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عنوان

قوانین ایمنی در آزمایشگاه

Laboratory Safety Rules



LAB SAFETY RULES

ALL FACILITIES SHOULD ENFORCE

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LAB SAFETY RULES

Supervision

- **NEVER** work alone in the laboratory.
- **Conduct only the assigned experiment, and do them only when the teacher is present.**



Read Directions

- **Read all of the directions for a laboratory procedure before proceeding with the first part.**
- **You may want to reread each instruction before you do it.**



Lab Wear



- **When asked, wear a chemical resistant apron/lab coat.**

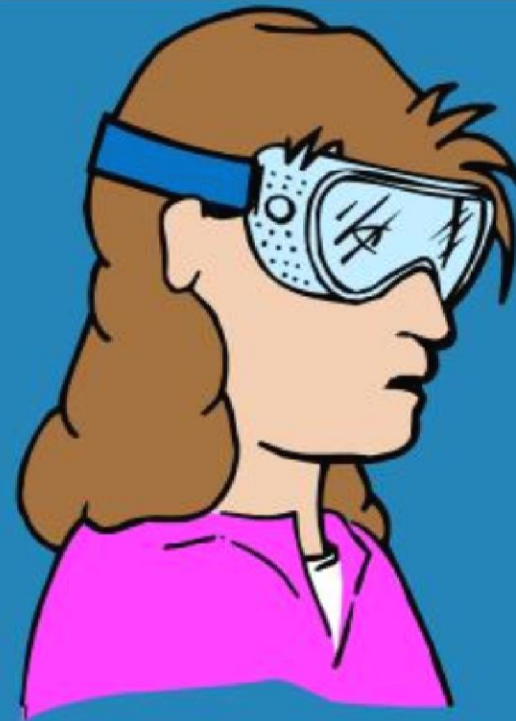
Clothing

- **Avoid wearing overly bulky or loose fitting clothes.**
- **Remove any dangling jewelry.**



Safety Goggles

- **Wear safety goggles at all times while performing an experiment.**
 - **Goggle MUST cover eyes!**



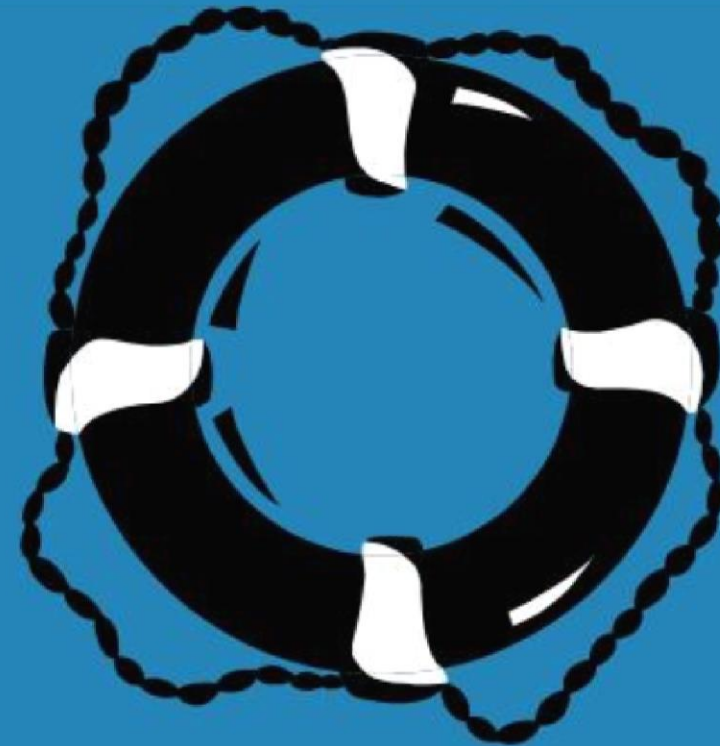
Shoes



- Shoes must be worn at all times in the laboratory.
 - NO SANDALS OR FLIP-FLOPS!

Safety Equipment

- **KNOW THE LOCATION OF SAFETY EQUIPMENT.**
- **BE SURE YOU KNOW HOW TO USE THE EQUIPMENT!**



No Eating

- Do not chew gum, eat, or drink in the laboratory.
- Tip: Don't chew on the end of a pen that was lying on the lab bench.



Chemical Spills



- Wash chemical spills off of yourself *immediately with large amounts of water.*
- ***NOTIFY TEACHER RIGHT AWAY!!!***

Safety Equipment



Eye Wash

If chemical substances get into your eye, wash eyes out for 15 minutes. Hold your eye open with your fingers while washing it out.

