

### Lesson At A Glance

<b>Length</b>	1 hour
<b>Learning Objectives</b>	<p>Students will:</p> <ul style="list-style-type: none"> <li>• recognize symbols and classes</li> <li>• identify hazardous materials through analyzing case studies</li> </ul>
<b>Teaching Strategies</b>	<ul style="list-style-type: none"> <li>• in-class discussion</li> <li>• personal reflection</li> <li>• critical thinking</li> <li>• questioning</li> <li>• cooperative groups</li> </ul>
<b>Equipment/Instructional Aids</b>	<ul style="list-style-type: none"> <li>• flipchart/whiteboard</li> <li>• Student Handouts (photocopy for class)</li> <li>• Visual Aids with WHMIS labels (optional)</li> </ul>
<b>Assessment Strategy</b>	<ul style="list-style-type: none"> <li>• WHMIS activity</li> <li>• case study</li> </ul>

### Lesson Breakdown

20 min.	Introductory Activity - Hazardous Materials - Part 1
10 min.	Learning Activity - Part 2 of Introductory Activity
15 min.	Learning Activity - WHMIS Classes & Symbols Exercise
20 min.	WHMIS Case Study

## Purpose

This module is designed to introduce students to the WHMIS classifications for hazardous substances. Although students should take responsibility for recognizing labels, the employer is ultimately responsible for training. This lesson stresses .... “If you don’t know.....Ask!”

## Learning Objectives

Students will be able to:

- recognize symbols and classes
- identify hazardous materials through analyzing case studies

## Duration

1 hour

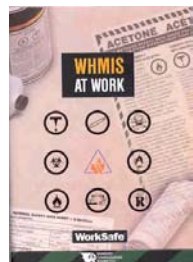
## Instructional Materials

### Student Handouts

(photocopy for students)

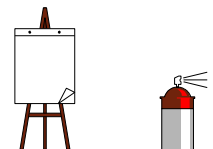
1. WHMIS Pre-test
2. WHMIS Classes and Symbols
3. WHMIS Exercise
4. WHMIS - Case Study
5. WHMIS Card, Booklet & Poster (optional)

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### Equipment

1. White board or flipchart and paper
2. Markers



### Visual Aids

(optional)

1. Examples of hazardous substances or chemicals from the classroom or home



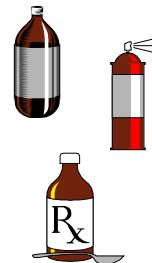
**Introductory Activity - 20 min.**

**Background Information for Teacher**

WHMIS is a federal Canadian regulation which applies to products used in Canadian workplaces. Therefore, it is essential that students joining the workforce understand this classification system of hazardous materials and substances.

**Comment**

Introduce students to the subtle nature of hazardous materials around them and the need to be proactive about the safe use of these substances.



**Show** examples of various hazardous substances and chemicals (from classroom or home). Point out WHMIS labels.

**WHMIS Pre-test - Part 1**



**Ask**

Did anybody think about safety when they were using these substances?

What hazardous chemicals have you used either at home, school or work?

**Distribute Student Handout #1, WHMIS Pre-test.**

Allow students to complete PART 1 only. Part 2 will be completed after the WHMIS Classification handout has been presented.)

**Workplace Hazardous Materials Information System Pre-test**

**Part 1**

Please check by all your responses.

1. Do you have labels on or liquid paper with you?
2. Have your parents ever used rat poison?
3. Have you ever used bleach?
4. Have you ever used your parents' hairbrush?
5. Have you ever used a Bunsen burner?
6. Have you ever jacked up an old battery?
7. Have you ever filled your car up with gas?
8. Have you ever painted with oil paints?
9. Have you ever sat in your car while it is running?
10. Have you ever used dry ice?
11. Have you ever dried your hair with an electric blow dryer?
12. Have you ever touched raw chicken?

**Part 2**

Using your answers and symbols beside the appropriate WHMIS Class.

Class	C

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## WHMIS Pre-test

Part 1

Teacher's Answer Key

Part 2



Place a check by all 'yes' responses.

Using your classes and symbols handout identify the appropriate WHMIS Class.

WHMIS Class

- 1. Do you have 'white-out' or liquid paper with you?
- 2. Have you or your parents ever used rat poisoning?
- 3. Have you ever used bleach?
- 4. Have you ever used your propane barbecue?
- 5. Have you ever used a Bunsen burner?
- 6. Have you ever picked up an old battery?
- 7. Have you ever filled your car up with gas?
- 8. Have you ever painted with oil paints?
- 9. Have you ever sat in your car while it is running?
- 10. Have you ever used dry ice?
- 11. Have you ever dried your hair with an electric blow dryer?
- 12. Have you ever touched raw chicken?

C

D

D

B

B

E

B

B

B

D

C

D

## Ask

Have you ever been injured or know of someone who has been injured by a hazardous chemical?

Why is knowledge and training in hazardous substances so important?

## Random Response

Have students share stories of workplace accidents involving hazardous substances.

