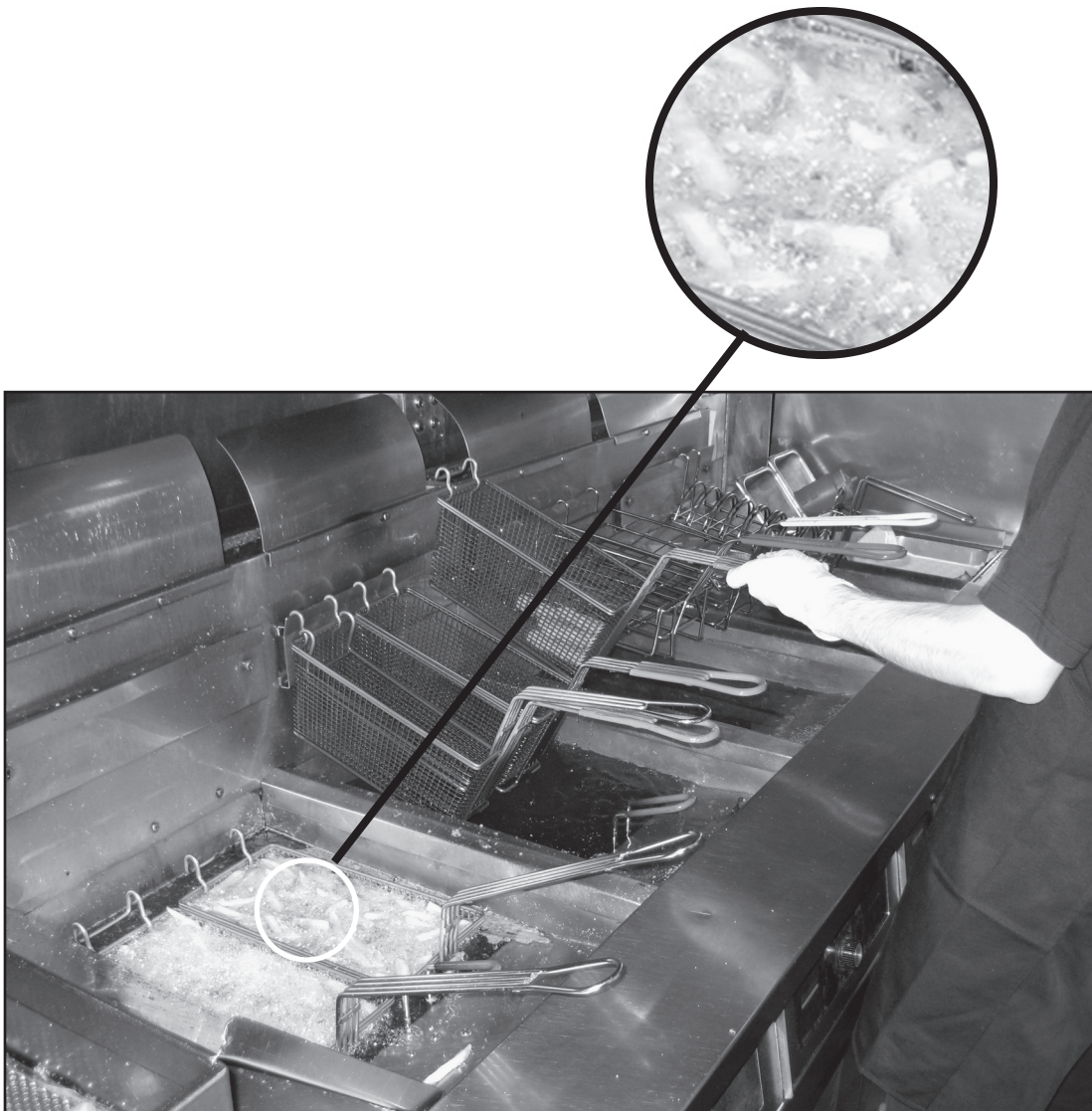


Identifying Workplace Hazards



Unit 2 Overview

This unit introduces students to different types of job hazards. The concept is reinforced through a hazard mapping activity where students create hazard maps of workplaces.

