

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

## Science Laboratory Safety Protocols

### LABORATORY SAFETY

- A. Reasons for Safe Standard (common) Procedures in the Lab:
1. Minimizes hazards to self, other lab students, etc.
  2. Ensures procedures and experiments can be duplicated accurately
  3. Ensures more accurate results – reduces tampering, contamination, false results, etc.
- B. Review Lab Safety Sheet/Rules and Student Lab Contracts
- C. **UNIVERSAL PRECAUTIONS** – specific requirements to maintain at-risk environmental areas in sanitary conditions, to reduce risk of personal infection and harm
1. **\*Bloodborne pathogens** – any disease-carrying microorganism (i.e., bacteria, virus, fungus) transported through the bloodstream
    - a. May be contained in blood and other potentially infectious bodily substances.  
Specific disease concerns – Herpes simplex virus, meningitis, tuberculosis, Hepatitis B, HIV/AIDS
  2. **\*Bodily Substance Isolation (BSI)** – standard universal precautions to isolate or prevent risk of exposure to bloodborne pathogens from bodily substances

Personal Protective Equipment (PPE) and Personal Hygiene are two very basic aspects of laboratory safety.

Wearing appropriate PPE and practicing good hygiene helps minimize exposure to bloodborne pathogens and hazardous lab materials.

a. **\*Personal Protective Equipment (PPE):**

1. Disposable gloves, proper lab clothes and shoes, safety goggles
2. All cuts, scrapes, wounds must be properly and sterilely covered underneath gloves or clothing
3. Don't touch eyes, lips, face, pencils, lab equipment, etc., or apply makeup before thoroughly washing hands properly, *even when gloves are worn*

❖ **DRESSING FOR SAFETY:**

- Always wear appropriate chemical and flame resistant clothing
- Cover legs and feet

DO NOT wear shorts, cutoffs, or miniskirts on lab days

NO OPEN-TOED SHOES allowed in the lab – no high-heels, sandals, or shoes made of woven or canvas (porous) material

Leather shoes that completely enclose the feet are preferred

- No loose fitting clothes that can catch on table corners, equipment, etc.
- Hair must be tied back to prevent accidents

- ❖ **GLOVES** – proper gloves help prevent against skin absorption, infection, or burns
- ❖ **EYE PROTECTION** – proper, *approved* safety goggles **MUST** be worn at all times in the science lab where eye hazards are a possibility, regardless of how brief the contact with the materials
- ❖ **CONTACT LENSES**
  - Wearing contact lenses is **NOT RECOMMENDED** in the science lab
  - If worn, you must wear safety goggles ***at all times*** when in the lab
  - Remove contact lenses immediately if eye redness, blurring vision, or eye pain occurs

b. **Personal Hygiene**

1. Includes proper handwashing technique with antiseptic cleansers
2. Wash hands/arms before leaving the science lab, after contact with hazardous materials or bodily substances, and before eating, or before putting on another pair of gloves, etc., ***even if gloves are worn***
3. \*Review Discussion & demonstration of proper handwashing technique

3. **Lab Environmental Practice Controls:**

- a. Refer to Protocols for disposal of broken glass
- b. Review proper use and maintenance of lab equipment and supplies
- c. The science lab must maintain separate handwashing and eyewash stations
- d. Refer to the spill management and cleanup plan

***Lab students must notify Instructor of ALL spills immediately – students must NEVER attempt to clean up spills!***

4. **Equipment Cleaning and Disinfecting:**

- a. Always use proper equipment that is in good condition – NEVER use chipped or cracked glassware, or any equipment with frayed or tampered wires
- b. To minimize or eliminate bloodborne pathogens, a solution of 1/4 cup of bleach per 1 gallon of water is the recommended standard disinfectant to clean all lab surfaces, materials, and equipment used

D. **LAB SAFETY VIDEO** - class viewing and discussion

E. **Science Lab/Room 367 Emergency Evacuation Procedures** - class discussion and demonstration

1. FIRE EVACUATION
2. TORNADO DRILL
3. HURRICANE DRILL

***\*Refer to Evacuation Route posted inside front door of classroom***