
Hazardous Materials I and II Activity

Instructor Guide

Note to Instructor

Hazardous Materials I and II Activity is the activity in the Hazardous Materials Learning Module. It is recommended that Hazardous Materials I and II PKs be covered prior to this activity. Below is the [Hazardous Material Learning Module](#):

- Hazardous Materials I and II Knowledge Probe (pre-test / post-test)
- Hazardous Materials I
- Hazardous Materials II
- **Hazardous Materials I and II Activity**
- Hazardous Materials I and II Final Assessment

Description and Estimated Time to Complete

The Activity provides

- a **crossword puzzle** that tests your knowledge of the terminology and acronyms associated with hazardous materials,
- a link to a jeopardy game that review HazMat terminology, and
- **post-activity questions** that ask you to cite specific examples related to chemicals and their hazards.

Allow at least 20 minutes to complete the crossword puzzle.

Of course, the actual time it takes depends on how much you know about hazardous materials.

Allow 30 minutes to complete the Post-Activity questions.

Introduction

Employers, employees, students, instructors – anyone working with or around chemicals must understand

- what they are working with,
- how to protect themselves and others, and
- must have access to and be able to interpret information about the chemicals in their work or educational environment.

In order to effectively interpret a Material Safety Data Sheet (MSDS) and chemical label, one must understand

- the terminology associated with chemicals,
- their health and physical hazards,
- the characteristics of various chemicals, and
- the rules to apply when working with and around chemicals.

This activity tests your knowledge of the terminology, hazards, and characteristics of chemicals.

Activity Objectives and Outcomes

Activity Objectives

- Identify the related terms or acronyms associated with definitions related to hazardous materials.
- Cite specific examples of various chemical characteristics and exposure.

Activity Outcomes

By completing the crossword puzzle and post-activity questions, you will demonstrate your basic understanding of the terminology associated with hazardous materials.

