three or four, and instruct each on the parameters of their assignment.</p> <p><u>Note booking/Journaling in Google Classroom</u></p> <p><u>Modeling of strategies and skills/Simulation and Hands-on Learning-Skill practice/Role Play-Performance of skills using</u></p>

	<p><u>CAE ARES Manikin:</u></p> <p>Independent work or in groups of two, the student will perform an assignment utilizing the CAE ARES Manikin which can consist of:</p> <ul style="list-style-type: none"> -Communication skills with a patient -Head Injury Care -Spine Injury Care -Fracture first aid -Extremity injury first aid -Dislocation first aid -Sprain first aid <p>The above assignment will be followed up with a log/journal entry in google classroom, recording results and observations of patient assessment.</p>
<p>Experiences (Virtual and live field trips)</p>	<ul style="list-style-type: none"> ● Hands on interaction with CAE ARES manikin and Anatomage Table ● Suggested Guest Speaker: OHS Athletic Trainer to discuss first aid. ● Local First Aid Squad or Ambulance or an EMT or another emergency responder.
<p>Resources</p>	
<ul style="list-style-type: none"> ● Tyygerson, S. & Thygerson A., (n.d.). <i>First Aid, CPR, and AED Essentials, Sixth Edition</i>, Brigham Young University, ISBN-13: 9781449626624 ● Karren, K. (2012). <i>First aid for colleges and universities (10th ed.)</i>. Boston: Benjamin Cummings. ISBN-13: 9780321732590 <p><u>Applied Education Systems: Health Center 21:</u> https://aeseducation.com Modules on CPR and Basic Life Support; Emergency Care; Bloodborne Pathogens</p> <p>Wolgin, Francine. <i>Being a Nursing Assistant</i>. 8th ed. Saddle River, NJ: Prentice Hall Health, 2000. Print. Chapter 5-Infection Control, Chapter 6-Safety, Chapter 13-Emergency Care</p> <ul style="list-style-type: none"> ● Pulliam, Jolynn, and Francine Wolgin. <i>Workbook: Being a Nursing Assistant</i>. 8th ed. Upper Saddle River, NJ: Prentice Hall, 2000. Print. Chapter 5-Infection Control, Chapter 6-Safety Chapter 13-Emergency Care, ● Unit 4: American Red Cross: Unit 8, Injuries to muscles, bones and joints - http://con1.classes.redcross.org/learningcontent/PHSS/PHSS/Flanker/flanker_p6/Unit8/Unit_objectives.htm <ul style="list-style-type: none"> ● Laptops or computer ● Internet access ● Simulations-Anatomage Table ● CAE ARES Manikin ● First Aid Equipment for bandaging and splints. ● Sample First AID kit. ● Soap, water and paper towels. ● Disposable gloves and face masks. 	
<p>Pacing/ Time Frame:</p>	<p>Unit 4: Injuries: 15 class periods; 41 minutes per period.</p>

