

### List of Safety Activities

- Student DO/DON'T Pictures
  - Students pair up and select rules (some pairs may have more than one). Students use cameras to take photos of dos and don'ts for their rule(s) in the lab. Pictures are submitted to the teacher and compiled into powerpoint. Afterwards, each pair explains their pictures to the class and how they demonstrate and violate the rule.
- Worksheet: Walkthrough of Classroom/Lab:
  - Students are given a worksheet with very brief scenarios which would require them to use some sort of safety equipment (safety goggles, safety shower, eye wash, fire extinguisher, first aid kit, emergency exit). Students get into small groups and read these scenarios. Together, they choose which piece of safety equipment they would need to use, describe where it is found in the lab and the procedure for using it.
    - Example question: There's a small fire in the lab. What do you need to put it out? Where can you find it in the room? What do you need to do to use it?
- What's Wrong Activity:
  - Students are put in groups and given short scenarios where students are conducting an experiment. Students must identify as many things in each scenario that students are doing wrong and right. After each scenario, the class makes a list that includes what everyone has come up with.
- Youtube lab safety video

## **Safety Rules and Procedures**

### General Rules

1. Follow all written and verbal instructions carefully. Always read the procedure for the lab before beginning.
2. Only perform authorized experiments and only conduct experiments when the teacher is present.
3. Report all accidents, spills, injuries to the teacher immediately no matter how trivial it seems.
4. Don't fool around in the laboratory. Horseplay or practical jokes can be dangerous.
5. Always wash your hands after lab exercises involving organisms or chemicals.
6. The workspace should be kept tidy. Have only necessary items on the lab bench. Clean all work surfaces after use.
7. Never eat, drink, or chew gum in the laboratory.
8. Know the locations and how to use the first aid kit, fire extinguisher, eyewash, and safety shower.
9. Be aware of exit locations and evacuation procedures.
10. When working with animal specimens, show respect and ethical behavior.

### Dress

11. Wear safety goggles during all lab activities.
12. Dress appropriately for lab. Tie up long hair, secure loose clothing, and wear close toed shoes. Wear an apron to protect clothing when appropriate.

### Working with Chemicals

13. Consider every chemical dangerous. Don't taste, touch, or smell any chemical unless instructed to do so. If chemicals splash on skin or clothing, rinse immediately with large quantities of water.
14. Never remove chemicals or other material from the laboratory area.
15. Dispose of all materials properly according to instructions from the teacher. Pour only water and approved materials in the sink.

### Lab Equipment

16. If you do not understand how to use a piece of equipment, ask the instructor.
17. Use care when working with heating equipment. Never heat substances that you haven't been instructed to. Never reach over an exposed flame or touch a hot plate.
18. Examine glassware before use, and never use chipped or cracked glassware.
19. Never pick up broken glass with bare hands. Notify the teacher first, then use a brush and dustpan to clean up the glass. Broken glass should be disposed of in a special container, never the trash.
20. When using knives or other sharp objects, be careful and always cut away from yourself.

## Safety Contract

I, \_\_\_\_\_, have read and understand these safety rules. I understand that these rules are important to ensure the safety of myself and my classmates. I agree to follow these rules and cooperate with my instructor and classmates to maintain the safest possible lab environment. I will follow all written and verbal instructions in the laboratory and ask for help if I am confused about directions. I understand that if I violate this safety contract, I will be removed from the laboratory and receive a zero for the assignment.

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Date

Dear Parent or Guardian,

I look forward to giving your children rich laboratory experiences this year. In order to perform laboratory exercises, it is essential that all students are aware of safety rules and procedures as well as the behavior that is expected of them in the laboratory. Please read and review these safety rules with your student. No student will be permitted to participate in laboratory exercises unless this contract is signed by themselves and their parent/guardian. Your signature indicates that you have read the safety rules and the student contract and give permission for your child to participate in laboratory exercises.

\_\_\_\_\_  
Parent/Guardian Signature

\_\_\_\_\_  
Date

## Safety Quiz

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

### Section I: Multiple Choice

- 1) Which of the following can you dispose of safely in the sink?
  - a) Any liquid
  - b) Only plain water
  - c) Liquids and some small solids
  - d) Liquids that have been approved by the teacher
- 2) If chemicals splash onto skin, rinse immediately with
  - a) soap.
  - b) oil.
  - c) weak base.
  - d) plenty of water
- 3) Horseplay or practical jokes in the laboratory are
  - a) always against the rules.
  - b) okay.
  - c) not dangerous.
  - d) okay if you are working alone.
- 4) Eating or drinking in lab is
  - a) always allowed
  - b) allowed if not working with dangerous chemicals
  - c) allowed as long as you wash your hands first
  - d) never allowed

### Section II: Safety Scenarios

*For each of the following scenarios, write out two rules that students are observing and two rules that students are breaking.*

**Scenario I.** The class read the lab procedure together before coming into the lab. Students went into the lab while the teacher stayed in the classroom gathering some supplies. After putting on his safety goggles and apron, Jake began to measure out chemicals and smelled the chemical to make sure it's the correct one.

**Good**

1.

2.

**Bad**

1.

2.

**Scenario II.** Kayla and Paul finished their labs early. They had mixed chemicals with other chemicals during the lab and observed reactions. They were curious about what would happen if

they mixed a combination that wasn't mentioned in the lab, so they mixed a small amount of the two chemicals together. After they were done, they cleaned up their workspace and washed their hands.

**Good**

**Bad**

1.

1.

2.

2.

**Scenario III.** Greg took out a test tube and poured in the amount chemical specified in the lab. He noticed that it had a chip, but decided it didn't matter. He began to heat the test tube and it shattered. He told the teacher, got a broom and dust pan and then threw the broken glass into the regular trash.

**Good**

**Bad**

1.

1.

2.

2.

**Scenario IV.** Sally came to school with her long hair down and wearing a shirt with loose flowing sleeves. During lab, she tied her hair up in a ponytail. She and her lab partner John were heating test tubes. They needed to heat a test tube in a few minutes so they left the Bunsen burner on. Sally reached to get the test tube and caught her sleeve on fire. John quickly got the fire extinguisher and put the fire out.

**Good**

**Bad**

1.

1.

2.

2.

### **Section III: Short Answer**

Write **OR** draw and label the locations of:

- a. the fire extinguisher
- b. the eyewash
- c. the safety shower
- d. the emergency exits
- e. the first aid kit

What is the penalty for violating any safety rules during lab?

