

Balance with Masses

A balance is a science tool. It is used to measure an object's mass.

How to use a balance:

1. Make sure the pointer on the base is at the middle mark. This tells you that the empty pans are balanced.
2. Put the object you want to measure in one pan.
3. Add masses to the other pan one at a time. The pointer will move. When the pointer is at the middle mark again, the pans are balanced.
4. Add up the numbers on the masses to find out the mass of the object. The balance measures mass in grams (g).

Use the balance and masses to find the mass of a small object in the classroom.

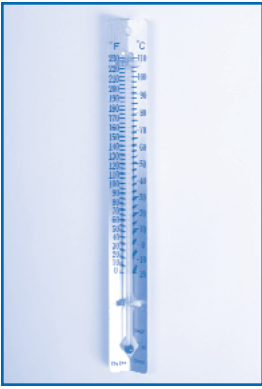
What did you measure? _____

Mass of object: _____ g

Now use the balance and masses to find the mass of a second object in the classroom.

What did you measure? _____

Mass of object: _____ g



Thermometer

A thermometer is a science tool. It is used to measure the temperature of air and liquids.

How to use a thermometer to find air temperature:

1. Put the thermometer on a table.
2. Read the number on the scale where the red liquid ends.
3. This is the temperature of the room. Temperature is measured in degrees Celsius ($^{\circ}\text{C}$) or degrees Fahrenheit ($^{\circ}\text{F}$).

How to use a thermometer to find the temperature of a liquid:

4. Put the thermometer in the container of liquid, bulb-end down.
5. Wait until the red liquid stops moving.
6. Read the number on the scale where the red liquid ends.
7. This is the temperature of the water.

Use the thermometer to measure the temperature of a cup of warm water.

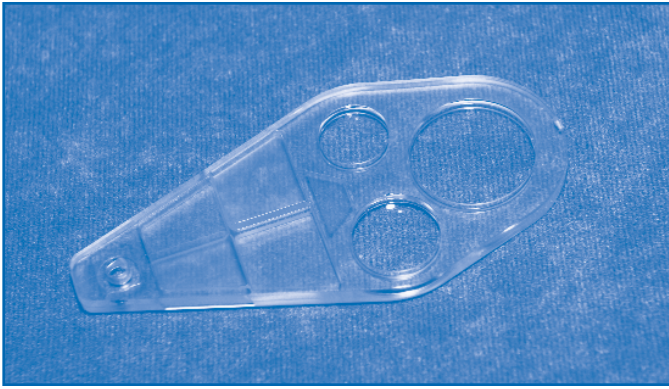
What is the temperature in degrees Celsius ($^{\circ}\text{C}$)? _____ ($^{\circ}\text{C}$)

What is the temperature in degrees Fahrenheit ($^{\circ}\text{F}$)? _____ ($^{\circ}\text{F}$)

Now use the thermometer to measure the temperature of a cup of cold water.

What is the temperature in degrees Celsius ($^{\circ}\text{C}$)? _____ ($^{\circ}\text{C}$)

What is the temperature in degrees Fahrenheit ($^{\circ}\text{F}$)? _____ ($^{\circ}\text{F}$)



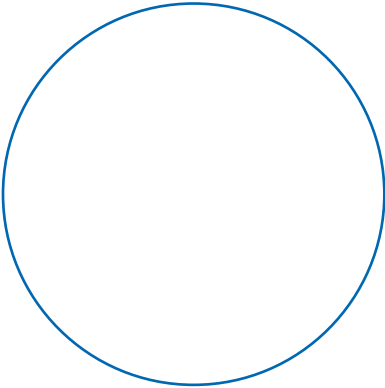
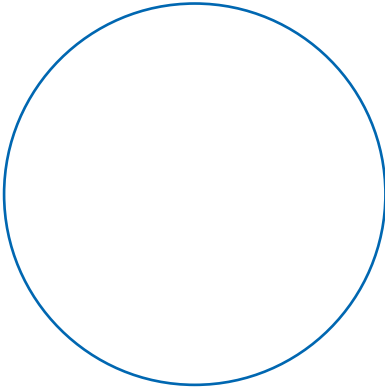
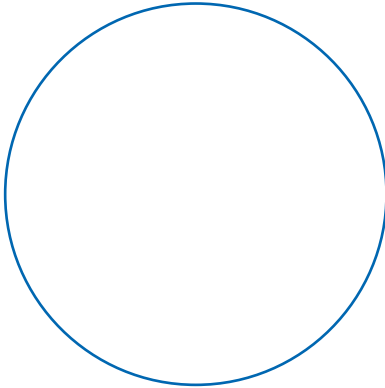
Magnifier

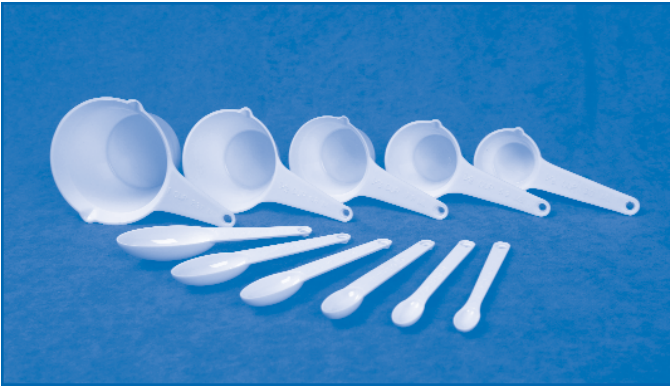
A magnifier is a science tool. It makes objects look larger than they are.

