

SCIENCE SAFETY

Basic safeguards:

1. Review district or state regulations which relate to school safety. If special equipment is required (fire extinguishers, eye wash fountain, first aid kit, etc.), obtain and familiarize yourself with this equipment first.
2. Review your school's fire regulations and evacuation procedures with your students. Determine the location of the nearest fire call box in your building.
3. Before handling equipment or chemicals, familiarize yourself with their possible hazards. Keep all chemicals and equipment which could cause injury in a locked storage area when not in use.
4. Never allow students to work with equipment or chemicals without adult supervision.
5. Incorporate discussions on safety into your lesson plans on a regular basis. Developing an attitude of "safe experimenting" is important.

Before each activity:

1. Have a list of safety rules posted in your room and review them regularly. Be sure that all students know proper procedures to follow if an accident should occur. Review classroom behavior rules with emphasis on the seriousness of scientific experiments.
2. Perform all activities yourself before assigning them to the students. Look for areas where the students may have trouble.
3. Arrange each activity in such a way so that equipment and materials are easily accessible and identifiable. Use food coloring to identify normally clear liquids.
4. Have available only equipment and materials needed to complete the assigned activity. This helps to eliminate unauthorized experiments.
5. Review the procedures of each activity with the students and emphasize cautions as necessary.
6. Limit the size of each group to a number that can safely perform the activity without confusion or accidents. If necessary, assign specific tasks to individual students within each group.
7. Allow sufficient time for students to perform an activity.

During the activity:

1. Never allow students to work alone.
2. Exercise caution when using cutting devices. Do not use double-edged razor blades.
3. Require students to wear safety goggles when heating substances or working with chemicals that can cause burns.
4. When heating a substance in a test tube, always point the open end away from everyone.

5. Never allow students to taste, touch or smell any chemical unless it is listed as part of the experimental procedure. When smelling a substance use a fanning motion with your hand to direct the vapor toward you. Never smell a substance directly.
6. Require that all measurements (weight, length, volume, etc.) be double-checked. If two students disagree on a value, they should contact the teacher for a resolution.
7. Following each activity, lab stations should be cleaned up and equipment and materials inventoried.

Special safety precautions:

1. Students should wash their hands after contact with live organisms. Although microorganisms shown in this program are not pathogens (i.e., bacteria), the conditions which support their life may also support pathogens.
2. When working with mold, care should be taken that spores are not excessively spread throughout the room. Although they are constantly in the air we breathe, some people are allergic to high concentrations of mold spores.
3. Avoid use of mercury thermometers. Students should be aware that mercury is poisonous and that they should not play with it. Never wash mercury down a drain.
4. All electrical experiments should use low voltage (batteries or power supplies). Special safety precautions should be taken when working with household electricity.
5. When glass tubes in stoppers are required for an activity, the teacher should prepare them personally. Always lubricate the glass tube with soapy water or glycerine before inserting it into the stopper. Wrap the tubing with paper towel, grasp it close to the stopper and insert it with a gentle twisting motion.
6. If you modify an experiment to suit your equipment or application, thoroughly test it before introducing it in the classroom. Many chemical experiments found in older resource books are hazardous. Consult an authority if you have any reason to suspect danger.