Unit 5	Sudden Illness and Poisons	Grade(s)	12
Overview/Rationale			
The focus of this unit is on understanding how to recognize sudden illness and poisonous skin contact. They will also practice first aid procedures.			
New Jersey Student Learning Standards			
<ul style="list-style-type: none"> ● 9.3.HL.1 Determine academic subject matter, in addition to high school graduation requirements, necessary for pursuing a health science career ● 9.3. HL.3 Identify existing and potential hazards to clients, co-workers, visitors and self in the healthcare workplace. ● 9.3. HL.5 Analyze the legal and ethical responsibilities, limitations and implications of actions within the healthcare workplace. ● 9.3. LW-EFM.1 Demonstrate effective communication skills (e.g., writing, speaking , listening and nonverbal communication) while utilizing communications equipment and platforms common to emergency and fire management systems. ● 9.3. LW-EFM.2 Manage an incident scene as the first responder using emergency response skills. ● 9.3. LW-EFM.4 Demonstrate an understanding of the objectives and a commitment to the mission of emergency and fire management services. ● 9.3. LW-EFM.5 Execute safety procedures and protocols associated with local state and federal regulations. ● 9.3. LW-EFM.7 Describe the legal regulatory and organizational guidelines governing emergency and fire management services. ● 9.3. LW-EFM.9 Execute protocols for handling emergency situations that range from minor medical and fire emergencies to area-wide incidents. ● 9.3. LW-EFM.10 Demonstrate the use and various applications of the equipment commonly used in emergency and fire management services. 			
Career Readiness, Life Literacies, and Key Skills			
<ul style="list-style-type: none"> ● 9.2.5.CAP.4: Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements. ● 9.2.8.CAP.9: Analyze how a variety of activities related to career preparation (e.g., volunteering, apprenticeships, structured learning experiences, dual enrollment, job search, scholarships) impacts postsecondary options. ● 9.2.12.CAP.2: Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs. ● 9.2.12.CAP.6: Identify transferable skills in career choices and design alternative career plans based on those skills. ● 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1. 12prof.CR3a). ● 9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4. 12prof.CR2b, 2.2.12.LF.8). ● 9.4.12. CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1. 12acc.C1b, 2.2.12. PF.3). ● 9.4.12. CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1. 3E.12profCR3.a). ● CRP1. Act as a responsible and contributing citizen and employee. ● CRP2. Apply appropriate academic and technical skills. ● CRP3. Attend to personal health and financial well-being. ● CRP4. Communicate clearly and effectively and with reason. ● CRP5. Consider the environmental, social and economic impacts of decisions. 			

- CRP6. Demonstrate creativity and innovation.
- CRP7. Employ valid and reliable research strategies.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP9. Model integrity, ethical leadership and effective management.
- CRP10. Plan education and career paths aligned to personal goals.
- CRP11. Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.

Technology/Computer Science and Design Thinking	Interdisciplinary Standards
<p>8.1.12.A.1 Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.</p> <p>8.1.12. D.1 Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.</p> <p>9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specific task (e.g., W.11-12.6.).</p> <p>9.4.12.TL.4: Collaborate in online learning communities or social networks or virtual worlds to analyze and propose a resolution to a real-world problem.</p>	<p>NJSLSA.R1: Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.</p> <p>NJSLSA.R4: Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning and tone</p> <p>NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p>NJSLSA.W5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.</p> <p>NJSLSA.W6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.</p> <p>RI.11-12.1. Accurately cite strong and thorough textual evidence, (e.g., via discussion, written response, etc.), to support analysis of what the text says explicitly as well as inferentially, including determining where the text leaves matters uncertain.</p> <p>RI.11-12.2. Determine two or more central ideas of a text, and analyze their development and how they interact to provide a complex analysis; provide an objective summary of the text.</p> <p>Science HS-LS1-3. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p> <p>HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p>

HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.

HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.

HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

Health 2.1.12.D.6 Demonstrate first-aid procedures, including Basic Life Support and automatic external defibrillation, caring for head trauma, bone and joint emergencies, caring for cold and heat injuries, and responding to medical emergencies.

Essential Question(s)

- How does one identify the different types of sudden illness?
- How does a person determine if a substance is a poison?
- How does a person provide first aid for animal bites?

Enduring Understandings

- Sudden illness is often associated with a decrease in a person's alertness and responsiveness caused by brain injury and lack of either oxygen or glucose reaching the brain, which can be assessed using the mnemonic STOP.
- Anything that can harm someone if it is used the wrong way, by the wrong person or used in the wrong way is a poison.
- Animal bite concerns include immediate tissue damage and later infections from microorganisms.