How to use a magnifier:

1. Hold the magnifier close to your face. Look through one of the lenses.
2. Move an object back and forth in front of the magnifier until you see it clearly.
3. The large lens magnifies objects to twice their size. The middle lens magnifies objects to six times their size. The small lens magnifies objects to eight times their size.

Use the magnifier to look closely at an object through each of the three lenses. Draw what you see below.

		
2x	6x	8x



Measuring Cups and Spoons

Measuring cups and spoons are science tools. They are used to measure the volume of liquids.

How to use a measuring cup:

1. Find the 1 cup measure.
2. Pour water up to the line at the top of the cup.
3. You have measured 1 cup of water.

Use a $\frac{1}{4}$ cup measure to measure out $\frac{1}{4}$ cup of water. Pour the water into a 1 cup measuring cup.

How many of the $\frac{1}{4}$ cup measures does it take to fill up a 1 cup measure?

_____ $\frac{1}{4}$ cup measures = 1 cup

How to use a measuring spoon:

4. Find the 1 tablespoon measure.
5. Pour water up to the line at the top of the spoon.
6. You have measured 1 tablespoon of water.

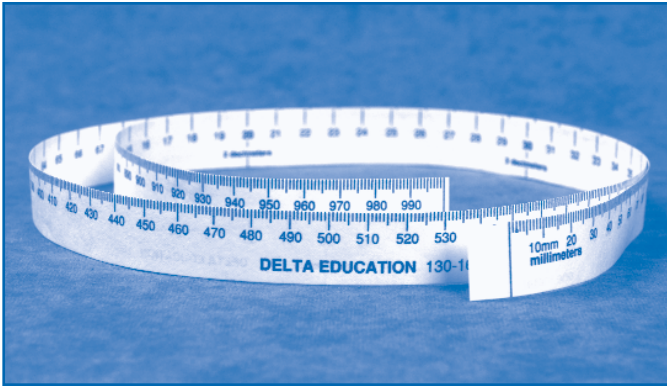
Use a 1 tablespoon measure to measure out 1 tablespoon of water. Pour the water into a 1 cup measuring cup.

How many of the 1 tablespoon measures does it take to fill up a 1 cup measure?

_____ 1 tablespoon measures = 1 cup

How many of the 1 teaspoon measures does it take to fill up a 1 cup measure?

_____ 1 teaspoon measures = 1 cup



Tape Measure

A tape measure is a science tool. It is used to measure length or distance.

How to use a tape measure:

1. Hold the end of the tape at one end of an object or distance you want to measure.
2. Stretch the tape to the other end of the object or distance. (If the distance is long, work with a partner. Have your partner hold one end of the tape while you stretch it out.)
3. Look at the number on the tape to find out how long the object or distance is. The measuring tape measures length and distance in centimeters (cm).

Use the tape measure to measure an object in the classroom.

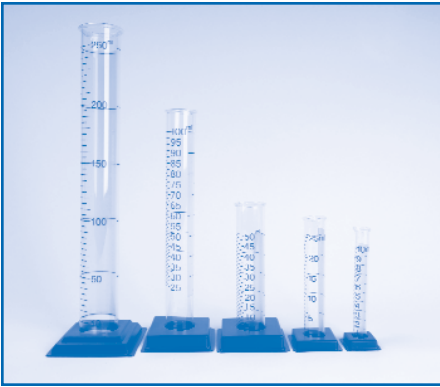
What did you measure? _____

Length: _____ cm

Now use the tape measure to measure the distance between two objects in the classroom.

What did you measure? _____

Distance: _____ cm



Graduated Cylinders

A graduated cylinder is a science tool. It is used to measure the volume of liquids.

How to use a graduated cylinder:

1. Place the cylinder on the plastic base.
2. Pour the liquid you want to measure into the cylinder.
3. Read the number at the top of the liquid line.
4. This is the volume of the liquid. A graduated cylinder measures volume in milliliters (mL).

Use one of the graduated cylinders to measure the volume of juice in a juice box.

Which cylinder did you use? _____

Why did you use that cylinder? _____

Volume of juice: _____ mL

Now use another cylinder to measure out 45 mL of water.

Which cylinder did you use? _____

Why did you use that cylinder? _____



Beakers

A beaker is a science tool. It is used to measure the volume of liquids.

How to use a beaker:

1. Pour the liquid you want to measure into the beaker.
2. Read the number at the top of the liquid line.
3. This is the volume of the liquid. A beaker measures volume in milliliters (mL) and ounces (oz).

Use one of the beakers to measure the volume of water in a bottle of water.

Which beaker did you use? _____

Why did you use that beaker? _____

Volume of water: _____ mL

Now use another beaker to measure out 900 mL of water.

Which beaker did you use? _____

Why did you use that beaker? _____
