Name: _____ **Date:** _____

Answer Key: Hazard Hero: Prove You Can Manage a 6th Grade Science Lab

Navigate high-stakes scenarios from chemical containment to electrical safety to ensure your research team stays safe and your experiments succeed.

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1. You notice a small crack in a glass graduated cylinder before beginning a high-heat experiment. What is the most scientifically sound action to take?

Answer: C) Alert the instructor and dispose of it in a designated glass container.

Damaged glassware can shatter unexpectedly when heated due to thermal expansion, posing a serious laceration risk. It must be reported and disposed of in specific 'broken glass' bins.

2. When diluting a concentrated acid, you should always add the _____ slowly to the water, never the other way around, to prevent dangerous splashing.

Answer: B) Acid

The 'AA' rule (Add Acid) is vital; the heat generated during mixing is absorbed better by a large volume of water, preventing the acid from boiling and splashing onto the chemist.

3. If a student has long hair, it is acceptable to leave it down as long as they are working at least two feet away from a Bunsen burner.

Answer: B) False

Long hair is a significant fire hazard in the lab. It must be tied back regardless of perceived distance to prevent accidental contact with flames or chemical vats.

4. While heating a substance in a test tube, in which direction should the mouth of the tube be pointed?

Answer: D) Away from yourself and all other people in the lab.

Chemicals can 'bump' or erupt suddenly when heated. Pointing the tube away from people ensures that a sudden discharge does not cause injury.

5. To properly identify the odor of a chemical without inhaling dangerous concentrations, a scientist should use a technique called _____.

Answer: B) Wafting

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Wafting involves using your hand to gently wave the vapors toward your nose from a distance, protecting your respiratory system from direct exposure.

6. Chemicals that look like common table salt or sugar are safe to taste in the lab as long as the containers are new.

Answer: B) False

A fundamental rule of lab safety is that nothing should ever be tasted. Many toxic or corrosive chemicals share the appearance of household ingredients.

7. Which piece of safety equipment is most appropriate if a classmate accidentally knocks over a beaker of corrosive liquid onto their arm?

Answer: C) The safety shower

The safety shower provides a high volume of water to quickly dilute and wash away corrosive chemicals from the skin, minimizing chemical burns.

8. A Safety Data Sheet (SDS) provides information about a chemical's properties, hazards, and _____.

Answer: D) Handling and storage

SDS documents are essential references that detail exactly how to store, use, and dispose of substances safely, as well as what to do in an emergency.

9. If an electrical piece of equipment begins to smoke or smell like it is burning, what should be your first priority?

Answer: B) Unplug it immediately if safe, and notify the teacher.

Disconnecting the power source stops the flow of energy that is causing the overheating. Reporting it ensures the faulty equipment is removed from service.

10. Safety goggles only need to be worn when you are personally handling chemicals, not when you are just watching a demonstration.

Answer: B) False

Hazards like splashes or flying debris can travel several feet. Everyone in the vicinity of an experiment must wear eye protection until all materials are put away.