

Name: _____

Period: _____

Lab Safety Video

Procedure:

Watch the "Safety in the Laboratory" video and discuss each topic with your teacher. After the discussion you will be asked to fill in the answers to questions on each topic.

Handling Chemicals Safely

VIDEO SUMMARY

Work with an appropriate sized container, mix chemicals only when your teacher says to, read and reread all chemical labels, read all instructions for the lab before beginning the first step, move carefully and deliberately when handling chemicals, hold coin-top stoppers between your fingers while pouring, replace stoppers immediately, keep chemicals away from your face, work with harmful volatile chemicals under the hood, keep chemicals as pure and uncontaminated as possible, notify your teacher to clean up spills, put waste chemicals in the proper container and clean up your lab area when finished.

1. When you read the label on the container what are the 3 most important pieces of information?

name, concentration, hazard warning.

2. How many times should you read the container label before using the chemicals inside?

twice, read and re-read

3. Why is it important to be precise when preparing your chemical reaction in lab?

so that you do not mix chemicals mistakenly or incorrectly, causing an unfavorable reaction.

4. What should you do with left over chemicals after a laboratory experiment?

dispose of in the proper waste container.

5. Why shouldn't some chemicals be dumped down the drain in chemistry lab?

hazardous chemicals can pollute the environment and end up contaminating water sources.

6. Why is it important to read all the instructions for your lab procedure before beginning the experiment?

to ensure you do not miss a step or make a mistake.

7. When you need to carry chemicals in the lab, which size container is best to use?

small, it is easier to manage and control so you do not spill a chemical.

8. If you spill a liquid chemical, what should you do?

tell the instructor so they can clean it up.

Bunsen Burner and Glassware Safety

VIDEO SUMMARY

Never heat anything flammable with a Bunsen burner, check the gas hose for cracks, make sure the hose fits securely on the gas valve and the Bunsen burner fittings, stand back from the burner when lighting it (don't lean over it), if the flame goes out or starts to sputter, turn the gas off immediately, check glassware for stars or cracks, move test tubes back and forth at an angle through the flame at an angle while heating, never heat closed containers, and hold hot glassware with tongs or mitts.

9. Before connecting a Bunsen burner to the gas line, what should you check for? (At least 2 things)

check for cracks and holes in the hose and a secure fit.

10. When should you turn on the gas when trying to light your Bunsen burner?

when you have all equipment and are ready to light- you don't want gas to fill the room.

11. How should you position your body with respect to the Bunsen burner when using the striker to light the burner?

away from the opening of the burner.

12. If the flame sputters or goes out what should you do?

turn off the gas and tell the teacher.

13. If you smell gas in the room what should you do?

turn off the gas and tell the teacher.

14. Is it safe to heat a sealed container? **Explain** your answer.

No- it will explode from the build up of pressure as gases form.

15. How is it possible to work safely near hot objects? Explain.

With caution and being aware of your surroundings.

16. Is it safe to use glassware with stars or cracks? **Explain** your answer.

No- it may burst when heated.

17. How should you carry hot objects?

With tongs or hot mitts.

Thermometer Safety

18. What kind of thermometers will we use in class? What dangers should you be aware of?

Alcohol- they can burst if placed directly into the burner flame and can break easily so do not shake.

19. If you break a thermometer what should you do?

Tell the teacher- do not attempt to clean up yourself.

Dressing for Lab Safety

VIDEO SUMMARY

Don't wear extremely loose clothing, fabrics should be sturdy and natural, like cotton, wear older clothes to lab and protect yourself with an apron, wear long pants or a long skirt to cover your legs, wear closed-toe shoes- NO FLIP FLOPS!, tie back long hair, remove rings, watches and any other jewelry that can trap chemicals, be aware that a contact lens can trap chemicals in the eye, always wear goggles to protect your eyes in lab, protect your hands with gloves when necessary.

20. Describe the appropriate shoes for lab.

Closed toe leather shoes.

21. Describe the type of clothing that should be worn in lab. Start from the feet and work your way up the body. **Clothing of natural fabrics (cotton) that is fitted but allows movement. Long pants or a skirt, an apron, closed toe shoes and lab goggles with hair tied back.**

22. Why is it important to remove all jewelry when working in lab?

Chemicals can become trapped against your skin behind jewelry which can cause injury.

Behavior in the Lab

VIDEO SUMMARY

Absolutely no fooling around in the lab, keep your book bags off of the floor and out of the aisles during lab, no food or drinks in the chemistry lab, keep all makeup inside of your purse during chemistry, stand on a step stool or ask someone taller than you to help reach items in high places, and bring items such as a burette to eye level if you need to read values.

23. Explain why the laboratory is not a safe place to eat, drink or put on makeup?

Chemicals can contaminate the food or makeup and be consumed or applied to the skin.

24. How should your personal belongings be kept during lab? **away from aisles, under your chair.**

Emergency Equipment

Clean and dry skin around a cut before applying any bandages, rinse chemicals from your eyes in the eyewash fountain, rinse any chemicals spilled on your hands or arms immediately, remove your clothes on the way to the safety shower if you spill a large amount of acid on yourself, call your teacher immediately if anything goes on fire and put clothing fires out with a fire blanket or in the safety shower.

25. Indicate where each of the following pieces of safety equipment is located in the classroom:

- Eyewash station front right corner of the front desk.
- Safety shower next to the clock to the right of the door.
- Fire extinguisher bottom right of the door.
- Fire blanket left of the door.
- Fire escape window to the right of the air conditioner.
- First aid kit to the left of the class door.
- Goggle cabinet back left corner of the classroom.