

Safety Guide

Science is a lot of fun, and you'll have the most fun if you avoid accidents. Some simple precautions can go a long way to ensure the safe and successful completion of your project.

The major causes of laboratory accidents are carelessness, lack of attention, and inappropriate behavior. Following the safety guidelines below will greatly reduce your chances of having an accident. While you are working on a science experiment at home, even a minor accident can cause serious injuries, so be very careful.

- Know the locations of the fire extinguisher, telephone, and first-aid kit in the event of an emergency.

- Always have an adult (parent or teacher) supervising the data collection phase of your science experiment.



- Wear safety goggles and tie back loose hair and clothing when working with any chemical, flame, or heating device.



- Wear an apron and gloves when using acids and bases.

- Never smell or taste a chemical unless instructed to do so by your teacher.



- Never use an electrical device with a frayed cord. Never use an electrical appliance with wet hands or with water nearby.



- Never eat any part of a plant used in an experiment.

- Whenever possible, use plastic test tubes, beakers, and flasks. Check all glassware for chips and cracks. Glass containers used for heating should be made of heat-resistant glass.



- Whenever possible, use a hot plate rather than an open flame or burner. Make sure to turn off and unplug a heating device when you are through with it.



- Check with your state board of education before experimenting with and exhibiting animals. Permits and/or veterinarian supervision may be required. Also, wash your hands with hot water and soap after touching any animal.

- Students and adults should wear ultraviolet safety goggles during operation of UV light.

- Do not use cultures from any warm-blooded animal.

- If you are planning on using X rays, cathode ray tubes, or radioactive substances, you must get information on federal guidelines for their use. Consult the Consumer Affairs Office of the Center for Devices and Radiological Health, a division of the Department of Health and Human Services.

- Many states require registration of lasers. Check with the state board of education for tips on how to register.

- Discuss the safety of your materials with your teacher or another scientist.

Safety Contract

I, _____, hereby certify that on this day of _____, I have successfully completed a review of safety procedures for a science project. I agree to follow the safety guidelines listed below, and I will take every necessary precaution to operate safely throughout my experiment.

- I will follow the safety guidelines of my teacher and my school.
- I will keep my work area neat and free of unnecessary papers, books, and materials. I will keep my clothing and hair neat and out of the way, and I will wear a safety apron and/or gloves if necessary.
- I know the location of all safety equipment (such as the fire extinguisher and first-aid kit) and the nearest telephone.
- I will wear safety goggles when handling chemicals, working with a flame, or performing any other activity that may cause harm to my eyes.
- I will not use chemicals, heat, electricity, or sharp objects until my teacher or parent instructs me to do so, and I will follow the adult's instructions carefully.
- I will be especially careful when using glassware. Before heating glassware, I will make sure that it is made of heat-resistant material, and I will never use cracked or chipped glassware.
- I will wash my hands immediately after handling hazardous materials. I will clean up all work areas before I leave the laboratory, put away all equipment and supplies, and turn off all water faucets, gas outlets, burners, and electric hot plates.

I understand and agree to the above and all other safety precautions presented to me in class. I am hereby ready to undertake my science project with safety from this day forward.

Student's signature

Teacher's signature

Parent's/guardian's signature