



## HEALTHCARE SCIENCE

**COURSE:** 25.564 Emergency and Disaster Preparedness

**UNIT:** 8.1 Extinguish Small Fires



### INTRODUCTION

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**Annotation:**

This unit will cover the various origins of fires, classes of fires, and the correct means to extinguish each type of fire.

**Grade(s):**

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

**Time:**

Five 50 minute periods

**Author:**

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**Additional Author(s):**

Michael Higgins, Language Arts

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**Students with Disabilities:**

For students with disabilities, the instructor should refer to the student's IEP to be sure that the accommodations specified are being provided. Instructors should also familiarize themselves with the provisions of Behavior Intervention Plans that may be part of a student's IEP. Frequent consultation with a student's special education instructor will be beneficial in providing appropriate differentiation.



## FOCUS STANDARDS

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### **GPS Focus Standards:**

**HS-EDP-5: FIRE CHEMISTRY.** Students will understand the various origins of fires, classes of fires, and the correct means to extinguish each type of fire.

- a. Explain the role that individuals play in fire safety.
- b. Identify and reduce potential fire risks in the home, school, and workplace.
- c. Conduct a basic size-up for a fire emergency.
- d. Understand minimum safety precautions, including safety equipment and utility control.

### **GPS Academic Standards:**

**ELA11C1.** The student demonstrates understanding and control of the rules of the English language, realizing that usage involves the appropriate application of conventions and grammar in both written and spoken formats.

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

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

**ELA11W3.** The student uses research and technology to support writing.

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



## UNDERSTANDINGS & GOALS

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### Enduring Understandings:

- Students will understand when and how to activate the services of the fire department. Students will remember the meaning of the acronym *RACE* to use in evacuating in case of a fire and the acronym *PASS* when using a fire extinguisher. Students will understand how to use a fire extinguisher as well as alternate means of extinguishing small fires, when it is safe to do so, and when it is preferable to evacuate.

### Essential Questions:

- What are ways to reduce the amount of damage a fire will do in a home?
- How do you decide if you should attempt to extinguish a fire?
- Which type of fire extinguisher should be used on any given type of fire?
- What are alternate ways to extinguish small fires?

### Knowledge from this Unit:

- Types of fires and fire extinguishers.
- Meaning of the acronyms *RACE* and *PASS*.

### Skills from this Unit:

- Student can activate emergency services and the fire department.
- Student can determine when it is not safe to attempt to extinguish a fire.
- Student can extinguish small fires safely using the correct fire extinguisher or other means of suppression.



## ASSESSMENT(S)

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### Assessment Method Type:

- ☐ Pre-test
- ☐ Objective assessment - multiple-choice, true- false, etc.
  - ☐ Quizzes/Tests
  - ☐ Unit test
- ☒ Group project
- ☐ Individual project
- ☐ Self-assessment - May include practice quizzes, games, simulations, checklists, etc.
  - ☐ Self-check rubrics
  - ☐ Self-check during writing/planning process
  - ☐ Journal reflections on concepts, personal experiences and impact on one's life
  - ☐ Reflect on evaluations of work from teachers, business partners, and competition judges
  - ☐ Academic prompts
  - ☐ Practice quizzes/tests
- ☐ Subjective assessment/Informal observations
  - ☐ Essay tests
  - ☐ Observe students working with partners
  - ☐ Observe students role playing
- ☐ Peer-assessment
  - ☐ Peer editing & commentary of products/projects/presentations using rubrics
  - ☐ Peer editing and/or critiquing
- ☐ Dialogue and Discussion
  - ☐ Student/teacher conferences
  - ☐ Partner and small group discussions
  - ☐ Whole group discussions
  - ☐ Interaction with/feedback from community members/speakers and business partners
- ☒ Constructed Responses
  - ☐ Chart good reading/writing/listening/speaking habits
  - ☒ Application of skills to real-life situations/scenarios
- ☐ Post-test

### Assessment(s) Title:

Fire Extinguisher Live Training

### Assessment(s) Description/Directions:

Fire Extinguisher Live Training: perform activity with assistance of fire department.

