

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Safety in the Science Classroom Page 1

1. Never begin an experiment or lab without your teacher's permission.
2. Read and study the procedure from start to finish before beginning any experiment. If you have any questions, ask your teacher. Make sure you understand any safety symbols on materials you will be using, and the hazards they represent. Follow the procedure exactly as specified.
3. Always wear safety goggles throughout a lab that requires chemicals. Keep the goggles on for as long as there are any chemicals being used by anyone in the lab. Do not take your goggles off or move them from your eyes (for example, to write down observations) at any time during the lab. Wear other safety equipment, such as aprons, gloves, lab coats, as required.
4. Never eat or drink anything in the lab. Do not chew gum during labs.
5. Never inhale chemicals. Use the "wafting" technique if you need to smell a chemical. Do not taste any substances or draw any material into a tube with your mouth.
6. If you are taking chemicals from one container and putting them into smaller containers, make sure you label all the containers.
7. When pouring liquids hold the containers away from your face. Put test tubes in a test tube rack before pouring liquids into them.
8. Use only Pyrex or Kimax glass containers when heating. Never use chipped or cracked glassware. Never allow a container to boil dry.
9. Report all chemical spills to your teacher. All chemical spills must be cleaned up completely and immediately. Wipe up any splashes or spills of water immediately.
10. Use test tube holder and always slant test tubes away from yourself and others when heating them. Keep materials away from flames. Follow all instructions for using Bunsen burners carefully.
11. Take caution with hotplates -- you can't tell by looking if they are hot, but they can remain hot for up to one hour after being turned off. To see if one is still hot, don't touch it! Instead, carefully put a drop of water on it's surface. If the water bubbles or boils, the hot plate is too hot to touch!

## Safety in the Science Classroom Page 2

12. Make sure your hands are dry when using electrical equipment. Unplug electrical cords by pulling on the plug, not the cord. Don't use equipment with frayed wires or cords. Report any defective equipment or outlets to your teacher.
13. When cutting materials, follow the following guidelines:
  - Do not cut anything with a scalpel or razor blade by holding it in one hand while cutting it with the other. Always put the item down (for example, into a dissecting tray) on a flat surface. Hold it down with pins or clamps, not your fingers.
  - Always cut away from yourself and away from others when using a scalpel.
  - When walking with or handling over a scalpel or sharp or pointed object, keep the sharp or pointed surface facing the floor away from others when using a scalpel.
14. Tie back long hair and loose clothing.
15. When holding a bottle from which you are going to pour chemicals, keep the label against the palm of your hand. If everyone does this, any drips will only touch the opposite side of the bottle, and not get on your hand.
16. When diluting acid, always add small amounts of acid to large amounts of water.
17. Know the location and proper use of the fire extinguisher, safety shower, fire blanket, first aid kit, and fire alarm.
18. If your clothing catches on fire, smother it with the fire blanket or a coat. "Stop, Drop, and Roll" NEVER RUN.
19. Report any accident or injury, *no matter how small*, to your teacher.
20. When cleaning up, be sure to:
  - Turn off gas if it was used.
  - Disconnect electrical apparatus.
  - Return all materials to their proper places.
  - Do not return unused chemicals to the original containers. Your teacher will tell you what to do with the unused chemicals and how to dispose of any other materials. Never pour unused chemicals down the drain without permission from your teacher.
  - Place any broken glass in the container(s) reserved for broken glass. Do not put broken glass in the regular garbage.
  - Clean and dry your work area. Do not leave water on the counter or floor
  - The last thing you should do after a lab is wash your hands with soap and water.

# Safety in the Science Classroom Exercise

For each of the following safety rules, give one GOOD reason why we have that safety rule.

- a) Never begin an experiment or lab without your teacher's permission.

**Sample Answer:**

**The teacher might have some important information you need to make the experiment work properly and safe.**

- b) Keep your safety goggles on as long as there are any chemicals being used in the lab, even if you yourself are finished.
- c) Never eat, drink, or chew gum during a lab.
- d) Put test tubes in a test tube rack before pouring liquids into them.
- e) Make sure your hands are dry when using electrical equipment.
- f) Report any injuries, no matter how minor, to your teacher.
- g) Always cut away from yourself and away from others when using a scalpel.
- h) When diluting acid, always add small amounts of acid to large amounts of water.
- i) If your clothing catches on fire, never run.
- j) When holding a bottle from which you are going to pour chemical, keep the label against the palm of your hand.
- k) If a chemical gets in your eye, flush it with running water for at least 15 minutes.

## Scientific Method Science Safety Rules

Name \_\_\_\_\_

**The Bikini Bottom gang has been learning safety rules during science class. Read the paragraphs below to find the broken safety rules and underline each one. How many can you find?**

SpongeBob, Patrick, and Gary were thrilled when Mr. Krabbs gave their teacher a chemistry set! Mr. Krabbs warned them to be careful and reminded them to follow the safety rules they had learned in science class. The teacher passed out the materials and provided each person with an experiment book.

SpongeBob and Gary flipped through the book and decided to test the properties of a mystery substance. Since the teacher did not tell them to wear the safety goggles, they left them on the table. SpongeBob lit the Bunsen burner and then reached across the flame to get a test tube from Gary. In the process, he knocked over a bottle of the mystery substance and a little bit splashed on Gary. SpongeBob poured some of the substance into a test tube and began to heat it. When it started to bubble he looked into the test tube to see what was happening and pointed it towards Gary so he could see. Gary thought it smelled weird so he took a deep whiff of it. He didn't think it smelled poisonous and tasted a little bit of the substance. They were worried about running out of time, so they left the test tube and materials on the table and moved to a different station to try another experiment.

Patrick didn't want to waste any time reading the directions, so he put on some safety goggles and picked a couple different substances. He tested them with vinegar (a weak acid) to see what would happen even though he didn't have permission to experiment on his own. He noticed that one of the substances did not do anything, but the other one fizzed. He also mixed two substances together to see what would happen, but didn't notice anything. He saw SpongeBob and Gary heating something in a test tube and decided to do that test. He ran over to that station and knocked over a couple bottles that SpongeBob had left open. After cleaning up the spills, he read the directions and found the materials he needed. The only test tube he could find had a small crack in it, but he decided to use it anyway. He lit the Bunsen burner and used tongs to hold the test tube over the flame. He forgot to move his notebook away from the flame and almost caught it on fire.

Before they could do another experiment, the bell rang and they rushed to put everything away. Since they didn't have much time, Patrick didn't clean out his test tube before putting it in the cabinet. SpongeBob noticed that he had a small cut on his finger, but decided he didn't have time to tell the teacher about it. Since they were late, they skipped washing their hands and hurried to the next class.