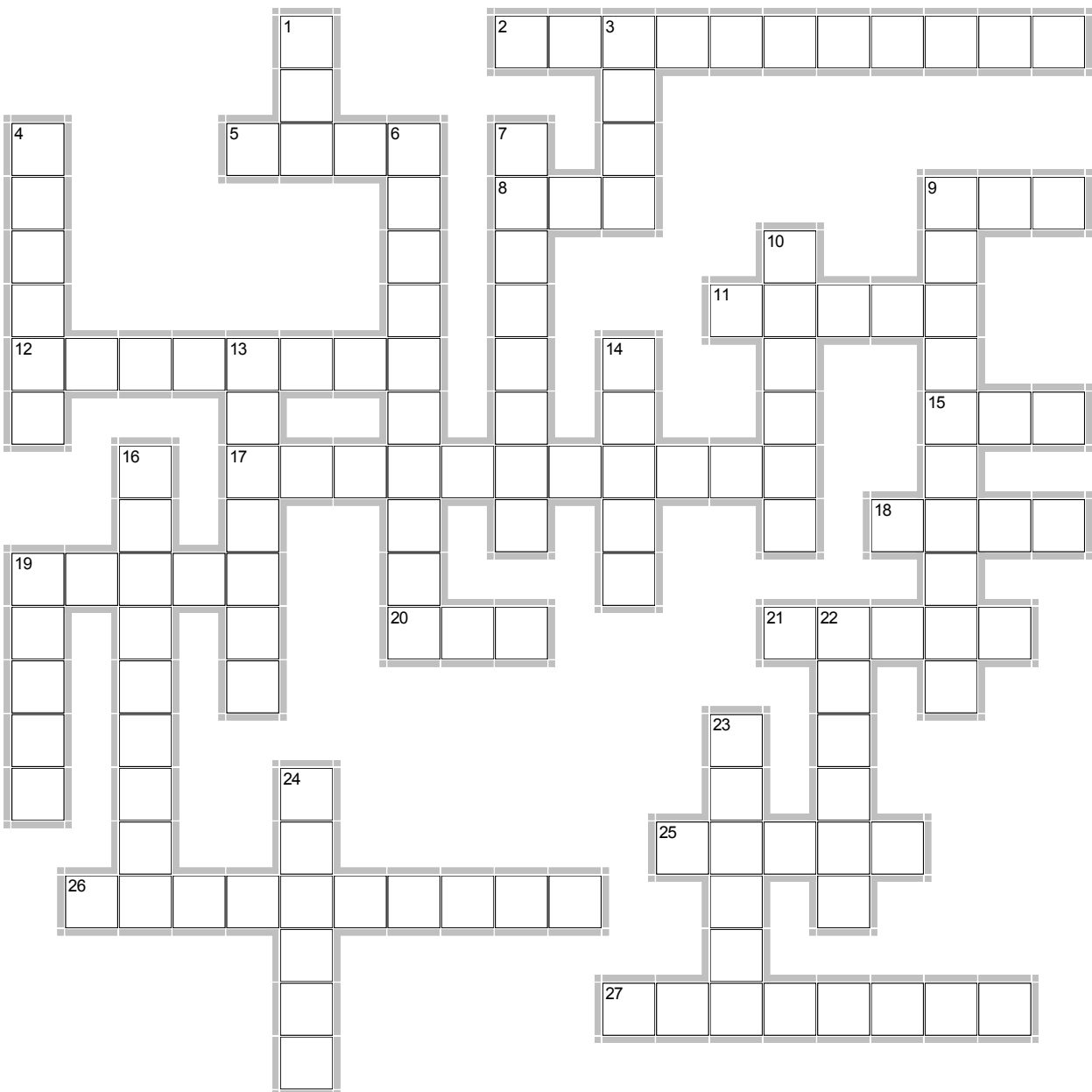
Dependencies

A review of Hazardous Materials I and II would enhance your ability to complete this activity successfully.

Supplies

- A printout of the crossword puzzle
- Pencil
- Eraser (possibly)
- Post-activity Questions

What Do You Know About Hazardous Materials?