Student Learning Targets/Objectives

Unit 5

Lesson 1-Sudden Illness Emergencies

- Use the mnemonic STOP (Sugar low/ Seizure/Stroke/Shock; Temperature; Oxygen; Poisoning/pressure on the brain) to describe five signals of sudden illness.
- Recognize the difference between someone suffering from a heart attack and cardiac arrest.
- Identify and describe the care necessary for a stroke or heart attack victim or a person suffering from angina.
- Explain how to use the mnemonic FAST (Facial drooping, Arm weakness, Speech difficulty, Time) for someone having a Stroke.
- Identify and describe the care necessary for a victim suffering from asthma; hyperventilation or chronic obstructive pulmonary disease (COPD).
- Identify and describe the care necessary for a victim experiencing the following: fainting, diabetic emergency, seizures, abdominal pain, nausea and vomiting, diarrhea and constipation.

Lesson 2-Emergency First Aid for Poisoning and Misuse of Substances

- Define a poison and the four ways it can enter the body and recognize the signs of ingested poisoning and describe how to administer care for victims.
- Recognize the signs of alcohol intoxication and describe how to administer care for victims.
- Classify different types of drugs and recognize the signs of drug use and describe how to administer care for users.
- Recognize the signs of carbon monoxide poisoning and describe how to administer care for victims.
- Describe and recognize the effects of poison ivy, poisons oak and poison sumac, and the stinging nettle, and how to administer care for victims.
- Demonstrate how to call 911 and the Poison Control Center for a poison victim
- Create a list of questions that need to be answered if poisoning is suspected.
- Create a list of five factors to prevent poisonings and five factors to prevent unintentional misuse or abuse of alcohol or drugs.

Lesson 3-Emergency First Aid for Bites and Stings

- Define rabies and identify a possibly rabid animal.
- Recognize and describe the care for victims of human and animal bites, snake bites and insect bites.
- Describe the black widow spider, brown recluse spider, tarantula and recognize and describe the care from its bite or embedded hairs if applicable.
- Recognize and describe the care for victims of a common aggressive house spider bite.
- Describe the scorpion, and recognize and describe the care from its sting.
- Recognize and describe the care for victims of bites from the following: mosquito, tick bite, shark, barracuda or moray eel sting, other marine stings, animals, snakes, humans, bees, wasps or scorpions.

Assessments

Pre and Formative

Unit Group Scenarios and discussion

Topical On-line quiz

Journal writing reflection on items learned.

Unit assignments

Lesson quiz

Wolgin Worksheet pages

Wolgin Textbook Chapter Review

Applied Education Systems: Health Center 21: <https://aeseducation.com> Module pre-test, worksheets and activities

Summative

Unit test

Online Rutgers, Final Exam

Authentic

Writing assignment

Project (Disaster Kit, PowerPoint on Emergency Services at local, state, etc. levels., HOSA skill performance guidelines.)

Wolgin Textbook, Critical Thinking Questions, Journal entry

Journal writing: reflection on items learned.

First Aid Skill Performance

Teaching and Learning Actions

Instructional Strategies

Unit 5

Lesson 1-Sudden Illness Emergencies

Ch 17- outline a series of medical history questions for a suspected case of a stroke, myocardial infarction, angina, and asthma

Note booking/Journaling in Google Classroom:

Have students write about a time when they experienced one or more of the illnesses mentioned in this lesson. Students should include the signs, symptoms experienced, as well as the ways they treated their illness. If they have not suffered from any of these illnesses, have them write about someone they know who has.

Group activities:

In groups, give each student a card labeled with an illness. Remind students to keep their cards hidden. Have each student role play their illness, acting out the symptoms, while other members try to guess which illness they have. Then, each group can treat the sick member based on the identified illness.

Independent Assignment: One student will be assigned/select this topic to teach a 40-minute lesson and activity with class

Medical Terminology Review:

Have students research the difference between a heart attack and a cardiac arrest. Simulations-Anatome Table-Practice knowledge of human anatomy, cardiovascular system.

Complete lesson quiz.

View, discuss and record notes from American Red Cross: Unit 4, Sudden Illness.

Do Now: list five signals of sudden illness.

Demonstrate and practice the care necessary for a fainting victim.