Activity A. Identifying Hazards Student Pre-Test

Students complete the pre-test as a measure of what they already know about identifying workplace health and safety hazards before the lesson is taught.

Activity B. Types of Workplace Hazards: Warm-up Discussion

During a discussion, students categorize workplace hazards into four categories; Safety Hazards, Chemical Hazards, Biological Hazards, and Other Health Hazards.

Activity C. Hazard Mapping

The Hazard Mapping activity highlights hazards found in a variety of workplaces or school shops or labs. Students create a map on which they locate, label and categorize the different hazards in that work setting.

Activity D. Identifying Hazards Student Post-Test

Students complete a post-test as a measure of what they have learned as a result of presenting lesson 2.

Washington State Essential Academic Learning Requirements (EALRs)

Health and Fitness

- 2.3 Acquire skills to live safely and reduce health risks
- 3.1 Understand how environmental factors affect one's health
- 4.1 Analyze health and safety information

Communication

- 2.5 Effectively use images to support presentations
- 3.1 Use language to interact effectively and responsibly with others
- 3.2 Work cooperatively as a member of a group
- 3.3 Seek agreement and solutions through discussion

Social Studies (Geography)

- 1.1 Use and construct maps, charts and other resources

Identifying Workplace Hazards

Learning Objectives

By the end of this lesson students will be able to:

- Define the term *job hazard*.
- Provide examples of different types of job hazards.
- Identify a variety of health and safety hazards found at typical worksites where young people are employed or in school shops or teaching labs.

Preparing to Teach This Lesson

Before you present this lesson:

1. For hazard mapping activity, you will need flipchart paper and a set of five colored markers for each small group.
2. Locate PowerPoint slides for *Unit 2 – Identifying Hazards* on your PowerPoint Slides CD and review them.

Detailed Instructor’s Notes

Activity A. Identifying Hazards Pre-Test (Handout A)

Procedure:

1. Distribute copies of handout A *Identifying Hazards Pre-Test* to students prior to introducing any of the material in unit 3.
2. Collect the pre-test right after its completion. Keep it on file until the *Know Your Rights Post-Test* is completed at the end of unit 3. Do not let students keep the pre-test.
3. Answers to the pre- and post-test can be found in handout C, *Identifying Hazards Pre-and Post-Test Teacher Answer Key*.

Activity B. Types of Workplace Hazards: Warm-up Discussion

1. Remind the class that a job hazard is anything at work that can hurt you, either physically or mentally.

Explain that some job hazards are very obvious, but that others are not. In order to be better prepared to be safe on the job, it is necessary to be able to identify different types of hazards.

Time

45 minutes

Materials

- Flipchart paper
- Colored markers (5 colors per student group)
- Job Hazards (PowerPoint Slide 1)
- Sample Hazard Map (PowerPoint Slide 2)

Handouts

- A. Identifying Hazards Pre-Test
- B. Identifying Hazards Post-Test
- C. Pre- and Post-Test Teacher Answer Key

Tell the class that hazards can be divided into four categories. Write the categories on the top of a piece of flipchart paper and show PowerPoint slide 1 *Job Hazards*.

Job hazards: *A job hazard is anything at work that can hurt you either physically or mentally.*

- **Safety hazards:** Can cause immediate accidents and injuries
Examples: knives, hot grease, trip hazards, sharp edges, etc.
- **Chemical hazards:** Are gasses, vapors, liquids, or dusts that can harm your **body**
Examples: Cleaning products, pesticides
- **Biological hazards:** **Are living things that can cause sickness or disease**
Examples: Bacteria, viruses, or parasites
- **Other health hazards:** Are harmful things, not in the other categories, that can injure you or make you sick. These hazards are sometimes less obvious because they may not cause health problems right away.
Examples: noise, repetitive movements

Slide 1

Health & Safety Awareness for Working Teens

Safety hazards can cause immediate accidents and injuries.

