Before an investigation...

- Listen to all teacher directions.
- Read all directions before beginning.
- Be sure you know where safety materials are.

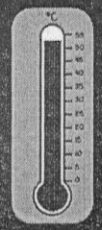
During an investigation...

- Work carefully with your materials.
- Tell your teacher about any accidents.
- Use necessary safety materials.
- Follow directions.

After an investigation...

- Clean up all materials carefully according to your teacher's directions.
- Conserve resources.
- Dispose of (throw away) materials carefully.

Thermometer



- measures temperature in degrees Celsius

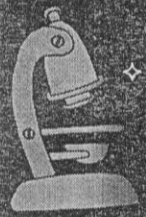
Hand Lens

- helps us observe small objects or organisms

Pipette

- helps us add small amounts of liquid for exact measurements

Microscope



- helps us observe very small objects more closely

Graduated Cylinder

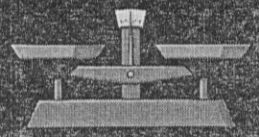
- helps us get exact measurements of liquids in milliliters (ml)

Stopwatch

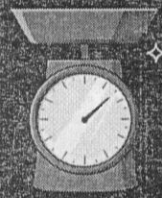
- helps us measure elapsed time in minutes and seconds

Balance

- helps us measure mass in grams (g)



Scale



- helps us measure weight in pounds (lb) and ounces (oz)

Ruler

- helps us measure length in centimeters (cm) and millimeters (mm)

Tool	Measures	Unit of Measurement
Balance	Mass	Grams
Ruler	Length	Centimeters, Millimeters
Graduated Cylinder	Volume	Milliliters
Scale	Weight	Pounds, Ounces
Thermometer	Temperature	Degrees Celsius

Experiment

Ask a question!
Research!
Plan!
Test!
Record and Analyze Data!
Draw Conclusions!

Experiment

In an experiment, you attempt to answer a testable question.

Which type of grass seed grows the fastest?

Research

Before you plan your experiment, research more about your topic using books and reputable websites.

Hypothesis

Based on your research, what do you THINK the results of your experiment will be?

If I _____, I think _____ will happen because _____.

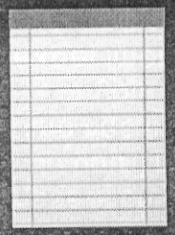
Plan

Make a plan of how you can answer your question. Create a list of materials. Plan a way to record your data.

Experiment

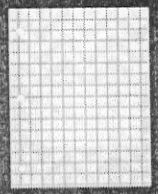
Conduct the experiment to answer your question!

Types of Data



- Notes
- Tables
- Photographs
- Drawings
- Measurements

Why should I use a graph?



- to display data
- to find patterns
- to analyze data visually

Ask yourself...

- Is your data complete?
- Is there anything that stands out as strange in your data?
- What do you notice?

After you Analyze...

- Draw a conclusion
  In a conclusion, you tell whether your hypothesis was correct. Explain what your data tells you.