

Name _____ Class _____ Date _____

Laboratory Skills

Worksheet 1

Safety First!

Always use caution when working in the science laboratory.
Always follow the safety guidelines.

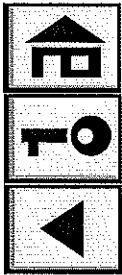
Safety in a Symbol


Goals


In this exercise, you will learn to recognize symbols that alert you to the need for safety equipment or techniques in the laboratory, and you will compare safe and unsafe laboratory behavior.


Part A Developing the Concept


Study the safety symbols. Some of the symbols you may have seen. Others may be new to you. Write safety guidelines for each symbol.



1.  _____

2.  _____

3.  _____


4.  _____

5.  _____

6.  _____

7.  _____

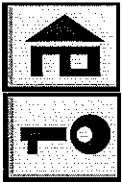
8.  _____

9.  _____

10.  _____

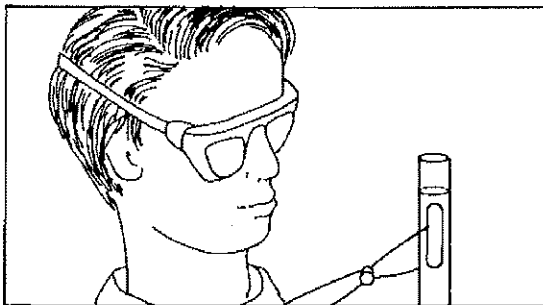
11.  _____

12.  _____

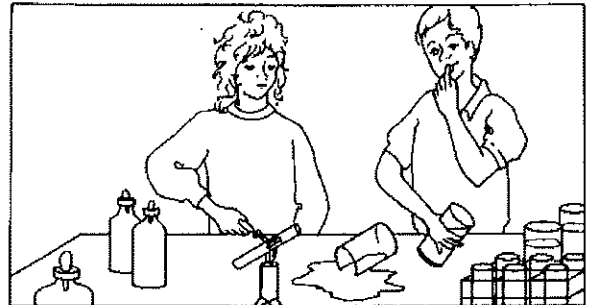


Part B Applying the Skill

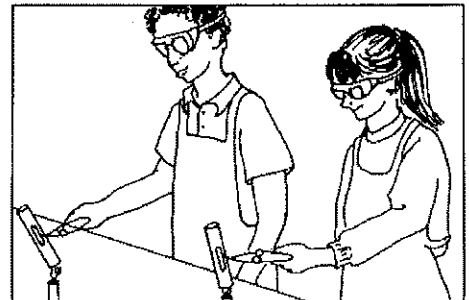
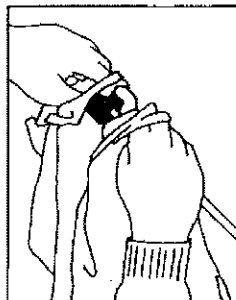
Study Figures a–e. Label each drawing safe or unsafe. Then circle the safe practices in blue. Draw a red “X” over each unsafe practice.



a _____



b _____



Science
Sixth Grade
Chapter One

Name _____
Date _____
Travel Group _____

Alligator Lab

Name: My alligator's name is _____ because _____

Purpose: To Investigate, through measurement, the physical characteristics of an alligator. Measurements will include mass, length, volume and density.

Research: Use your glossary (or dictionary) to define the following:

- mass - _____
- weight - _____
- length - _____
- volume - _____
- density - _____

TUES
Hmwk

Hypothesis: Based on your previous experience, predict the following:

- What is the mass of your alligator? _____
- What will the mass of your alligator be after soaking in water for 1 day? _____
- What will the mass of your alligator be after soaking in water for 2 days? _____
- What is the length of your alligator? _____
- What will the length of your alligator be after soaking in water for 1 day? _____
- What will the length of your alligator be after soaking in water for 2 days? _____
- What is the volume of your alligator? _____
- What will the volume of your alligator be after soaking in water for 2 days? _____
- What is the density of your alligator? _____ Why? _____
- Will the density of the alligator increase or decrease? _____ Why? _____

wed
class

Materials:

- | | | |
|---------------------|------------------|--------------------|
| Alligator | centimeter ruler | graduated cylinder |
| spring scale | water | beaker |
| triple beam balance | thermometer | digital balance |

******Must be done before leaving class on first day******

Place your alligator in a tray. Using a beaker, carefully cover the alligator with water. Then continue adding water until the level of the water is 4 cm. above the alligator. Measure and record the amount of water used. _____