## Comment

At the worksite, employers are required by WCB regulations to provide instruction for workers using hazardous materials.

Also, if hazardous contents are transferred to a new container, workplace labeling must be used.

This is called **WHMIS**. Distribute WHMIS Wallet Cards, booklets and show WHMIS poster (optional). Review WHMIS card with students.

**WHMIS MATERIALS  
FREE**

- WHMIS Wallet Cards
- WHMIS Poster
- WHMIS At Work Booklet

To order call:  
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 Workers' Compensation Board of  
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## Ask

What does **WHMIS** stand for?

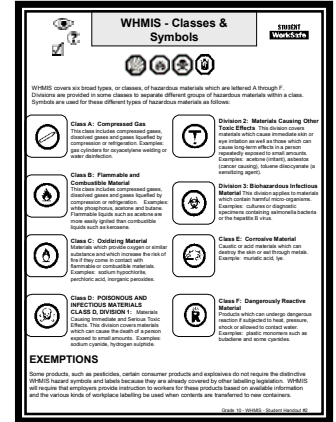
## Response

Workplace Hazardous Materials Information System

## Distribute

Hand out Student Handout #2 - WHMIS Classes and Symbols to students.

## Review WHMIS symbols and classes on handout.



**WHMIS Pre-test Part 2 - 10 min.**

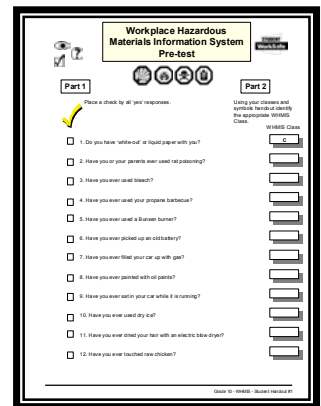
## Ask

Allow students to complete Part 2 of the WHMIS Pre-test. Refer to Student Handout #5.

## Comment

Point out which category each one fits into. Indicate that exceptions are made for consumer products and explosives are covered by consumer packages and labeling laws.

The products encountered in these exercises do fit into WHMIS categories.



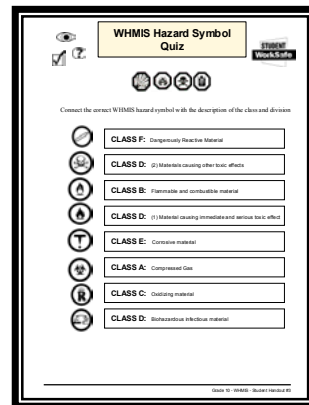
## Discuss responses with students. Refer to Teacher's Answer Key on Page 4 (Part 2).

**WHMIS Exercise - Learning Activity - 15 min.**

**Distribute**

Hand out Student Handout #3 - WHMIS Exercise. This quiz allows students to begin using WHMIS to identify hazards. Try not to use the classes and symbols handout for this exercise.

**See Teacher's Answer Key below. Have students share answers with class.**



**CLASS F:** Dangerously Reactive Material



**CLASS D:** (2) Materials causing other toxic effects



**CLASS B:** Flammable and combustible material



**CLASS D:** (1) Material causing immediate and serious toxic effect



**CLASS E:** Corrosive material



**CLASS A:** Compressed Gas



**CLASS C:** Oxidizing material



**CLASS D:** Biohazardous infectious material

**WHMIS Case Study - Learning Activity - 20 min.**

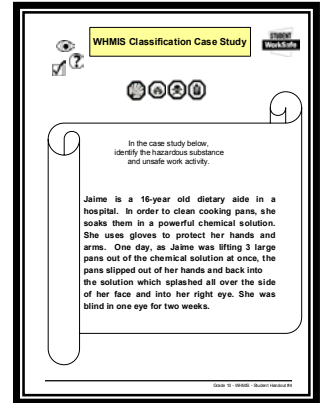
Divide class into small groups of 3 to 5.

Distribute Student Handout #4 - Case Study on Jamie.

**Comment**

**Part 1**

Using the “See It. Think It. Do It.” strategy, identify the hazardous substance and unsafe work procedure in the case study. Use the WHMIS Classification handout for reference.



**In the case study below,  
identify the hazardous substance  
and unsafe work activity.**

Jaime is a 16-year old dietary aide in a hospital. In order to clean cooking pans, she soaks them in a powerful chemical solution. She uses gloves to protect her hands and arms. One day, as Jaime was lifting 3 large pans out of the chemical solution at once, the pans slipped out of her hands and back into the solution which splashed all over the side of her face and into her right eye. She was blind in one eye for two weeks.

**Case Study - continued**

**Part 2**

Create a group case study using your reference materials. Involve a hazardous substance and an unsafe work procedure.

If time permits, allow students to exchange case studies and provide responses.

**Conclusion**



**Conclude / Reflect**

Remember, before you use an unknown substance, you have the right to know what it is and the responsibility to find out how to use it.

**If You Don't Know .....Ask!**