

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?
2. How many times should you read the container label before using the chemicals inside?
3. Why is it important to be precise when preparing your chemical reaction in lab?
4. What should you do with left over chemicals after a laboratory experiment?
5. Why shouldn't some chemicals be dumped down the drain in chemistry lab?
6. Why is it important to read all the instructions for your lab procedure before beginning the experiment?
7. When you need to carry chemicals in the lab, which size container is best to use?
8. If you spill a liquid chemical, what should you do?

## 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)
  
10. When should you turn on the gas when trying to light your Bunsen burner?
  
11. How should you position your body with respect to the Bunsen burner when using the striker to light the burner?
  
12. If the flame sputters or goes out what should you do?
  
13. If you smell gas in the room what should you do?
  
14. Is it safe to heat a sealed container? **Explain** your answer.
  
15. How is it possible to work safely near hot objects? Explain.
  
16. Is it safe to use glassware with stars or cracks? **Explain** your answer.
  
17. How should you carry hot objects?

## Thermometer Safety

18. What kind of thermometers will we use in class? What dangers should you be aware of?
  
19. If you break a thermometer what should you do?

## 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.
21. Describe the type of clothing that should be worn in lab. Start from the feet and work your way up the body.
22. Why is it important to remove all jewelry when working in lab?

## 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?
24. How should your personal belongings be kept during lab?

## 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:

- a. Eyewash station \_\_\_\_\_
- b. Safety shower \_\_\_\_\_
- c. Fire extinguisher \_\_\_\_\_
- d. Fire blanket \_\_\_\_\_
- e. Fire escape window \_\_\_\_\_
- f. First aid kit \_\_\_\_\_
- g. Goggle cabinet \_\_\_\_\_

## Lab Safety Video Quiz

### 1. Fill in the blanks in this reading passage with the words from the bank below.

A(n) \_\_ (a) \_\_ doesn't occur often in chemistry lab if students understand safe lab procedures and are \_\_ (b) \_\_ in following instructions. Common sense and a \_\_ (c) \_\_ for the people working around you is essential. The chemistry lab is no place for \_\_ (d) \_\_ around and will not be tolerated. Never do anything in lab that is not called for in the specific \_\_ (e) \_\_ for the experiment you are working on. Be sure to place your \_\_ (f) \_\_ on your desk chair, so that \_\_ (g) \_\_ are kept clear during an experiment, just in case of an \_\_ (h) \_\_ where students need to leave the room quickly. And always \_\_ (i) \_\_ about what you're doing in lab.

The best way to prevent an eye injury is to wear safety \_\_ (j) \_\_ at all times. Make sure you know where the \_\_ (k) \_\_ fountain is in the event you get something in your eyes. In this case, your lab \_\_ (l) \_\_ should help walk you over to the station and \_\_ (m) \_\_ your eyes out with plenty of \_\_ (n) \_\_. If part of a person's clothing catches on fire they should use the \_\_ (o) \_\_. For a larger clothing fire or chemical spill the \_\_ (p) \_\_ should be used. If the lab fills with smoke fumes, students should pull the \_\_ (q) \_\_ and \_\_ (r) \_\_ the room.

Special care should be taken when working with a Bunsen burner. The sleeves of your shirt should be \_\_ (s) \_\_ and of \_\_ (t) \_\_ fabric. Choose \_\_ (u) \_\_ clothing to wear during lab and take additional protection by wearing an \_\_ (v) \_\_. Also, long hair should always be \_\_ (w) \_\_ back. Lastly, never \_\_ (x) \_\_ anything in lab and take care to wash your \_\_ (y) \_\_ after lab.

fire blanket	fire alarm	partner	tied	emergency
fitted	aisles	flush	accident	eat
careful	backpacks	older	respect	think
water	procedure	goggles	hands	apron
fooling	eyewash	safety shower	evacuate	natural

- |           |           |           |
|-----------|-----------|-----------|
| (a) _____ | (i) _____ | (q) _____ |
| (b) _____ | (j) _____ | (r) _____ |
| (c) _____ | (k) _____ | (s) _____ |
| (d) _____ | (l) _____ | (t) _____ |
| (e) _____ | (m) _____ | (u) _____ |
| (f) _____ | (n) _____ | (v) _____ |
| (g) _____ | (o) _____ | (w) _____ |
| (h) _____ | (p) _____ | (x) _____ |
|           |           | (y) _____ |

2. Describe the proper clothing attire (head to foot) for a student working in lab.

***BE SPECIFIC!!!!***

HEAD –

BODY –

FEET –

3. Explain why students should not wear jewelry in lab.

4. Explain why students should not have food, drink or makeup in the lab.

5. Four students are working around a lab pod in chemistry class. They are using Bunsen burners to heat beakers set up on a ring stand. Besides for the way they are dressed, what is the most IMPORTANT safety rule in this situation. Explain your answer.

6. There are four pieces of safety equipment in this classroom. Name each piece and explain the circumstances in which you would use these pieces of equipment.

(a)

(b)

(c)

(d)