Name:_____ Date:_____

Lab Safety

Review the essential lab safety rules for the classroom. Remember these are not ALL the rules but cover a majority of what to do in the classroom. Read the following paragraphs and be able to answer questions. You will have questions about lab safety on your first test.

Safety First: Understanding Lab Protocol

Science laboratories are exciting places where you can explore chemical reactions, examine specimens, and conduct experiments. However, because labs contain hazardous materials, fragile glassware, and heat sources, following safety rules is absolutely critical. Above all, you must always **follow instructions** given by your teacher and your lab handout. Never perform unauthorized experiments or play the "mad scientist" by mixing random chemicals, as this can trigger unpredictable reactions, release toxic gases, or cause fires. Most of all **never experiment on yourself or play "mad scientist."**

To keep yourself safe, always **dress appropriately** on lab days: tie back long hair, avoid loose clothing, and wear closed-toed shoes. Safety goggles and aprons must be worn whenever chemicals, heat, or glassware are used. Remember that you should **never eat, drink, or chew gum** in the laboratory, as chemical residue can easily contaminate your food. Similarly, **never taste or sniff chemicals** directly; if you need to identify a substance by its scent, safely waft the fumes toward your nose with your hand. Additionally, never experiment on yourself or apply any substance to your skin. When your experiment is finished, **dispose of all waste and materials properly** as directed by your teacher, and wash your hands thoroughly with soap and water.

Lastly, you must **know the location of safety equipment**—including the fire extinguisher, eye wash station, safety shower, and first aid kit—before you begin. **Knowing what to do in an emergency** and notifying your teacher immediately if an accident occurs ensures that everyone in the classroom stays safe.

REMEMBER...Above all else make sure to listen to the teacher! Science is made to be fun and hands on but students who can not follow rules and obey WILL NOT get to participate in the labs. Labs are a privilege not a right in this classroom.

LIVEWORKSHEETS

Part 1: The Golden Rules

Match each lab safety rule from the word bank to the scenario where it is being broken. Write the correct letter in the answer box on the left side.

A. Dress appropriately

B. Dispose of waste/materials properly.

C. Do not eat or drink in the lab

D. Follow instructions

E. Do no taste or sniff chemicals

1. Marcus decides to mix two extra powders into his beaker just to see what will happen, even though the teacher didn't say to.

2. Sarah holds a test tube right up to her nose and takes a deep breath to see what the liquid smells like.

3. Leo pours his leftover copper sulfate solution straight down the sink drain instead of in the designated chemical bin.

4. Maya brings an open can of soda and a bag of chips to her lab station while waiting for her water to boil.

5. David wears open-toed sandals and a loose, baggy sweater on a day the class is working with open flames and acids.

Part 2: Safety Equipment & Emergencies

Answer the following questions about emergency procedures in your science lab.

6. Why is it critical to know the exact location of safety equipment (like the eye wash station or fire extinguisher) *before* you start an experiment?

7. If a glass beaker shatters on the floor and a clear liquid spills, what are the first two steps you should take?

LIVEWORKSHEETS

Part 3: True or False

8. If you are curious about how a chemical will react with your skin, it is okay to put a tiny drop on your hand as long as you wash it off immediately.

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9. You should always wash your hands thoroughly with soap and water after completing any lab experiment.

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10. If you need to smell a chemical, you should safely waft the fumes toward your nose with your hand rather than sniffing it directly.

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11. It is acceptable to drink from laboratory glassware if you have rinsed it out first.

Part 4: The "Mad Scientist"

We often see characters in movies acting like "mad scientists"—wildly mixing chemicals, causing explosions, and ignoring all protocols.

12. Explain why playing "mad scientist" (doing unapproved experiments or mixing random chemicals) is incredibly dangerous in a real laboratory setting. Give at least two specific dangers.

LIVEWORKSHEETS