

Name: _____

Date: _____

Science Lab Tools and Equipment

Science Literacy Article

Scientists use many different types of lab tools and equipment during lab investigations. Science **lab tools** are generally used for measuring and/or observing particular substances during a lab activity. **Safety equipment** is used for emergency situations that may occur in the lab. All lab tools and equipment have specific purposes and should always be used safely and properly while participating in lab activities.

Lab tools are used in almost every lab to:

1. **Measure** substances. Measurements such as mass, volume, length, and force are taken with lab tools. Examples of lab tools used for measuring are triple beam balances (mass), graduated cylinders (volume), meter sticks (length), and spring scales (force).
2. **Observe** substances. Certain lab tools can assist our senses as we observe substances. Examples of lab tools used for observing are microscopes, hand lenses, watch glasses, and spot plates.
3. **Interact** with substances. There are many other types of tools that can be used during a lab such as test tubes, tongs, thermometers, droppers, and Bunsen burners, to name a few. Lab tools help to *gather important data* required in order to thoroughly complete lab activities.

While conducting science lab activities there are four main types of **safety equipment** that can be used in case of emergency.

1. A **fire extinguisher** is used to put out fires, such as paper fires, trash fires, and larger fires. The nozzle of a fire extinguisher should always be aimed at the *base of the flame* while in use. It should never be sprayed on a person because it can cause skin and eye irritation, difficulty breathing, and other serious health concerns.
2. A **fire blanket** is used to smother small fires by removing oxygen from the flame. A person can be *wrapped* in a fire blanket and rolled to help smother a clothing fire.
3. The **eye wash station** is used to flush the eyes with water due to a chemical splash or foreign object causing harm. You should flush your eyes with water at the eye wash station for *at least 15-20 minutes* while keeping your eyes open and rolling them in all directions.
4. The **safety shower** is used to wash off large chemical spills on the body or clothing. If you spill a large amount of chemicals onto yourself, you should go directly to the safety shower, pull the handle, and completely rinse the harmful substances off of your body.

It is crucial to know the **location and use** of these pieces of safety equipment. Your teacher will likely review the location and use of specific safety equipment during particular lab activities.

It is important to remember that some lab tools and equipment are very *expensive*, so they must be always handled carefully. Using different lab tools and equipment during lab activities can be exciting and fun, but it also requires great responsibility!