

## What are constants?

A **constant** is a part of an experiment that is not changed. There can be more than one constant. In the fertilizer experiment, the constants could be the type of plant, the amount of water or sunlight the plants get, or the kind of soil the plants are planted in. The scientist keeps all of these constants the same for all the types of fertilizer that are tested.

## Laboratory Safety

In your science class, you will perform many kinds of investigations. Performing investigations involves more than just following steps. You must learn how to keep yourself and those around you safe. Always obey the safety symbol warnings shown below.

### Safety Symbols



Eye Safety



Toxic



Clothing Protection



Animal Safety



Disposal



Flammable



Biological



Electrical



Extreme Temperature



Chemical



Sharp Object



Open Flame



Fume



Handwashing



Irritant

## How do you practice safety in the lab?

When scientists work in a lab, they take many safety precautions. You must also take safety precautions in the science lab. The most important safety advice is to think before you act. You should always check with your teacher during the planning stage of your investigation. Make sure you know where the safety equipment is in your lab or classroom. You also need to make sure you know how to use the safety equipment. Safety equipment includes eyewashes, thermal mitts, and the fire extinguisher.

## Picture This

- 8. Recognize Cause and Effect** What is one kind of experiment in which you would need to wear eye goggles?

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## Reading Check

- 9. Describe** What is the most important safety advice in the lab?

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## Think it Over

10. **Apply** Why should you never eat or drink in the lab?
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## Think it Over

11. **Infer** If you are doing a science experiment in the lab or in the field, what is the one thing that you should always wear?
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## What are some good safety habits?

Good safety habits include the following suggestions:

- Find and follow all safety symbols before you begin an investigation.
- Always wear an apron and goggles to protect yourself from chemicals, flames, and pointed objects.
- Keep goggles on until activity, cleanup, and handwashing are complete.
- Always slant test tubes away from yourself and others.
- Never eat, drink, or put on makeup in the lab.
- Report all accidents to your teacher.
- Always wash your hands after working in the lab.

## How do you practice safety in the field?

Investigations are also done outside the lab. You can do investigations in streams, farm fields, and other places. Scientists call this working in the field. Scientists must follow safety regulations in the field as well as in the lab. Always wear eye goggles and other safety equipment that you need. Never reach into holes or under rocks. Always wash your hands after you have finished your work in the field or in the lab.

## Why have safety rules?

Doing science in the lab or in the field can be much more interesting than just reading about it. But doing experiments can be dangerous and accidents can happen. If you follow safety rules closely, an accident is less likely to happen. Still, you cannot predict when something will go wrong.

Think of a person taking a trip in a car. Most of the time the person is not in a car accident. However, to be safe, drivers and passengers must wear their safety belts. Wearing safety gear in the lab is like wearing a safety belt in a car. It can keep you from being hurt in an accident. You should wear safety gear even if you are just watching an experiment. Always keep safety in mind when conducting an experiment.