Demonstrate and practice the care necessary for a diabetic emergency.

Demonstrate and practice the care necessary for seizures.

Demonstrate and practice the care necessary for stroke victims.

View, discuss and summarize notes from Standard First Aid, CPR, and AED. New York, NY: McGraw-Hill Higher Education, 2005. Print and DVD Clips, Sudden Illness Emergencies.

Zigzag read the Wolgin textbook 289 to 290 and summarized notes.

Complete Wolgin. Workbook: Ch 13 on corresponding topic area.

Exit ticket- sentences on five new terms

Journal writing: reflection on items learned.

Lesson 2-Emergency First Aid for Poisoning and Misuse of Substances

Ch 18- List some commonly found poisons and their antidotes

Note booking/Journaling in Google Classroom:

Have students divide their paper into quadrants, labeling each square with a form of poison (solid, liquid, sprays and gases). Have students investigate on-line and in their home, various poisonous substances and record them in the appropriate quadrant.

Group activities:

Break students into groups of three and have each member take turns acting out the effects of different drugs, while the group members try to recognize the drug's effects. Each group member should have a turn acting out the effects of drugs.

Independent Assignment: One student will be assigned/select this topic to teach a 40-minute lesson and activity with class

ARES: Model, practice and perform skills learned on ARES manikin

Medical Terminology

Have students locate visual images of poison ivy, oak, sumac and stinging nettle. Then, have students write captions/labels for each image and describe the effects of each plant on human skin.

Complete lesson quiz.

Zigzag read the Wolgin textbook 293 to 295 and summarized notes.

Complete Wolgin. Workbook: Ch 13 on corresponding topic area.

View, discuss and summarize notes from Standard First Aid, CPR, and AED. New York, NY: McGraw-Hill Higher Education, 2005. Print and DVD Clips, Chapter 10. Model and practice how to call 911 and the Poison Control Center for a poison victim.

Create a first aid fact sheet for swallowed or inhaled poisons or an apparent drug or alcohol overdose or for poison ivy, oak and sumac.

Do Now: Create a list of five factors to prevent poisonings.

Do Now: Create a list of five factors to prevent unintentional misuse or abuse of alcohol or drugs.

Journal writing: reflection on items learned.

Lesson 3-Emergency First Aid for Bites and Stings

Ch 19- Identify locally found insects/animals and treatment for their bites

Note booking/Journaling in Google Classroom:

Have students research and write a one-page paper describing Africanized (killer) bees, describing their origin and migration into the U.S. Also, they should write about treatment for Africanized bee stings.

Group activities:

Break the class into groups of three. Prepare index cards with signs and symptoms of either an animal or human bite, insect sting, spider bite or marine mammal bite.

One index card to a group. Have students research the symptoms to determine the type of bite or sting and determine a course of action. Other class members can agree or disagree with the group's conclusion.

Independent Assignment: One student will be assigned/select this topic to teach a 40-minute lesson and activity with class

Medical Terminology Review:

Have students research and create a list of marine animals that have nematocysts.

Complete lesson quiz and unit test.

Zigzag read the Wolgin textbook 293 to 295 and summarized notes.

Complete Wolgin. Workbook: Ch 13 on corresponding topic area.

View, discuss and summarize notes from Standard First Aid, CPR, and AED. New York, NY: McGraw-Hill Higher Education, 2005. Print and DVD Clips, Chapter 10.