Mass and Length - Keep a daily record of your alligator's mass and length on the chart below:

Date + Time								
Mass								
Length								

Mass (Initial)

Mass of alligator on triple beam balance _____

Mass of alligator using the digital balance _____

Mass of alligator using a spring scale _____

Were there any differences in the measurements? _____ Explain _____

Which instrument do you think is the most accurate and why? _____

Length

What are the numbered divisions on the metric ruler called? _____

How many smaller parts are these divided into? _____

What are these smaller divisions called? _____

What would you use to measure your height in the science lab? _____

Complete this chart for your lab partners' heights:

Name	Height

Volume

Follow the teacher's demonstration to find the volume of the alligator.

What instrument did the teacher use? _____ What process is this called? _____ What was the volume of the alligator before soaking? _____ after soaking? _____

Diagram the teacher's demonstration of measuring the alligator's volume.

Density

The formula for calculating density is:

The correct units for density are _____

The density of the alligator is (show your calculations)_____

The density of water is _____ Anything _____dense than water, sinks.

Anything_____ dense than water, floats. The alligator should _____ because it is _____ dense than water.

Laboratory Skills

Activity 2

Laboratory Equipment I

Goals

In this activity, you will identify common laboratory equipment and tools and explain their uses.

Part A Identifying Laboratory Equipment and Tools

