

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

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

## Lab Safety Chat!

**Directions:** Today you will be participating in “Lab Safety Chat.” This is a lab station activity designed to review and reinforce your knowledge of the lab safety rules, and introduce you to the safety features of this lab. You will be rotating through various stations as instructed by your teacher. Complete the student handouts for each station.

### Station: Lab Safety Basics

**Directions:** Find the “General Safety Rules” page at this station. Familiarize yourself with all the basic lab rules. Use the information found at this station to answer the following lab safety questions.

#### Fill in the Blanks:

- \_\_\_\_\_ 1. What two items must be worn anytime you are working with chemicals?  
\_\_\_\_\_
- \_\_\_\_\_ 2. Suppose that you are doing a lab in which you are observing prepared slides under the microscope. List the numbers of all lab rules that would directly apply to this situation.
- \_\_\_\_\_ 3. List the numbers of all lab rules that directly apply to the use of chemicals in the laboratory.
- \_\_\_\_\_ 4. Read rule 6 from the “General Safety Rules” page to fill in the following blank. Never perform \_\_\_\_\_.
- \_\_\_\_\_ 5a. Rule 6: Directions must be followed \_\_\_a\_\_\_ as stated in the \_\_\_b\_\_\_ or by the \_\_\_c\_\_\_.
- \_\_\_\_\_ 5b.
- \_\_\_\_\_ 5c.
- \_\_\_\_\_ 6a. Never \_\_\_a\_\_\_, \_\_\_b\_\_\_, \_\_\_c\_\_\_, \_\_\_d\_\_\_, or \_\_\_e\_\_\_ chemicals unless you are told to do so.
- \_\_\_\_\_ 6b.
- \_\_\_\_\_ 6c.
- \_\_\_\_\_ 6d.
- \_\_\_\_\_ 6e.

#### Multiple Choice:

- \_\_\_\_\_ 7. When must safety goggles be worn? (a) Working with an open flame (b) Working with chemicals (c) Working with a mechanical device (d) All of the above.
- \_\_\_\_\_ 8. When must a laboratory apron be worn? (a) Working with an open flame (b) Working with chemicals (c) Working with a mechanical device (d) All of the above.
- \_\_\_\_\_ 9. Which of the following behaviors will be tolerated in the lab? (a) horsing around

(b) practical jokes (c) washing hands with soap and water (d) racing to find a good seat when you enter the lab.

\_\_\_\_\_10. Which of the following are appropriate when working with an open flame? (a) Secure loose clothing. (b) Tie back long hair. (c) Wear safety goggles. (d) All of the above.

**True or False:**

\_\_\_\_\_11. If a lab requires a boiling water bath, you will be required to wear safety goggles even though it is only water.

\_\_\_\_\_12. When a classmate asks to borrow your ruler, it is okay to toss it across the lab table.

\_\_\_\_\_13. Upon entering the lab you should pick up and examine all equipment and chemicals prior to the start of class.

\_\_\_\_\_14. It is never appropriate to drink from laboratory glassware.

\_\_\_\_\_15. If you are unsure of how to proceed during an experiment, you should try anything rather than bothering the instructor.

\_\_\_\_\_16. If you spill something, clean it up yourself before the teacher notices.

\_\_\_\_\_17. Never return unused chemicals to their original containers.

**Short Answer:**

18. Why is working alone in the lab an unsafe procedure? \_\_\_\_\_

\_\_\_\_\_

19. List the items you should bring to your lab table at the beginning of class. \_\_\_\_\_

\_\_\_\_\_

20. What items should never be brought to your lab table? \_\_\_\_\_

\_\_\_\_\_

21. What "dress code" rules must be followed in the lab? \_\_\_\_\_

\_\_\_\_\_

22. Why do you suppose you are not allowed to eat or drink during a lab experiment? \_\_\_\_\_

\_\_\_\_\_

23. In what two ways will you always be made aware of the safety precautions during a lab experiment?

\_\_\_\_\_

24. Why should all spills be reported? \_\_\_\_\_

\_\_\_\_\_

25. Explain why this rule is necessary: Do not use chipped, cracked, or broken glassware. \_\_\_\_\_

\_\_\_\_\_



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## Station: What's the (Floor) Plan?

**Directions:** Use the space on this page to draw your floor plan of the lab. Be sure to include all of the items indicated on the Lab Station Instruction Page. Complete questions 1 – 7 on the following page.