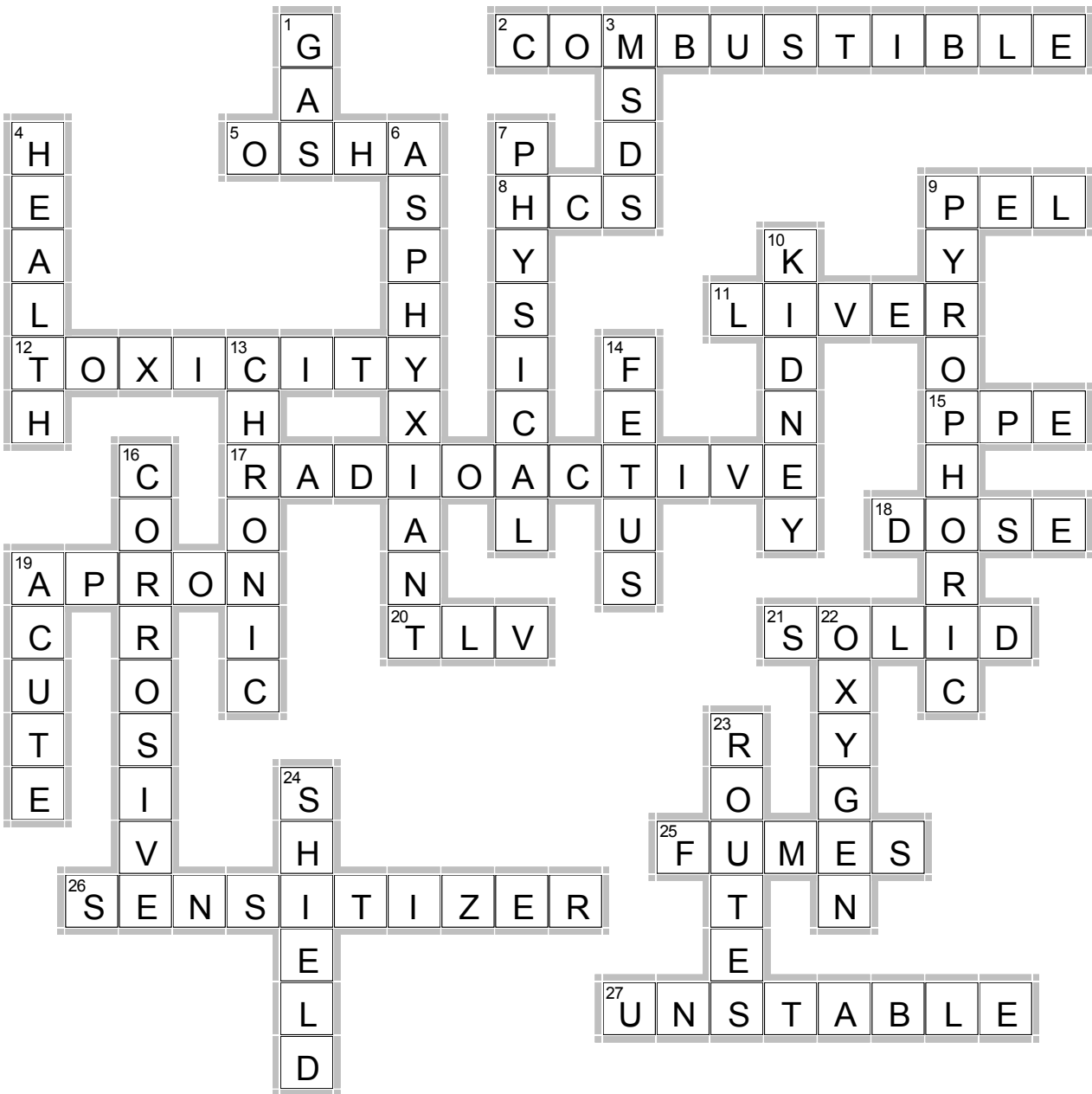


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Across
2. Type of chemical that burns at 100° F
5. Organization that wrote the HCS
8. Policy that gives you the Right to Know
9. Acronym for permissible concentration of a chemical
11. Organ damaged by a hepatotoxin
12. A chemical's _____ is determined by the duration and concentration of exposure
15. Equipment that protects you from chemical exposure
17. Type of chemical that emits radiation
18. The amount of exposure is referred to as a _____
19. Protective equipment that protects the torso and legs
20. Acronym for the criterion that provides the day to day exposure limits of a chemical
21. The chemical state that absorbs slowly
25. The by-product of a boiling liquid
26. Allergens are also called _____
27. If a chemical is reactive, it is characterized as _____
Down
1. The chemical state with easy access to the nose
3. A user's information source about any chemical
4. A rash or headache are _____ hazards of some chemicals
6. Type of chemical that can cause death due to suffocation
7. Flammability and reactivity are considered _____ hazards of a chemical
9. A type of chemical that spontaneously ignites
10. The organ affected by a nephrotoxin
13. The term that refers to long term exposure of a chemical
14. A teratogen has been found to possibly cause damage to a _____
16. A chemical that damages skin and some metals
19. The term that refers to a sudden, one time exposure of a chemical
22. The fuel of oxidizers
23. Nose, mouth, skin are the three _____ for chemical exposure
24. Equipment that protects the eyes and face

Table 1: Clues

What Do You Know About Hazardous Materials? (Answer Key)



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JEOPARDY GAME

Play this game with your friends as a review to HazMat terminology.

<http://www.superteachertools.us/jeopardyx/jeopardy-review-game.php?gamefile=708982>

Post-Activity Questions / Answers

1. State five chemical characteristics that are considered "physical hazards".

Answer:

- *Combustible*
- *Explosive*
- *Flammable*
- *Oxidizer*
- *Peroxide*
- *Pyrophoric*
- *Radioactive*
- *Reactivity*

2. State five chemical characteristics that are considered "health hazards".

Answer:

- *Asphyxiant*
- *BioHazard*
- *Carcinogenic*
- *Corrosive*
- *Irritant*
- *Poison*
- *Sensitizer*

3. State at least one example of how a specific chemical can dangerously affect a human being for **each** route of exposure.

Answer (Examples):

- *Drinking paint thinner*
- *Working in a coal mine or asbestos infested environment*
- *Being splash with HF*

4. State a specific example of "acute exposure" to a chemical.

Answer (Example): Being splash with HF (hydrofluoric acid)

5. State a specific example of "chronic exposure" to a chemical.

Answer (Example): Developing cancer due to asbestos exposure

6. State at least two specific examples of how two people can be affected differently by the same chemical exposure.

Answer (Examples):

- *A person with asthma could be more easily affected by any types of fumes, dusts, or mists than a person that does not have asthma*
- *One person could develop hives working with formaldehyde whereas another person is unaffected.*

References

1. Occupational Safety and Health Association (OSHA) (www.osha.gov)
2. OSHA Hazardous Communications Standard
(<http://www.osha.gov/SLTC/hazardcommunications/index.html>)
3. The Material Safety Data Sheet (MSDS) HyperGlossary
(<http://www.ilpi.com/msds/ref/index.html>)
4. Understanding Toxic Substances (<http://www.dhs.ca.gov/ohb/hesis/uts.htm>)

Disclaimer

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