

WORKING AS A SCIENTIST

GETTING OFF TO A SAFE START

Science investigations can be a lot of fun. You have the chance to work with new equipment and substances. Science investigations can also be dangerous, however, so you have to pay attention! As well, you have to know and follow special rules. Here are the most important rules to remember.

1 Follow your teacher's directions.

- Listen to your teacher's directions, and follow them carefully.
- Ask your teacher for directions if you are not sure what to do.
- Never change anything, or start an activity on your own, without your teacher's approval.
- Get your teacher's approval before you start an investigation that you have designed yourself.

2 Act responsibly.

- Pay attention to your own safety and the safety of others.
- Tell your teacher immediately if you see a safety hazard, such as broken glass or a spill. Also tell your teacher if you see another student doing something that you think is dangerous.
- Tell your teacher about any allergies or medical problems you have, or about anything else your teacher should know.
- Do not wear contact lenses while doing investigations.
- Read all written instructions carefully before you start an activity.
- Clean up and put away any equipment after you are finished.

3 Be science-ready.

- Come prepared with your student book, notebook, pencil, worksheets, and anything else you need for an activity or investigation.
- Keep yourself and your work area tidy and clean.
- Wash your hands carefully with soap and water at the end of each activity or investigation.
- Never eat, drink, or chew gum in the science classroom.
- Wear safety goggles or other safety equipment when instructed by your teacher.
- Keep your clothing and hair out of the way. Roll up your sleeves, tuck in loose clothing, and tie back loose hair. Remove any loose jewellery.



SAFE SCIENCE

Follow these instructions to use chemicals and equipment safely in the science classroom.



HEAT, FIRE, AND ELECTRICITY

- Never heat anything without your teacher's permission.
- Always wear safety goggles when you are working with fire.
- Keep yourself, and anything else that can burn, away from heat or flames.
- Never reach across a flame.
- Before you heat a test tube or another container, point it away from yourself and others. Liquid inside can splash or boil over when heated.
- Never heat a liquid in a closed container.
- Use tongs or heat-resistant gloves to pick up a hot object.
- Test an object that has been heated before you touch it. Slowly bring the back of your hand toward the object to make sure that it is not hot.
- Know where the fire extinguisher and fire blanket are kept in your classroom.
- Never touch an electrical appliance or outlet with wet hands.
- Keep water away from electrical equipment.



CHEMICALS

- If you spill a chemical (or anything else), tell your teacher immediately.
- Never taste, smell, touch, or mix chemicals without your teacher's permission.
- Never put your nose directly over a chemical to smell it. Gently wave your hand over the chemical until you can smell the fumes. *waving*
- Keep the lids on chemicals you are not using tightly closed.
- Wash your hands well with soap after handling chemicals.
- Never pour anything into a sink without your teacher's permission.
- If any part of your body comes in contact with a chemical, wash the area immediately and thoroughly with water. If your eyes are affected, do not touch them but wash them immediately and continuously with cool water for at least 15 min. Inform your teacher.

HANDLE WITH CARE



GLASS AND SHARP OBJECTS

- Handle glassware, knives, and other sharp instruments with extra care.
- If you break glassware or cut yourself, tell your teacher immediately.
- Never work with cracked or chipped glassware. Give it to your teacher.
- Use knives and other cutting instruments carefully. Never point a knife or sharp object at another person.
- When cutting, make sure that you cut away from yourself and others.



LIVING THINGS

- Treat all living things with care and respect.
- Never treat an animal in a way that would cause it pain or injury.
- Touch animals only when necessary. Follow your teacher's directions.
- Always wash your hands with soap after working with animals or touching their cages or containers.





Wash your hands with soap and water after you work with the plants.

Figure 1
Potential safety hazards are identified with caution symbols and red type.

Caution Symbols

The activities and investigations in *B.C. Science Probe 8* are safe to perform, but accidents can happen. This is why potential safety hazards are identified with caution symbols and red type (**Figure 1**). Make sure that you read the cautions carefully and understand what they mean. Check with your teacher if you are unsure.

Safety Symbols

The following safety symbols are used throughout Canada to identify products that can be hazardous (**Figures 2 and 3**). Make sure that you know what each symbol means. Always use extra care when you see these symbols in your classroom or anywhere else.



Figure 2
Hazardous Household Product Symbols (HHPS) appear on many products that are used in the home. Different shapes show the level of danger.

Figure 3
Workplace Hazardous Materials Information System (WHMIS) symbols identify dangerous materials that are used in all workplaces, including schools.

PRACTICE

In a group, create a safety poster for your classroom. For example, you could create a map of the route your class should follow when a fire alarm sounds, a map of where safety materials (such as a fire extinguisher and a first-aid kit) are located in your classroom, information about the safe use of a specific tool, or a list of safety rules.