**Answer the following questions about your lab floor plan.**

1. How many exits are in this lab? \_\_\_\_\_

2. Where does each exit lead? \_\_\_\_\_

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3. Where will you place your backpacks, purses, and jackets when you enter the lab? Why is it a hazard to carry these materials to your lab station? \_\_\_\_\_

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4. Does the lab have windows? Can the windows be opened for ventilation or used as an escape route? \_\_\_\_\_

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5. There are many different styles of lab tables. Which of the following are included at your table?

- \_\_\_\_\_ Sink
- \_\_\_\_\_ Electrical outlets
- \_\_\_\_\_ Gas fixture
- \_\_\_\_\_ Storage cabinet
- \_\_\_\_\_ Support rods with crossbar

6. Do you have access to water at your lab table? If not, how will you obtain water for lab experiments? \_\_\_\_\_

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7. List all equipment and supplies that are stored at your lab table. \_\_\_\_\_

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## Station: Lab Safety Symbols

**Directions:** Complete the card sort activity before filling in the blanks below. Once you have correctly matched each lab safety symbol to the correct hazard it represents, fill in the blanks with the hazard and the precautions that are needed.



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_

\_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_

\_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_

\_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_

\_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_

\_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_

\_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_

\_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_

\_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_

\_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_

\_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_

\_\_\_\_\_



Hazard: \_\_\_\_\_

Precaution: \_\_\_\_\_

\_\_\_\_\_

Why are symbols such as these used in lab manuals? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

As stated in the introduction, there is not a universal set of safety symbols. The symbols seen below are slightly different from the ones in the card sort activity. What do suppose is meant by each of the following?



\_\_\_\_\_

\_\_\_\_\_



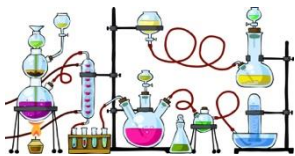
\_\_\_\_\_

\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_



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## Station: Heating and Fire, Glassware, and Sharps

**Directions:** Complete the questions below as you follow the directions on the lab station sign.

1. Many different pieces of equipment can be found at this station. List the items that can be used to supply heat. \_\_\_\_\_
2. List the pieces of glassware. \_\_\_\_\_
3. List the sharp instruments. \_\_\_\_\_
4. Is the burner tubing connector in good condition? What might you see if it was in bad condition?  
\_\_\_\_\_  
\_\_\_\_\_
5. Does the cord on the hot plate appear to be safe? What might you see if it was unsafe? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
6. Where is the electrical outlet for plugging in the hot plate? \_\_\_\_\_
7. When plugged in, will the cord dangle from your workstation? If so, how will you secure it?  
\_\_\_\_\_
8. Which pieces of glassware appear to safe to use in a lab activity? \_\_\_\_\_
9. Which pieces of glassware are unsafe to use? What makes them unsafe? \_\_\_\_\_  
\_\_\_\_\_
10. What might happen if you heat a substance using unsafe glassware? \_\_\_\_\_
11. A fire occurs on your lab bench. List two ways to put out the fire. \_\_\_\_\_  
\_\_\_\_\_
12. Why is the safety shower the preferred method of putting out a fire on a person? \_\_\_\_\_  
\_\_\_\_\_

13. How do you determine if heated glassware is safe to touch? \_\_\_\_\_

\_\_\_\_\_

14. What "dress code" rules should be obeyed when using an open flame? \_\_\_\_\_

\_\_\_\_\_

15. Where is the fire alarm? \_\_\_\_\_

16. How will you exit the room in case of fire? \_\_\_\_\_

**Each of the following statements is FALSE. In the space provided, write a corrected statement.**

17. Safety goggles are worn only when chemicals are in use. \_\_\_\_\_

\_\_\_\_\_

18. In case of a fire, it is only necessary to turn off the gas outlets. \_\_\_\_\_

\_\_\_\_\_

19. Glassware only needs to be heat resistant if a Bunsen burner is used. \_\_\_\_\_

\_\_\_\_\_

20. The best fun in a lab is to heat a stoppered test tube and point it at your friend. \_\_\_\_\_

\_\_\_\_\_

21. It is acceptable to use a beaker that has a very tiny chip at the edge. \_\_\_\_\_

\_\_\_\_\_

22. When using a scalpel or razor, start the cut as far from you as possible, and then pull the scalpel or razor toward your body. \_\_\_\_\_

