

# Home Tutoring

## Safety in the Laboratory

### Before the experiment

Before starting any experiment, make sure you have **adult permission** and (if required) **adult supervision**. Then:

1. Tie hair back (if needed).
2. Don't wear loose clothing, eg, tie or unfastened jacket. Roll up sleeves if they are too floppy.
3. Don't take food into the lab.
4. Make sure you have pens, paper, and all the equipment and chemicals likely to be needed for the experiment. This means that someone needs to know what you're going to be doing.

On this last point, Luke 14:28-30 is applicable.

*[28] "Suppose one of you wants to build a tower. Will he not first sit down and estimate the cost to see if he has enough money to complete it? [29] For if he lays the foundation and is not able to finish it, everyone who sees it will ridicule him, [30] saying, 'This fellow began to build and was not able to finish.'*

### During the experiment - behaviour

1. Be sensible - no running, wrestling, pushing, shoving, etc, and no being silly with equipment or chemicals.
2. Do experiments away from young children and animals.
3. Wear safety glasses or goggles whenever appropriate.
4. Do not wipe face with hands, chew nails, pick nose, etc.
5. Do not crowd each other.

### During the experiment - dealing with chemicals and equipment

1. Use small quantities.
2. Put the lid on chemical containers after removing the amount of chemical you need.
3. Do not sniff or taste chemicals to try to recognise them. Some of them are highly toxic. (*This guideline will not apply to some experiments, like measuring how much salt is required to be able to taste salt water. The whole point of that experiment is to taste it.*)
4. Use meths or bunsen burners with plenty of ventilation. We don't want to poison or suffocate ourselves.
5. Blow out the meths burner as soon as you have finished using it so you don't accidentally reach across the top of it. It's easy to relight but burns can be hard to heal.
6. Do not pick anything up without examining it first. It may be really hot, or even poisonous to touch.
7. If passing something to another person make sure they're paying attention before they accept it. If passing a hot test tube, make sure they realise it's hot and will not try to hold it in their hand.
8. Do not put hot test tubes or beakers in cold water. They will crack. We don't want broken glass and we want to use them later.
9. Do not leave test tubes lying on a bench or table, as they could roll off and break. We don't want to stand on broken glass and we want to use the test tubes and our feet later.
10. Move stuff around as little as possible, especially liquids like water and acids.
11. If any substance is spilled, clean it up immediately. Do not use your clothing to clean up a spill. Some chemicals can stain and some are very corrosive so they could eat holes in your clothing. Your parents might not be happy about that.

### After the experiment

1. If chemicals are particularly toxic do **not** put them down the sink. (*Hopefully this won't apply to any chemicals we'll be using.*)
2. Ensure chemical containers, including test tubes still being used, have their lids on firmly. (*Unless the experiment requires not to, like measuring evaporation rates.*)
3. Clean all used equipment. Dispose of broken equipment carefully.
4. Return all equipment and chemicals to storage away from young children and pets.
5. If food was used in an experiment throw it out. Do not eat it or return it to the original packaging. (*This guideline will not apply for experiments that only involved food, in a clean environment.*)
6. Wash hands.