	<p>Create a first aid fact sheet for an animal bite, snake bite, human bite, spider bite, tick bite, bee or wasp sting, scorpion sting. Journal writing: reflection on items learned.</p>
<p>Activities:</p>	<p><u>Applied Education Systems: Health Center 21</u>: https://aeseducation.com Modules on CPR and Basic Life Support; Emergency Care; Bloodborne Pathogens Site contains lessons, power points, video clips, worksheets, activities, quiz and tests.</p> <p><u>Modeling of strategies and skills/Simulation and Hands-on Learning-Skill practice/Role Play-Performance of skills using CAE ARES Manikin:</u></p> <p>Independent work or in groups of two, the student will perform an assignment utilizing the CAE ARES Manikin which can consist of:</p> <ul style="list-style-type: none"> -Communication skills with a patient -First Aid for bites, stings -Practice Vital Sign skills: blood pressure, pulse, respirations -Case study treatment: Identify drug overdose; Identify poison; Identify stroke -Pupil condition observation <p>The above assignment will be followed up with a log/journal entry in google classroom, recording results and observations of patient assessment.</p>
<p>Experiences (Virtual and live field trips)</p>	<ul style="list-style-type: none"> ● Hands on interaction with CAE ARES manikin ● Suggested Guest Speaker: OHS Athletic Trainer to discuss first aid. ● Local First Aid Squad or Ambulance or an EMT or another emergency responder.
<p>Resources</p>	
<ul style="list-style-type: none"> ● Tyggerson, S. & Thygerson A., (n.d.). <i>First Aid, CPR, and AED Essentials, Sixth Edition</i>, Brigham Young University, ISBN-13: 9781449626624 ● Karren, K. (2012). <i>First aid for colleges and universities (10th ed.)</i>. Boston: Benjamin Cummings. ISBN-13: 9780321732590 ● <u>Applied Education Systems: Health Center 21</u>: https://aeseducation.com Modules on CPR and Basic Life Support; Emergency Care; Bloodborne Pathogens ● Wolgin, Francine. <i>Being a Nursing Assistant</i>. 8th ed. Saddle River, NJ: Prentice Hall Health, 2000. Print. Chapter 5-Infection Control, Chapter 6-Safety, Chapter 13-Emergency Care ● Pulliam, Jolynn, and Francine Wolgin. <i>Workbook: Being a Nursing Assistant</i>. 8th ed. Upper Saddle River, NJ: Prentice Hall, 2000. Print. Chapter 5-Infection Control, Chapter 6-Safety Chapter 13-Emergency Care, ● Unit 5: American Red Cross: Unit 4, Sudden Illness - http://con1.classes.redcross.org/learningcontent/PHSS/PHSS/Flanker/flanker_p6/Unit5/Unit_objectives.html ● Unit 5: American Red Environmental Emergencies – Unit 6. http://con1.classes.redcross.org/learningcontent/PHSS/PHSS/Flanker/flanker_p6/Unit6/heat_related_illnesses.html ● Unit 5: Heat Stroke online quiz http://www.urmc.rochester.edu/encyclopedia/document.aspx?ContentTypeID=40&ContentID=HeatStrokeHeatStrokeQuiz ● Unit 5: Hypothermia On line quiz http://www.urmc.rochester.edu/encyclopedia/document.aspx?ContentTypeID=40&ContentID=HypothermiaQuiz ● Laptops or computer ● Internet access 	

- Simulations-Anatomage Table
- CAE ARES Manikin
- First Aid Equipment for bandaging and splints.
- Soap, water and paper towels.
- Disposable gloves and face masks.

Pacing/ Time Frame:

Unit 5: Sudden Illness and Poisons: 15 class periods; 41 minutes per period.