Safety Equipment



- **Emergency Shower**

Safety Equipment



- **Fire Extinguisher**

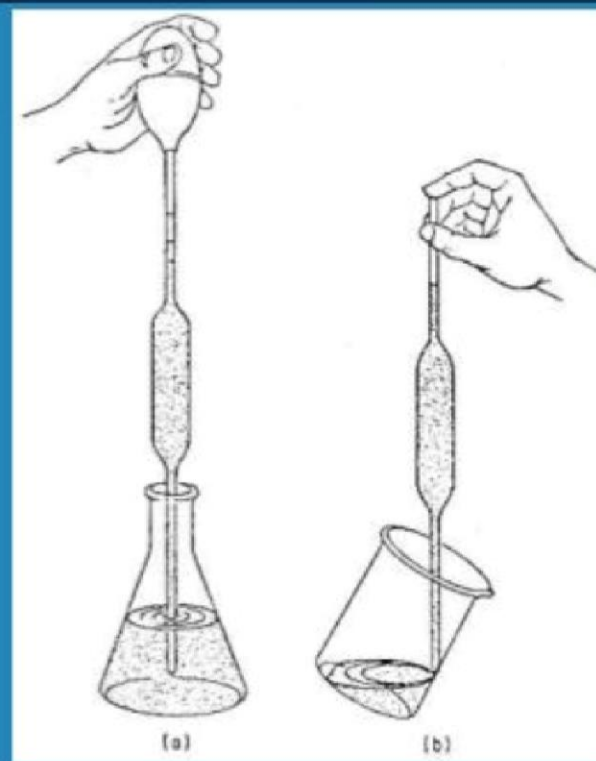
Safety Equipment



- **Fire Blanket**

Pipeting

- **DO NOT PIPET LIQUIDS BY MOUTH!!!**
- **Only use a pipet suction bulb.**



Excess Chemicals



- If you take more of a chemical substance from a container than you need, do not return the excess to the original stock bottle because this might cause contamination of the stock container.
- Dispose of the excess as your teacher directs.

Smelling a Substance

- **Never smell anything unless your teacher tells you it is safe.**
- **Do not smell a substance by putting your nose directly over the container and inhaling.**
- **Instead, waft the vapors towards your nose by gently fanning the vapors toward you.**



Tasting



- **NEVER TASTE MATERIALS IN THE LABORATORY.**

Burns



- If you burn yourself on a hot object, immediately hold the burned area under cold water for 15 minutes.
- ***INFORM YOU TEACHER IMMEDIATELY!!!***

Clean Up After Yourself

- **Keep the laboratory desk, sink, storage areas, and floor clean, dry and neat.**



Lids and Caps



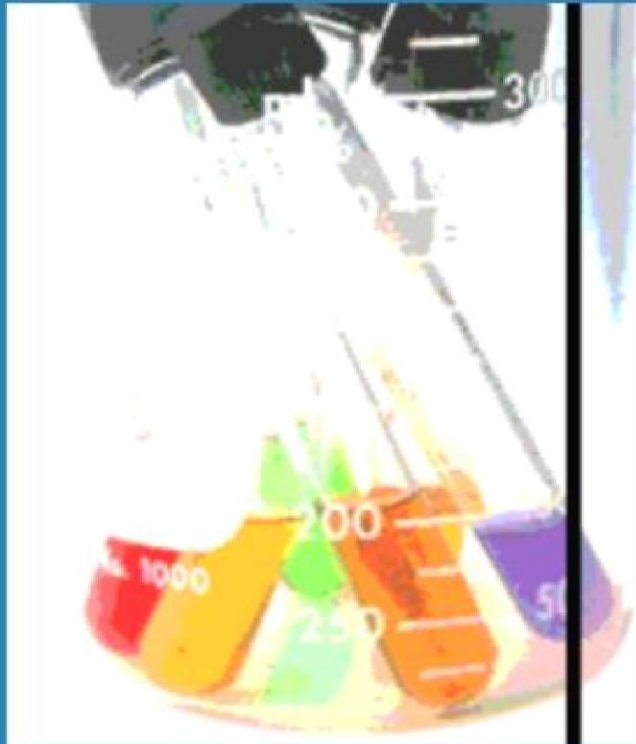
- **Put lids and caps back on bottles and jars.**

Spills

- **Clean up spills IMMEDIATELY.**
- **Notify the people in the area and then obtain assistance from your teacher.**
- **Acid spills should be neutralized with baking soda.**
- **Base spills should be neutralized with vinegar before cleaning them up.**



Closed Systems



- **NEVER HEAT A CLOSED SYSTEM!!!**

Bunsen Burner

- If your Bunsen burner goes out, **TURN OFF THE GAS IMMEDIATELY.**



Heating a Test Tube



- When heating a test tube, *turn the mouth of the test tube away from your self and others.*

Acid and Water

- **Always ADD ACID to water and stir the solution while adding the acid.**
- **NEVER ADD WATER TO AN ACID!!!**



Broken Glassware



- **Do not use chipped or cracked glassware.**
- **Dispose of broken glassware with brush and dustpan into PROPER WASTE CONTAINER.**

Horseplay

- **ABSOLUTELY
NO HORSE PLAY
IS ALLOWED IN
THE
LABORATORY!**



Waste Disposal

- **Follow instructions for proper waste disposal.**
- **Not all liquids can go down the drain.**
- **Not all solids can go in the garbage.**



Wash Your Hands



- **Wash your hands with soap and water at the end of each laboratory.**

Watch your station

- **Never leave your lab station unattended.**



Activity Time

What are the students doing wrong in the following picture?