\_\_\_\_\_



## Station: Eyewash and Safety Shower

1. Describe the location of the eyewash and safety shower. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. Is the eyewash station a separate piece of equipment from the safety shower, or do they appear to be one single unit? \_\_\_\_\_
3. When will you use the eyewash fountain? \_\_\_\_\_
4. When will you use the safety shower? \_\_\_\_\_
5. How is the eyewash fountain activated? (Remember: Do not activate unless you have been instructed to do so.) \_\_\_\_\_  
\_\_\_\_\_
6. If you are allowed to turn on the eyewash fountain, or if your teacher demonstrates it for you, describe the temperature and the flow of the water. \_\_\_\_\_  
\_\_\_\_\_
7. How is the safety shower activated? \_\_\_\_\_
8. Describe what you will do if you should ever need to use the eyewash fountain. Be specific.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. Describe what you will do if you should ever need to use the safety shower. Be specific.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
10. What is the minimum amount of time that eyes should be flushed? \_\_\_\_\_
11. What is the minimum amount of time that you should remain under the shower? \_\_\_\_\_



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## Station: Fire Safety

### Fire Extinguisher, Fire Blanket, and Fire Alarm

**Directions:** Complete the questions below as you follow the directions on the lab station sign.

1. Describe the location of the fire extinguisher. \_\_\_\_\_  
\_\_\_\_\_
2. Examine and read the labels on the fire extinguisher. Is this an "ABC" fire extinguisher? \_\_\_\_\_
3. What types of materials may be put out using this particular fire extinguisher? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. When operating a fire extinguisher, it is helpful to remember what key word? Explain the meaning of each letter in this word. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. A fire extinguisher should not be used on a person. Explain. \_\_\_\_\_  
\_\_\_\_\_
6. Describe the location of the fire blanket. \_\_\_\_\_  
\_\_\_\_\_
7. There are different types of fire blankets. Examine the one in this lab. How is the blanket removed from the container? \_\_\_\_\_
8. What instructions are given on the container? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9. Explain how to use the fire blanket on a tabletop fire. \_\_\_\_\_  
\_\_\_\_\_
10. What is the danger of “throwing” the fire blanket on top of a fire? \_\_\_\_\_  
\_\_\_\_\_
11. Explain how to use the fire blanket when a person’s clothing is on fire. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
12. A person wrapped in a fire blanket should lie on the ground to avoid a “chimney effect.” What do you suppose this means? \_\_\_\_\_  
\_\_\_\_\_
13. What is the location of the fire alarm? \_\_\_\_\_
14. Examine the fire alarm. How is it activated? \_\_\_\_\_
15. Most science labs have two types of fire alarms. One type is on the wall and is hand-activated. A second type is like the fire alarm in your home and is automatically activated when smoke is detected. Does this lab have both types of fire alarm? \_\_\_\_\_
16. How will you exit the room in case of a fire? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## Station: First Aid

1. If an accident or emergency occurs, what is the first most important thing for you to do? \_\_\_\_\_  
\_\_\_\_\_
2. What is the role of the person who is administering first aid? \_\_\_\_\_  
\_\_\_\_\_
3. What is the location of the first aid kit? \_\_\_\_\_
4. Take a look in the first aid kit. Make a list of the items included in the first aid kit. \_\_\_\_\_  
\_\_\_\_\_
5. For each situation given in the chart below, describe your "safe response" action.

Situation	Safe Response
<b>Fainting</b>	
<b>Chemical or foreign object in eye</b>	
<b>Poisoning</b>	
<b>Thermal burn</b>	
<b>Shock</b>	
<b>Minor cut</b>	
<b>Chemical spill on skin</b>	



## Station: Lab Dress Code

1. When you enter the lab, where will you find the safety goggles and the lab aprons? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. How will the goggles be sanitized after they are used? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. When should you wear safety goggles? \_\_\_\_\_
4. When should you wear a lab apron? \_\_\_\_\_
5. When should you use gloves? \_\_\_\_\_
6. Some people are very allergic to latex gloves. If you have a latex allergy, you must alert your teacher immediately!  
Are you allergic to latex products? \_\_\_\_\_
7. What might happen if you failed to tie back your long hair? \_\_\_\_\_  
\_\_\_\_\_
8. Why should you always wear closed-toed shoes in the lab? \_\_\_\_\_  
\_\_\_\_\_
9. As you “dressed” at this station, did you do the following?  
\_\_\_\_\_ Put on safety goggles?  
\_\_\_\_\_ Put on lab apron?  
\_\_\_\_\_ Wear heat resistant gloves?  
\_\_\_\_\_ Tie back long hair?  
\_\_\_\_\_ Secure loose clothing?  
\_\_\_\_\_ Remove dangling jewelry?  
\_\_\_\_\_ Are you wearing long pants?  
\_\_\_\_\_ Are you wearing closed-toed shoes?