Unit 6	Exposure and Rescue	Grade(s)	12
Overview/Rationale			
The focus of this unit is on understanding how to recognize and treat victims with heat and cold emergencies, as well as drowning and other accidents, mental illness and abuse. They will also practice first aid procedures.			
New Jersey Student Learning Standards			
<ul style="list-style-type: none"> ● 9.3.HL.1 Determine academic subject matter, in addition to high school graduation requirements, necessary for pursuing a health science career ● 9.3. HL.3 Identify existing and potential hazards to clients, co-workers, visitors and self in the healthcare workplace. ● 9.3. HL.5 Analyze the legal and ethical responsibilities, limitations and implications of actions within the healthcare workplace. ● 9.3. LW-EFM.1 Demonstrate effective communication skills (e.g., writing, speaking , listening and nonverbal communication) while utilizing communications equipment and platforms common to emergency and fire management systems. ● 9.3. LW-EFM.2 Manage an incident scene as the first responder using emergency response skills. ● 9.3. LW-EFM.4 Demonstrate an understanding of the objectives and a commitment to the mission of emergency and fire management services. ● 9.3. LW-EFM.5 Execute safety procedures and protocols associated with local state and federal regulations. ● 9.3. LW-EFM.7 Describe the legal regulatory and organizational guidelines governing emergency and fire management services. ● 9.3. LW-EFM.9 Execute protocols for handling emergency situations that range from minor medical and fire emergencies to area-wide incidents. ● 9.3. LW-EFM.10 Demonstrate the use and various applications of the equipment commonly used in emergency and fire management services. 			
Career Readiness, Life Literacies, and Key Skills			
<ul style="list-style-type: none"> ● 9.2.5.CAP.4: Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements. ● 9.2.8.CAP.9: Analyze how a variety of activities related to career preparation (e.g., volunteering, apprenticeships, structured learning experiences, dual enrollment, job search, scholarships) impacts postsecondary options. ● 9.2.12.CAP.2: Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs. ● 9.2.12.CAP.6: Identify transferable skills in career choices and design alternative career plans based on those skills. ● 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1. 12prof.CR3a). ● 9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4. 12prof.CR2b, 2.2.12.LF.8). ● 9.4.12. CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1. 12acc.C1b, 2.2.12. PF.3). ● 9.4.12. CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1. 3E.12profCR3.a). ● CRP1. Act as a responsible and contributing citizen and employee. ● CRP2. Apply appropriate academic and technical skills. ● CRP3. Attend to personal health and financial well-being. ● CRP4. Communicate clearly and effectively and with reason. ● CRP5. Consider the environmental, social and economic impacts of decisions. 			

- CRP6. Demonstrate creativity and innovation.
- CRP7. Employ valid and reliable research strategies.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP9. Model integrity, ethical leadership and effective management.
- CRP10. Plan education and career paths aligned to personal goals.
- CRP11. Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.

Technology/Computer Science and Design Thinking	Interdisciplinary Standards
<p>8.1.12.A.1 Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.</p> <p>8.1.12. D.1 Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.</p> <p>9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specific task (e.g., W.11-12.6.).</p> <p>9.4.12.TL.4: Collaborate in online learning communities or social networks or virtual worlds to analyze and propose a resolution to a real-world problem.</p>	<p>NJSLSA.R1. Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.</p> <p>NJSLSA.R4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning and tone</p> <p>NJSLSA.W4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p>NJSLSA.W5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.</p> <p>NJSLSA.W6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.</p> <p>RI.11-12.1. Accurately cite strong and thorough textual evidence, (e.g., via discussion, written response, etc.), to support analysis of what the text says explicitly as well as inferentially, including determining where the text leaves matters uncertain.</p> <p>RI.11-12.2. Determine two or more central ideas of a text, and analyze their development and how they interact to provide a complex analysis; provide an objective summary of the text.</p> <p>Science HS-LS1-3. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p> <p>HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p>

HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.

HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.

HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.

Health 2.1.12.D.6 Demonstrate first-aid procedures, including Basic Life Support and automatic external defibrillation, caring for head trauma, bone and joint emergencies, caring for cold and heat injuries, and responding to medical emergencies.

Essential Question(s)

- How does one determine the proper first aid for cold and hot related emergencies?
- How does one properly rescue and move victims around water, eclectic and hazardous materials?
- How do you stabilize an injury?

Enduring Understandings

- Stopping further heat loss, getting the victim out of the cold and handling the victim gently are steps to take by all cold-related victims while assessing their symptoms for mild or severe hypothermia.
- Heat-related emergency care starts by identifying if the person has heat exhaustion or heatstroke.
- Reach-throw-row-go identifies the sequence for attempting a water rescue
- All injured parts should be stabilized before and during moving.