Examples: hot surfaces, slippery floors, trip hazards, sharp edges, etc.

Chemical hazards are gasses, vapors, liquids, or dusts that can harm your body.

Examples: cleaning products, pesticides, etc.

Biological hazards are living things—bacteria, viruses, or insects—that can cause diseases such as flu, AIDS, hepatitis, Lyme disease, tuberculosis, and methicillin-resistant *Staphylococcus aureus* (MRSA). In the workplace you can be exposed to biological hazards through contact with used needles, sick children, animals, etc.

Other health hazards include harmful things, not in the other categories, that can injure you, make you sick, or cause you harm. These hazards are sometimes less obvious because they may not cause health problems right away.

Examples: noise, repetitive movements, awkward postures, and mental stress.

2. Ask students to think about places they have worked or workplaces with which they are familiar (restaurants, stores, movie theaters, offices, etc). You may also want to use your classroom, shop, or lab as a work setting.

On the board or flipchart paper, create a table with four columns. Add the following headings to the top of each column: Safety Hazards, Chemical Hazards, Biological Hazards, Other Health Hazards.

3. Have students call out possible job hazards and identify each as a safety hazard, chemical hazard, biological hazard, or other health hazard.

List each hazard the students call out in the matching column on the table. Alternatively, have the class generate one list of hazards and then work in small groups to categorize them.

***Note:** Students may confuse the effects of hazards with the hazards themselves. They may mention “cuts” for example, instead of knives, which cause cuts. The cause is the hazard and should be listed on the chart. If students give effects rather than the causes, ask them what causes the problem they mention. This will help later when students discuss how to eliminate hazards.

Safety Hazards	Chemical Hazards	Biological Hazards	Other Health Hazards
hot surfaces	cleaning products	viruses	noise
slippery floors	pesticides	bacteria	vibration
unsafe ladders	solvents	mold	radiation
machines without guards	acids	animals	heat or cold
sharp knives	asbestos	birds	repetitive movement
hot grease	lead	insects	awkward posture
unsafe electric circuits	ozone (from copiers)	poison ivy	heavy lifting
lack of fire exits	wood dust	poison oak	fast pace of work
motor vehicles	mercury	used needles	stress
cluttered work areas	poor air quality		areas too dark or too bright
falling objects	gasoline		
violence			

Activity C. Hazard Mapping

1. You may choose to select workplaces specifically relevant to your program or the experiences of your students for this exercise.

Divide the class into small groups. Assign each group a type of workplace. You and your students can choose workplaces where young workers often work, such as fast food restaurants, grocery stores, movie theaters, and offices.

2. Have students draw a simple floor plan of their workplace on flipchart paper using a black marker. The floor plan should show typical rooms, work areas, furniture, equipment, work processes, doors, and windows. Explain that the floor plan can be very simple.
3. Next, ask each group to think of various hazards that might be found in their workplace. Have them mark the locations of these hazards on their floor plans. Using the following color code can help reinforce the different categories of hazards. (It's not necessary to color code the categories if it feels too complicated.)

Red = safety hazards
Green = chemical hazards
Orange = biological hazards
Blue = other health hazards

4. Show students PowerPoint slide 2, *Sample Hazard Map*.
5. Ask each group to choose someone to present their map to the entire class. The presenter should be ready to explain to the class what they believe are the major hazards in this workplace.

Sample Hazard Map

Students will draw maps in color:
Red = Safety Hazards Green = Chemical Hazards Orange = Biological Hazards Blue = Other Health Hazards

FAST FOOD RESTAURANT

SAFETY (RED)
HOT GRILL
HOT GREASE
SHARP KNIVES
SLIPPERY FLOORS

CHEMICAL (GREEN)
CLEANING PRODUCTS
DISHWASHING PRODUCTS

BIOLOGICAL (ORANGE)
BACTERIA
USED NEEDLES

OTHER (BLUE)
CUSTOMERS/STRESS
ROBBERY
STANDING
LIFTING

Slide 2 **Health & Safety Awareness for Working Teens**


6. Have the person selected by each group present and explain its map. The explanation should include a list of the major hazards in this type of workplace. As each group presents its map, list any hazards people mention that were not previously listed on the chart created during the introduction.

