

Hands-on science experiments are different from other classroom activities. To keep safe, students should always follow the basic guidelines below.



Follow directions. Many of the experiments have additional safety guidelines. Students should follow all instructions given to them by the adult supervising the experiment.



Wait until lunch. Some experiments use materials that we eat at other times—like sugar, raisins, or marshmallows. These are not snacks! Students should NEVER eat or taste anything in the lab.



Tie back long hair. Long hair can get in the way, and in some experiments can be dangerous. Always keep long hair tied back.



Watch out for baggy clothes. Loose clothing (like sleeves) can get in the way in the lab, and sometimes even knocks things over.



Wash up. Students should wash their hands with soap and water after an experiment and avoid touching their eyes until they do, especially if the experiment uses chemicals.



Ask for help. Students should always talk to an adult:

- Before throwing things away (some substances have special disposal instructions)
- Before mixing substances together
- If anything spills or breaks



Be careful and pay attention. Students should avoid running around, getting rowdy, or tuning out on their phones—however, they can still have fun and explore!



Put your best foot forward. Students should wear close-toed shoes in the lab. This is a best practice all chemists follow that protects feet from spills and sharp objects.



When you smell, waft. If students need to smell something as part of an experiment, they shouldn't hold the container under their nose and inhale. Instead, they should hold the bottle away from their nose and use one of their hands to fan air from the bottle to their nose.

The teacher or adult has some additional responsibilities on top of the guidelines in “Lab Safety 101”.



Communicate. Make sure to communicate all the necessary safety information to students. A good way to help students remember safety rules is putting up a poster—look online to find one that is a good fit for your classroom, or have students get even more engaged and make their own lab safety posters.



Supervise. Monitor students during an experiment to make sure they are following lab safety guidelines. Avoid leaving students unsupervised in the lab.



Be prepared for emergencies. Know where to find any emergency equipment that you might need (i.e. eyewash, first-aid kit, fire blanket and extinguisher) and how to use it.



Be a good role model. Set a good example by following all the general “Lab Safety 101” tips.



Plan ahead. The teacher or adult supervising should perform each experiment themselves before giving it to students. A practice run is good for learning about:

- Potential risks and safety issues
- How to collect and safely dispose of materials
- Additional equipment or materials that you need
- Tips for instructing students during the activity

Be careful with chemicals. Most of the chemicals in CEF’s experiments are common household chemicals. Each of these has a product label, which should be read carefully to learn about risks and warnings. All non-household chemicals have a Material Safety Data Sheet (MSDS) with information about risks, storage, and disposal. In the lab, make sure that all chemicals:

- Are disposed of properly. Consult the MSDS or a science supervisor for details
- Are either kept in their original containers, or in other clearly labeled containers that are meant for holding chemicals. Don’t use containers that are meant for food
- Are NOT taken out of the lab. Keep chemicals in a secure place where they are not accessible outside of lab time
- Are NOT stored near food



Minimize the risk. The tips below make it easier to keep the lab safe:

- When possible, use non-breakable plastic containers instead of glass
- Only use sharp objects in the lab when needed. You may be able to avoid using things like scissors or knives by cutting lab materials beforehand
- Use lab aprons and safety goggles as needed. Although the YBTC Activity Guides use common household substances, use your best judgement when deciding whether to use lab aprons and safety goggles!