Student Learning Targets/Objectives

Unit 6

Lesson 1-Emergency First Aid for Cold Related Exposure to the Elements

- **Ch 20 and 21:** Compare and contrast cold vs heat injuries and describe how body temperature is controlled and how the body reacts to cold.
- List and describe the four ways the body loses heat and describe the factors that make people more or less susceptible to cold.
- Describe how altitude, water, and wind all affect body temperature.
- Recognize the signs of freezing and unfreezing emergencies and describe how to administer care.
- Explain the signals of dehydration, frostbite and hypothermia and describe the first aid.

Lesson 2-Emergency First Aid for Heat Related Exposure to the Elements

- Ch 21: Research the deleterious effects of electrolyte imbalances, hypo- and hypernatremia, hypo- and hyperkalemia
- Describe how body temperature is controlled and how the body stays cool and describe what electrolytes are, how the body uses them and the best way to replace them.
- Describe the effects of humidity on the body and explain the signals of heat exhaustion and heat stroke.

- Differentiate between the signs of heat cramps, heat exhaustion and heat stroke and describe the first aid.

Lesson 3-Rescuing and Moving Victims/Mental Disorders and Abuse

- Ch 22: Outline abnormal deliveries and their emergency treatments
- Ch 23: Research the internet for interviews of patients with a variety of mental health disorders (bipolar disorder, depression, schizophrenia), record similarities and differences.
- Discuss the physical presentations suggestive of child abuse
- Describe the steps in reach-throw-row-go in a water rescue.
- Define near-drowning and list the different types of drowning and how to care for near-drowning victims.
- Describe the hazards of a cold-water immersion and the factors involved in the speed at which a person cools down.
- Describe the heat lessening position for one or more victims.
- Describe an ice rescue for victims both close to and away from the shore.
- Describe the factors involved in an electrical emergency rescue.
- List the warning signs of hazardous materials.
- Describe how to give aid in a motor vehicle crash.
- Describe what to do should you encounter a fire.
- Describe how to handle threatening dogs and farm animals at the scene of an emergency.
- Define triage and the four classifications of an injured victim.
- Describe the guideline for moving victims and perform emergency and non-emergency moves on injured victims.

Assessments

Pre and Formative

Unit Group Scenarios and discussion

Topical On-line quiz

Journal writing reflection on items learned.

Unit assignments

Lesson quiz

Wolgin Worksheet pages

Wolgin Textbook Chapter Review

Applied Education Systems: Health Center 21: <https://aeseducation.com> Module pre-test, worksheets and activities

Summative

Unit test

Online Rutgers, Final Exam

Authentic

Writing assignment

Project (Disaster Kit, PowerPoint on Emergency Services at local, state, etc. levels., HOSA skill performance guidelines.)

Wolgin Textbook, Critical Thinking Questions, Journal entry

Journal writing: reflection on items learned.

First Aid Skill Performance for hot and cold related emergencies, drowning, car accidents, etc.

Teaching and Learning Actions

Instructional Activities

Unit 6

Lesson 1-Emergency First Aid for Cold Related Exposure to the Elements

Note booking/Journaling in Google Classroom:

Have students write a one-page paper describing the terms trench and immersion foot, also describe the term's origination and how those terms apply to the injuries they describe.

Group activities:

Have each student work with a partner to research wind chill and determine the wind chill factor on a particular day and the amount of time it would take for frostbite to set in, on exposed skin.

Independent Assignment: One student will be assigned/select this topic to teach a 40-minute lesson and activity with class

Medical Terminology Review:

Have students research the differences between frostbite and frostnip as well as the differences in how they should be treated.

Complete lesson quiz.

View, discuss and summarize notes from American Red Cross Environmental Emergencies – Unit 6.

Complete Hypothermia online quiz.

Exit ticket: sentences on five new terms learned.

Journal writing: reflection on items learned.