Review

1. Show PowerPoint slide 3, *Finding Hazards, Key Points*. Review the key points covered in this lesson.
 - Every job has health and safety hazards.
 - You should always be aware of these hazards.

Finding Hazards, Key Points

Every job has health and safety hazards.
You should always be aware of these hazards.



Slide 3 Health & Safety Awareness for Working Teens

Activity D. Post-Test—Identifying Hazards

1. Distribute copies of handout B *Identifying Hazards Post-Test* to students at the end of the unit.
2. Collect the post-test right after its completion. **Do not let the students keep the post-test.**
3. Handout C *Pre- and Post-Test Teacher Answer Key* is provided to help you evaluate your students work on the test. The answer key provides possible examples of correct answers. The list is not exhaustive and student answers may vary.

Name _____ Date _____ Period _____

1 Injuries are the fault of the worker.

True

False

2 List three examples of job hazards that could be found in the restaurant workplace.

1. _____

2. _____

3. _____

3 List three examples of how to protect an employee from hazards at work.

1. _____

2. _____

3. _____

4 What is workers' compensation?

Name _____ Date _____ Period _____

1 Injuries are the fault of the worker.

- True
- False

2 List three examples of job hazards that could be found in the restaurant workplace.

- 1. _____
- 2. _____
- 3. _____

3 List three examples of how to protect an employee from hazards at work.

- 1. _____
- 2. _____
- 3. _____

4 What is workers' compensation?

Instructor Note: This answer key provides possible examples of correct answers. The list is not exhaustive and student answers may vary.

- 1 Injuries are the fault of the worker.
 - False
- 2 List three examples of job hazards that could be found in the restaurant workplace.
 - Knives / slicers / blades / sharp edges
 - Hot grills / hot burners / hot stoves / hot cooking equipment / hot surfaces
 - Hot oil / hot grease
 - Slippery / greasy / oily floors
 - Hot steam / hot water
 - Cleaning chemicals / dishwashing products / detergent / sanitizers
 - Angry customers / stress / fast pace
 - Standing for long periods
 - Bending / reaching / stretching / lifting
 - Exposure to material contaminated with blood or body fluids when cleaning
- 3 List three examples of how to protect an employee from hazards at work.

Cooking equipment

 - Have guards around hot surfaces
 - Wear gloves or mitts
 - Minors under 16 cannot cook
 - Get proper training on how to use equipment
 - Keep appliance in safe condition

Hot oil / grease

 - Wear protective clothing
 - Place food in basket first and then lower into hot oil, rather than drop

- Use lids or covers over pans, pots or vats
- Allow oil to cool before moving or disposing of it
- Have splash guards
- Use oil pans that dump automatically

Knives and slicers

- Must be 18 to use power cutting equipment
- Keep equipment guards in place
- Get proper training
- Unplug when cleaning

Slippery floors

- Clean up spills quickly
- Keep floor clean of debris
- Use floor mats
- Wear non-slip shoes

Dishwashing products / sanitizers / cleaning products

- Use safer products
- Wear gloves
- Wear eye protection
- Have good ventilation

Contact with public

- Have adequate security
- Schedule at least two people per shift
- Good lighting and visibility
- Use barriers where money is handled
- Get customer service training

Standing for long periods

- Use floor mats
- Take regular breaks
- Rotate jobs

Bending / reaching / lifting / stretching

- Keep heavy items on lower shelves
- Use helpers

Exposure to items contaminated with blood or body fluids

- Must be 18 or older to clean up
- Wear personal protective equipment
- Get proper training on how to clean

4 What is workers' compensation?

It provides the employee benefits if they are hurt on the job, including:

- Payment of medical expenses
- Coverage of lost wages