Science Tools

Laboratory Instruments
SCIENCE TOOLS

- To become a successful scientists, we must be able to identify and use scientific instruments or tools.
- These tools are for collecting data, taking measurements, and recording observations.
- Scientists use a variety of tools to do investigations.
safety goggles

Eyewear that protects the eyes during a science experiment or investigation from hazardous or dangerous materials.
magnifying lens

A tool that magnifies objects or enlarges, or makes objects look bigger than they are.
stereoscope

A binocular instrument that magnifies 2 dimensional objects (shows length and depth)
microscope

A tool that magnifies at a much higher power than a hand lens.

It *magnifies* or makes tiny objects larger, only used on microscopic, flat, opaque specimens.
cover slip & slides

Items used to create a wet mount slide to view specimen(s) under a microscope.

The **coverslip** helps to flatten surface and keep specimen in place.

The **slide** provides a platform from which to view a specimen.
petri dish

A container used for samples or specimens.

A tool to culture (cultivate or grow) microorganisms.
A balance tells the amount of matter an object contains.

measures mass
beaker

An open cylindrical container with a pouring lip.

measures volume
erlenmeyer flask

Container with a flat bottom and tapered neck. Easy mouth pours solutions and may be closed with a stopper (top).

Measures volume & allows for mixing without spillage.
bulb flask

container used to heat or boil a liquid

measures volume
graduated cylinder

- Used to measure volume of liquids.
- Measures volume
A test tube is used to heat, hold, or mix liquids or solids in chemistry class. It is cylindrical; open at one end and closed at the other. Test tube rack is used to organize/hold test tubes with chemicals; also a drying rack.
A pipet, or tube, for dispensing small amount of liquid, in drops.
telescope

A tool used to see objects in the sky.

It magnifies or makes objects in the sky larger.
meter stick

A meter tool is used to **measure distance**; or the length of objects.

In science, we use the metric system for measuring.
thermometer

A tool that measures the temperature of air (gas) and most liquids.

The Greek prefix “therm” means “heat”.
A tool to navigate direction; N (north), S (south), E (east), and W (west).

It is used to find Earth’s magnetic north pole.
stopwatch

A tool that measures time.
magnet

Attracts (pulls towards) or repels (pushes away) objects with iron, nickel, or cobalt.
collecting net

Used to gather animal samples or specimens, such as butterflies.
Smock worn by professionals in the medical field or by those involved in laboratory work. The coat protects clothing and also serves as a simple uniform.
scoopula

Scooping utensil; used like a spoon, to “scoop.”

Transfers solid chemicals or scrapes chemicals from containers, much like a spatula is used to scrape food from a bowl.
stand

Typically used to hold items (such as a flask or beaker) over a flame during lab.
bunsen burner

Produces a flame that can be used for various purposes, such as heating or sterilizing materials.
tweezers

Used to handle small objects easily.
tuning fork

- A 2-pronged metal fork that, when struck, produces a pure note of **constant** specified pitch.

- Demonstrates vibrational tones; pitch depends on length and mass of prongs.
funnel

A tube or pipe that is wide at the top and narrow at the bottom, used for guiding liquid or powder into a small opening.
hot plate

A tool *used to heat objects.*
calculator

An electronic device for solving mathematic problems in science class.
**computer**

An electronic tool that performs tasks by processing and storing information / data.