Portfolio assessment critique.

Complete online American Red Cross course assessment.

Lesson 2-Emergency First Aid for Heat Related Exposure to the Elements

Note booking/Journaling in Google Classroom:

Have students research other heat illnesses such as heat syncope, heat edema, and prickly heat and write a one-page paper describing the symptoms of each heat illness and the proper care for each.

Group activities:

Have each student work with two partners to present symptoms of either heat cramps, exhaustion or heat stroke. Have other students first determine the heat illness affecting the victim, and then the treatment needed.

Independent Assignment: One student will be assigned/select this topic to teach a 40-minute lesson and activity with class

Medical Terminology Review:

Have students research the meaning of thermoregulation and what the body does naturally to regulate its temperature.

Complete lesson quiz.

View, discuss and summarize notes from American Red Environmental Emergencies – Unit 6.

Complete Heat Stroke online quiz.

Exit ticket: sentences on five new terms learned.

Journal writing: reflection on items learned.

Portfolio assessment critique.

Lesson 3-Rescuing and Moving Victims

	<p>Note booking/Journaling Note booking/Journaling writing assignments in Google Classroom in Google Classroom: Have students write a narrative involving an emergency rescue. In their story, students should include how the emergency occurred, how they rescued or attempted to rescue the victim, and the outcome of the emergency situation.</p> <p>Group activities: Have each student practice the emergency and non-emergency moves, using blankets, poles and a longboard if available. Independent Assignment: One student will be assigned/select this topic to teach a 40-minute lesson and activity with class</p> <p>Medical Terminology Review: Have students research cases of dry drawings, wet drowning and secondary drowning.</p> <p>Complete lesson quiz and unit test. Complete AHA final exam.</p>
<p>Activities, cont.:</p>	<p><u>Applied Education Systems: Health Center 21</u>: https://aeseducation.com Modules on CPR and Basic Life Support; Emergency Care; Bloodborne Pathogens Site contains lessons, power points, video clips, worksheets, activities, quiz and tests.</p> <p><u>CAE ARES Manikin:</u> Independent work or in groups of two, the student will perform an assignment utilizing the CAE ARES Manikin which can consist of: -Communication skills with a patient -Practice Vital Sign skills: blood pressure, pulse, respirations -First Aid -Case study treatment -Stethoscope performance The above assignment will be followed up with a log/journal entry in google classroom, recording results and observations of patient assessment</p>
<p>Experiences (Virtual and live field trips)</p>	<p>Suggested Guest Speaker: OHS Athletic Trainer to discuss first aid. Local First Aid Squad or Ambulance or an EMT or another emergency responder. Hands on interaction with CAE ARES manikin</p>
<p>Resources</p>	
<ul style="list-style-type: none"> ● Tyggerson, S. & Thygerson A., (n.d.). <i>First Aid, CPR, and AED Essentials, Sixth Edition</i>, Brigham Young University, ISBN-13: 9781449626624 ● Karren, K. (2012). <i>First aid for colleges and universities (10th ed.)</i>. Boston: Benjamin Cummings. ISBN-13: 9780321732590 ● Applied Education Systems: Health Center 21: aeseducation.com Modules on CPR and Basic Life Support; Emergency Care; Bloodborne Pathogens Site contains lessons, power points, video clips, worksheets, activities, quiz and tests. 	

- Unit 6: American Red Cross, Online Course Test;
http://con1.classes.redcross.org/learningcontent/PHSS/PHSS/Flanker/flanker_p6/index.htm
- Laptops or computer
- Internet access
- Simulations-Anatomage Table
- CAE ARES Manikin
- CPR Mannequins and face shields
- First Aid Equipment for bandaging and splints.
- Sample AED device.
- Sample First AID kit.
- Sample choking mannequin.
- Soap, water and paper towels and disposable gloves and face masks.

Pacing/ Time Frame:

Unit 6: Exposure and Rescue: 15 class periods; 41 minutes per period.