

# Physical Science Notes:

## Unit 1: The Process of Science

### Lesson 3: Laboratory Practices vs Safety

#### Laboratory Equipment Use:

- Laboratory equipment should be used only in the way it was intended.
- Follow all teacher directions, instruction manuals, and lab procedures when working with lab equipment.
- Handle glassware with special care, inspecting for damage before use.

#### Ensuring Safety During Laboratory and Field Investigations:

- Always protect eyes and skin from contact with lab materials.
- Make sure loose hair and clothing will not be caught on equipment.
- Never taste or inhale materials found in a lab.
- Wear appropriate clothing when conducting an investigation in the field.
- Report any unsafe conditions, or inappropriate student behavior to the teacher.

#### Chemistry Laboratory Basic Safety:

- Use tools to handle chemical substances, not your hands.
- Avoid fumes.
- Never return unused chemicals to the original container.
- Dispose of all chemical products only as directed.
- Always pour acid into water, never the reverse.
- Read labels and instructions carefully to ensure chemicals are used safely.

#### Material Safety Data Sheets (MSDS):

- Material **safety** data sheets (MSDS) provide information about all chemicals found in a lab.
- MSDSs must be kept in an accessible file or binder in the lab.

#### Safety Equipment Use In Labs:

- All students should know how to use fire extinguishers, eye wash stations, fire blankets, and basic first aid supplied.
- All investigations using chemicals or Bunsen burners should be done under a fume hood.

#### Procedures to Followed In Emergency Situations:

- Keep clear access to emergency exits, fire extinguishers, and eye washes.
- Turn off gas, extinguish flames, and close chemical containers during a fire or other emergency situation, then follow normal procedures for evacuation or shelter-in-place.
- Clean up chemical spills immediately, making sure neutralize acids and bases first.
- Do not touch broken glass.
- Report any accidents or chemical exposure to the teacher.