

# Earth Science

## Developmental Module: Safety in the Lab


### Introduction

#### Safety in the Lab

- At all times
- Before entering the lab area
- Before experiments
- During experiments
- After experiments

#### Introduction

Remember that the most important aspect of safety in the laboratory classroom is good common sense. Keep focused on your experiment and be aware of the hazards in your environment. If you are unsure about something, stop and ask for help. Always keep these safety rules in mind and you will help protect yourself and everyone else in the lab. In this interactivity, click on each of the tabs to learn more about safety in the laboratory.



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At all times

### Safety in the Lab

At all times

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- Absolutely no horseplay.
- No food or drinks in the lab, including chewing gum.
- Keep all papers and other objects away from open flames and chemicals in lab.
- If it is not part of the experiment, it should be stored elsewhere in a safe place.
- Keep a clean and orderly lab area. Report immediately to your instructor any damaged safety or lab equipment.



Before entering the lab area

Before experiments

During experiments

After experiments

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### Before entering the lab area

#### Safety in the Lab

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#### Before entering the lab area

- Know where laboratory equipment and protection is stored, including goggles, aprons, and gloves.
- Note the location of windows and exits.
- Identify the location of safety equipment, including the following:
  - First-aid kit
  - Fire extinguisher
  - Fire blanket
  - Emergency gas stop
  - Eyewash station
  - Safety shower
  - Chemical hood
  - Acid neutralizers
  - Broken glass disposal bin



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### Before experiments

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#### Before experiments

- Read laboratory procedures before you do any experiment, no matter how familiar you may already feel with the procedures.
- Inspect your safety goggles and lab apron for any damage before putting them on.
- Wash your hands and put on properly-fitting lab gloves.
- Inspect all lab equipment for damage.
- If using glassware, make sure it is not cracked or chipped.



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### During experiments

#### Safety in the Lab

- At all times
- Before entering the lab area
- Before experiments
- During experiments**
- After experiments

#### During experiments

- Be purposeful in all your actions. No running, skipping, or fast-paced movement.
- Always check your gloves during the experiment, and replace them immediately if you notice any tears or other damage.
- Pick up all glassware with tongs or hot hands. Unless you are removing or returning glassware from storage, never assume that you know the temperature of any container. Glass



- Be purposeful in all your actions. No running, skipping, or fast-paced movement.
- Always check your gloves during the experiment, and replace them immediately if you notice any tears or other damage.
- Pick up all glassware with tongs or hot hands. Unless you are removing or returning glassware from storage, never assume that you know the temperature of any container. Glass looks the same whether it is hot or cold.
- Point open or heated containers towards the wall. Never point a container towards yourself or another person.
- Keep any volatile chemicals under a chemical hood. The hood sucks up any fumes and removes them from the lab area.
- Never directly smell any chemical or materials in the laboratory classroom unless instructed to do so using proper smelling techniques. Chemical vapors can cause sickness and death!
- Never put any glassware directly into a flame unless instructed to do so. Some glassware cannot tolerate high heat and will shatter.

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## Developmental Module: Safety in the Lab


### After experiments

#### Safety in the Lab

- At all times
- Before entering the lab area
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- After experiments

#### After experiments

- Thoroughly clean and inspect all lab equipment for damage before returning it to storage.
- Inspect your goggles and apron for damage before returning them to storage.
- Dispose of your lab gloves and thoroughly wash your hands.
- Leave the lab area clean and ready for its next use.



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