

What is this thing called "WHMIS"?

To benefit from WHMIS, you must know **what it is** and how the **system works**.

1. WHMIS stands for W _____ H _____ M _____ I _____ S _____.
2. It is an **information system** implemented in 1988, that is designed to help **students know more** about **safety** and **health hazards** of materials that they use in the **workplace**.
3. WHMIS gives workers and employers key safety and handling **information** in the form of **special labels, symbols, and Material Safety Data Sheets** _____ on potentially **dangerous chemicals that are used on the job**.
4. You will come across **controlled products** that fall under the WHMIS legislation at _____ (for example, the chemicals used in your science and shop class), and at any **workplace** where chemicals are used.

WHMIS Labels

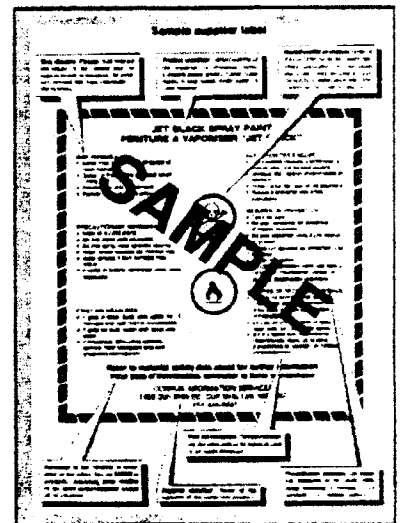
All **controlled products** at school or the workplace **must have WHMIS** _____.

The purpose of a WHMIS label is to **identify the product** as controlled and **alert workers or handlers** to the hazards and safe handling procedures of the product. A **WHMIS label** is just a _____, as the amount of information in it is limited by its size. The **MSDS** provides more _____ information.

It is important that you read the whole label before using a product for the first time. The label will give a brief summary of the most important things to know about the chemical.

This includes:

- _____ of the chemical: may be the common name, trade name, generic name, brand name, code name.
- The **WHMIS hazard** _____: hazard symbols representing the WHMIS hazard classes.
- _____ and **precautions**: Short phrases describing the hazards to supplement the information provided by the symbols, and precautions to be taken when using, handling or being exposed to the product.
- First _____ instructions: These statements indicate immediate first aid measures that can be taken by the victim or others in case of an accident or emergency.
- Supplier's name and address.
- A reference to the matching MSDS stating that more information is available.











W.H.M.I.S. Hazard Symbols and Classes

Symbol represents

It means that the material

And that you should

	CLASS A – COMPRESSED GAS eg. OXYGEN BOTTLES, AEROSOL SPRAY CANS	<ul style="list-style-type: none"> can release contents if not tightly closed is an explosion hazard because the contents are under pressure may explode if dropped or heated 	<ul style="list-style-type: none"> ensure valves are closed and protected do not drop containers; secure them from falling keep containers away from sources of ignition
	CLASS B – FLAMMABLE AND COMBUSTIBLE MATERIAL eg. LAQUER THINNER, GASOLINE, NAIL POLISH REMOVER	<ul style="list-style-type: none"> May form an explosive vapour or dust mixture with air may ignite easily when exposed to heat or flames 	<ul style="list-style-type: none"> guard against evaporation or dust creation keep the material away from sources of ignition and Class C materials
	CLASS C – OXIDIZING MATERIAL eg. ORGANIC PEROXIDES, SOME FERTILIZERS, BLEACH	<ul style="list-style-type: none"> may in combination with another substance create a fire hazard may explode when subjected to shock, friction, heat or a source of ignition may burn skin and eyes on contact 	<ul style="list-style-type: none"> avoid contact with Class B materials and organic substances, eg. fuel, wood dust keep away from heat and sources of ignition avoid contact with the skin or eyes. Wash exposed skin after using.
	CLASS D – POISONOUS AND INFECTIOUS MATERIALS: DIVISION 1 – IMMEDIATE AND SERIOUS TOXIC EFFECTS eg. WELDING FUME, METHYL HYDRATE, MOST SOLVENTS	<ul style="list-style-type: none"> can produce mild to severe ill health effects soon after exposure through inhalation, ingestion (swallowing) or skin absorption 	<ul style="list-style-type: none"> avoid inhaling by using in well-ventilated areas only and/or wearing respiratory equipment avoid contact with skin or eyes; wash exposed skin immediately after using do not taste the material
	DIVISION 2 – OTHER TOXIC EFFECTS eg. ASBESTOS FIBRES, FORMALDEHYDE, BENZENE	<ul style="list-style-type: none"> may result in skin or eye irritation may produce long term ill health effects after repeated exposures may produce delayed ill health effects after an exposure 	<ul style="list-style-type: none"> avoid contact with skin or eyes; wash exposed skin thoroughly after using avoid inhaling by using in well-ventilated areas only and/or wearing respiratory equipment not taste the material
	DIVISION 3 – BIOHAZARDOUS INFECTIOUS MATERIAL eg. HOSPITAL WASTE	<ul style="list-style-type: none"> can cause a serious disease 	<ul style="list-style-type: none"> handle the material only when fully protected by the proper, designated equipment in designated areas.
	CLASS E – CORROSIVE MATERIAL eg. ACIDS, CAUSTICS, FERRIC CHLORIDE	<ul style="list-style-type: none"> causes severe eye and skin irritation upon contact causes severe tissue damage with prolonged contact. may be harmful if inhaled 	<ul style="list-style-type: none"> use hand, face and foot protection to avoid contact keep away from incompatible materials; eg. acids away from caustics avoid smearing in fumes or vapour
	CLASS F – DANGEROUSLY REACTIVE MATERIAL eg. ACETYLENE, HYDROGEN PEROXIDE, METHYL ACRYLATE	<ul style="list-style-type: none"> may react with water to release a toxic gas may self react because of shock, friction or increases in temperature may undergo vapour polymerization or decomposition 	<ul style="list-style-type: none"> keep material away from heat open containers carefully; do not drop if examine products regularly for changes in appearance



