

# Lab Safety & Scientific Tools

## Lesson 2

# Lab Safety!

The most important thing is to think before you act!

Safety **MUST** be your top priority!

Know them **before** you do the lab/activity and use them **while** doing the lab/activity!

Being thoughtful and cautious while experimenting will help prevent many accidents!

# General Lab Safety Rules

- Make sure a teacher or another adult is present, and follow directions carefully
- Wear protective clothing (if necessary and/or instructed to do so)
  - E.g. apron, lab coat, goggles, gloves
- Wear closed-toe shoes to protect your feet in case something is dropped or spilled
- Tie back long hair

# General Lab Safety Rules

- Wash your hands after handling chemicals and living or once-living things
- Do not eat or drink in the lab
- Waft smells towards you rather than directly smelling something
- Keep the lab clean and organized
- Do not run or throw things

# WHMIS

**W** Workplace

**H** Hazardous

**M** Materials

**I** Information

**S** system



Compressed  
Gas



Flammable and  
Combustible  
Material



Oxidizing  
Material



Corrosive  
Material



1. Materials  
Causing Immediate  
and Serious  
Toxic Effects



2. Materials  
Causing Other  
Toxic Effects



3. Biohazardous  
Infectious Materials



Dangerously  
Reactive Material



Compressed  
Gas



Flammable



Oxidizer



Poisonous



Toxic



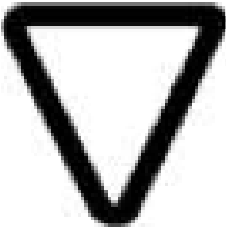

Biohazard



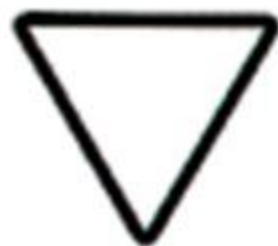
Corrosive



Reactive

<b>Symbol</b>	<b>Meaning</b>	<b>Precautions</b>
	Dangerous container	Symbols inside the inverted triangle refer to the container
	Dangerous contents	Symbols inside the stop sign refer to the contents of the container





CAUTION



WARNING



DANGER



Caution  
Explosive



Danger  
Corrosive



Danger  
Flammable



Warning  
Poisonous

# Safety Equipment

- **Eyewash** – use if a chemical spills or splashes into your eye
  - Rinse eye immediately for 15 minutes (sometimes there is a water fountain/eyewash station in the lab just for this)
- **Thermal mitts or tongs** – use when handling hot beakers or equipment
- **Waste disposal** – designated garbage containers labeled with the types of waste to be put inside.



# Safety Equipment

- **Fire extinguisher** – use to put out electrical, chemical, or gas fires
- **Fire blanket** – use to smother small fires on people or surfaces
  - If a person is on fire, wrap them in the blanket and have them roll on the floor



# Accidents Happen

Despite all the safety precautions we take, things happen. Make sure to tell the teacher or lab supervisor about ANY accidents.

- **Minor burn** – put under cold running water for at least 5 minutes
- **Lab fire** – get adult help immediately. A big fire isn't like a birthday candle: blowing on it will NOT put it out and can make the fire spread. Also, water will not put out an electrical fire.
- **Person on fire** – roll on the ground, preferably in a fire blanket. Get adult help immediately.



# Accidents Happen

Despite all the safety precautions we take, things happen. Make sure to tell the teacher or lab supervisor about ANY accidents.

- **Water spills** – mop them up so no one slips
- **Chemical spills & broken glass** – make sure no one steps in the accident area. Ask an adult for help. Use designated tools to clean up spills and broken glass.





Compressed Gas

Flammable and combustible material

Oxidizing material

Poisonous: materials causing immediate and serious toxic effects



Materials causing other toxic affects

Biohazardous infectious materials

Corrosive material

Dangerously reactive material