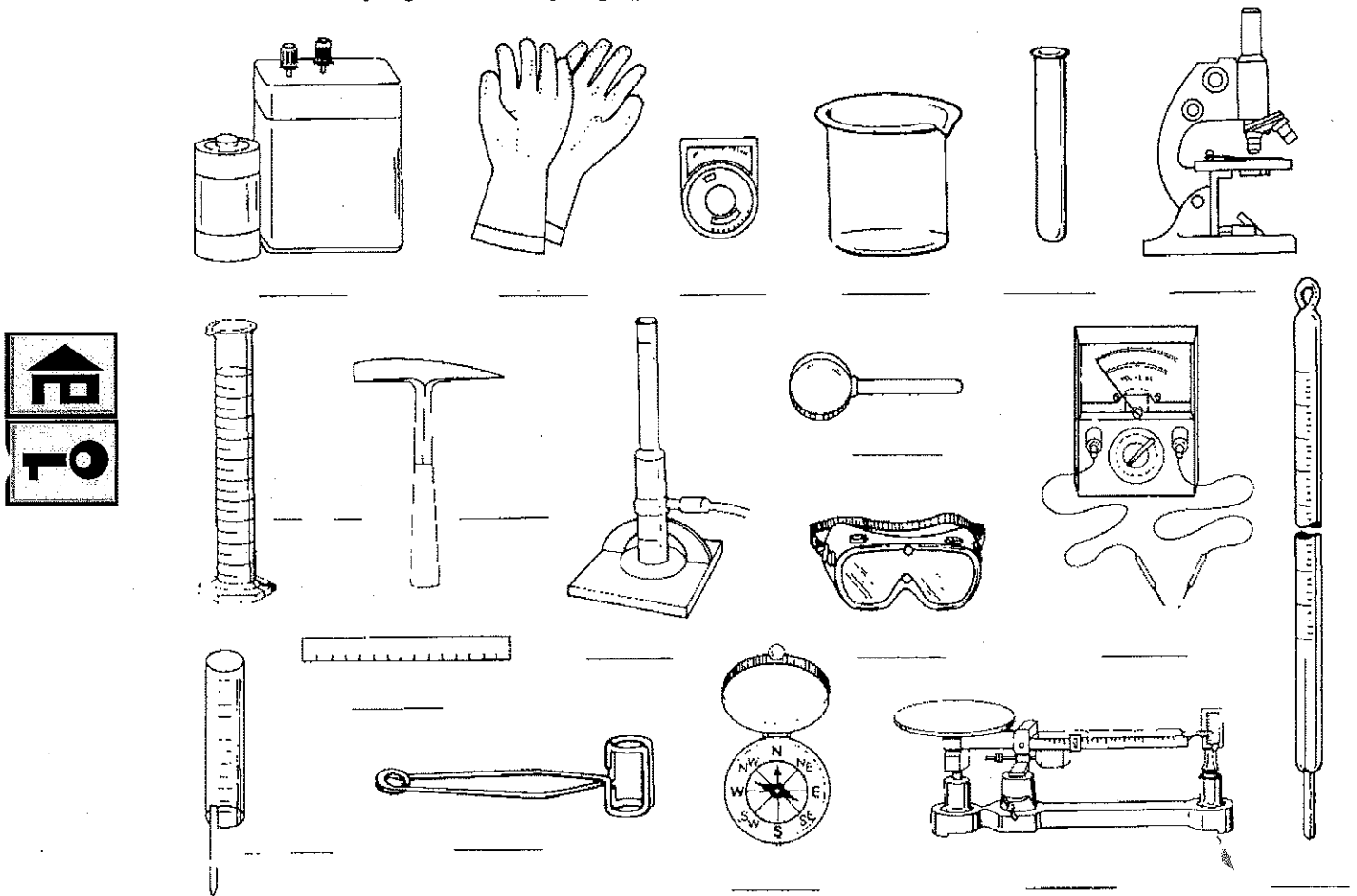


Figure 1

1. Figure 1 shows various science laboratory equipment and tools a scientist might use in the laboratory or in the field. Use the letters from the following list to label each item.

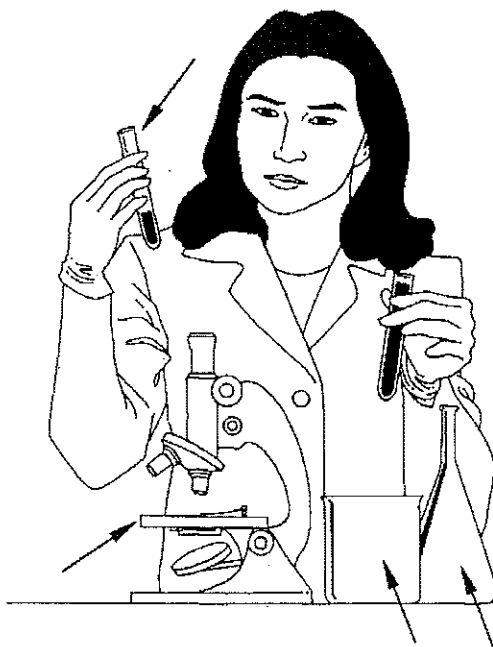
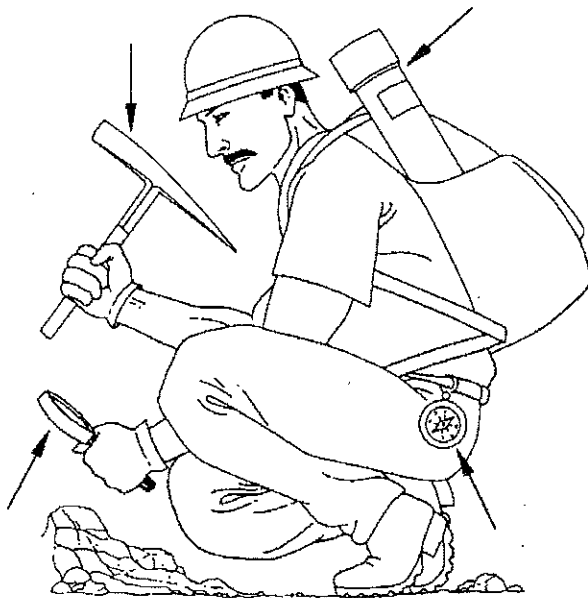
- | | | |
|---------------------|-----------------------|-----------------|
| a. safety goggles | g. gloves | m. thermometer |
| b. test tube | h. graduated cylinder | n. voltmeter |
| c. microscope | i. hand lens | o. rain gauge |
| d. balance | j. geologist's pick | p. metric ruler |
| e. Bunsen burner | k. dry cell | q. light meter |
| f. test-tube holder | l. compass | r. beaker |

Choose from the items in Figure 1 to answer the following questions. Write the correct letter(s) in each space.

2. Which pieces of equipment are used for safety? _____
 3. Which piece of equipment is used to measure length? _____
 4. Which piece of equipment is used to measure mass? _____
 5. Which pieces of equipment can hold liquids? _____
 6. Which piece of equipment is used to examine things that cannot be seen with eyes only? _____
 7. Which piece of equipment is used to measure temperature? _____
 8. Which tools might be most often used by earth scientists? _____
 9. Which pieces of equipment would be used to study the flow of electricity? _____
- _____
10. A light meter shows how much light is shining on a surface. Give an example of how a scientist might use a light meter.
- _____



Part B Using Laboratory Equipment



Look carefully at the two scientists pictured. List the tools and equipment they are each using.