Workplace Hazardous Materials Information System

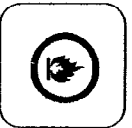
STUDENT WORKSAFE

CLASSES AND SYMBOLS

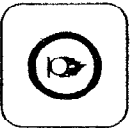
WHMIS covers six broad types, or classes, of hazardous materials which are lettered A through F. Divisions are provided in some classes to separate different groups of hazardous materials within a class. Symbols are used for these different types of hazardous materials as follows:



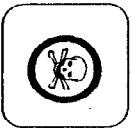
Class A: Compressed Gas
This class includes compressed gases, dissolved gases and gases liquefied by compression or refrigeration. Examples: gas cylinders for oxyacetylene welding or water disinfection.



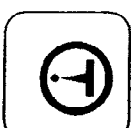
Class B: Flammable and Combustible Material
This class includes compressed gases, dissolved gases and gases liquefied by compression or refrigeration. Examples: white phosphorus, acetone and butane. Flammable liquids such as acetone are more easily ignited than combustible liquids such as kerosene.



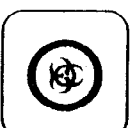
Class C: Oxidizing Material
Materials which provide oxygen or similar substance and which increase the risk of fire if they come in contact with flammable or combustible materials. Examples: sodium hypochlorite, dichloric acid, inorganic peroxides.



Class D: POISONOUS AND INFECTIOUS MATERIALS
CLASS D, DIVISION 1: Materials Causing Immediate and Serious Toxic Effects. This division covers materials which can cause the death of a person exposed to small amounts. Examples: sodium cyanide, hydrogen sulphide.



Division 2: Materials Causing Other Toxic Effects This division covers materials which cause immediate skin or eye irritation as well as those which can cause long-term effects in a person repeatedly exposed to small amounts. Examples: acetone (irritant), asbestos (cancer-causing), toluene diisocyanate (a sensitizing agent).



Division 3: Biohazardous Infectious Material This division applies to materials which contain harmful micro-organisms. Examples: cultures or diagnostic specimens containing salmonella bacteria or the hepatitis B virus.



Class E: Corrosive Material
Caustic or acid materials which can destroy the skin or eat through metals. Example: muriatic acid, lye.



Class F: Dangerously Reactive Material
Products which can undergo dangerous reaction if subjected to heat, pressure, shock or allowed to contact water. Examples: plastic monomers such as butadiene and some cyanides.

EXEMPTIONS

Some products such as pesticides, certain consumer products and explosives do not require the distinctive WHMIS hazard symbols and labels because they are already covered by other labelling legislation. WHMIS will require that employers provide information to workers for these products based on available information and the various kinds of workplace labelling used when comments are transferred to new containers.

Student Handout # 10