### Attachments for Assessment(s): Please list.

N/A



# LEARNING EXPERIENCES

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## Sequence of Instruction

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

HS-EDP-5: FIRE CHEMISTRY. Students will understand the various origins of fires, classes of fires, and the correct means to extinguish each type of fire.

ELA11C1. The student demonstrates understanding and control of the rules of the English language, realizing that usage involves the appropriate application of conventions and grammar in both written and spoken formats.

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

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

ELA11W3. The student uses research and technology to support writing.

### 2. Review Essential Questions.

- What are ways to reduce the amount of damage a fire will do in a home?
- How do you decide if you should attempt to extinguish a fire?
- Which type of fire extinguisher should be used on any given type of fire?
- What are alternate ways to extinguish small fires?

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

- Extinguish- to put out something that is burning
- Firebreak- an interruption in combustible material which helps to stop a fire in its tracks-
- PASS-Acronym for using fire extinguisher-Pull, Aim, Squeeze, Sweep
- RACE- Acronym for remembering how to respond to a fire in a facility
- Suppression – Forcefully restraining fire

## LESSON ONE/TWO

1. Warm-up Activity: Ask students to recall significant fires in recent or past history. Discuss what they know about these fires.

2. Assign students into small groups. Have each group research one of the major fires in history (Great Chicago Fire, Great Fire of London, San Francisco Earthquake Fire, Coconut Grove Fire, etc). Students should create a timeline poster of the events surrounding the fire.

3. Tape timelines to the walls and have students present their information to the class.
4. Wrap-up activity: discuss how each fire might have been prevented or contained. Discuss how each fire would be different today.

### **LESSON THREE**

1. Warm-up Activity: Ask students to spend one minute writing down everything they know (or think they know) about fire extinguishers. Share with class.
2. Review acronyms RACE and PASS.
3. Assign students into pairs or groups of three. Give each group one of the following topics to research and prepare a 2-3 minute informative report to the class. Have groups report in the same order as the topics are listed:
  - Types of Fire Extinguishers (types, when to use each, etc)
  - Types of Smoke Detectors (how they work, where they should be placed, etc)
  - Carbon Monoxide Detectors (how they work, where they should be placed, etc)
  - How Fire Extinguishers Work
  - How to Use a Fire Extinguisher
  - Care and Maintenance of Fire Extinguishers
  - When NOT to Fight a Fire
  - Other Ways to Put Out Small Fires (without an extinguisher)
4. Have students present their information to the class.
5. Wrap-up activity. Ask students to raise hand and tell class new fact they learned from another student's presentation today OR tell class how something presented today relates to their own life personally (remind them to maintain confidentiality at all times).

### **LESSON FOUR**

1. Warm-up Activity: Show room flashover video (attached) and discuss how quickly fires can spread.
2. Place students into small groups. Have them research the following topics and create Safety Tip posters for each topic.
  - Campfire Safety
  - Charcoal Grill / Barbeque Safety
  - Forest Fire Prevention
  - Alternative Heat Safety (such as space heaters)
  - Sprinkler Systems (where they are required, what they are and how they work)
  - Burning Debris
3. Have students' present posters.
4. Wrap-up activity: Show Kitchen Oil video clip (attached).

**Attachments for Learning Experiences: Room Flashover and Kitchen Oil Fire Videos.**

#### **LESSON FIVE**

1. Warm-up Activity: review safety rules for lab activity.
2. With local fire department assistance, have students extinguish barrel fires in parking lot.
3. Wrap-up activity: discuss how students reacted in a live fire situation.

**Attachments for Learning Experiences:**

**Notes & Reflections:**



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

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**Culminating Unit Performance Task Title:**

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

**Attachments for Culminating Performance Task**



## UNIT RESOURCES

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### Web Resources:

[www.nhtsa.gov](http://www.nhtsa.gov)

[www.citizencorps.gov/cert/](http://www.citizencorps.gov/cert/)

<http://www.fire-extinguisher101.com/index.html>

### Attachment(s):

### Materials & Equipment:

### What 21st Century Technology was used in this unit:

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