## Length

What is length?

- Length is used to measure how long or tall something is

Tools used to measure length:

- Ruler, Tape Measure, Yard Stick, Meter Stick
 Units used to measure length:

| US Customary | Metric |
| :---: | :---: |
| (in order from SMALLEST to LARGEST) <br> - Inch (in)_Ex: length of a paper clip <br> - Foot (ft)-Ex: length of a clipboard <br> - Yard (yd)-Ex: height of a door <br> - Mile - Ex: length of a road | (in order from SMALLEST to LARGEST) <br> - millimeter (mm)—Ex: width (side) of a dime <br> - centimeter (cm)-Ex: width of your finger <br> - meter ( $m$ )—Ex: length of a guitar <br> - kilometer (km) - Ex: length of a road |

Important Conversions:

- 12 inches $=1$ foot
- 3 feet $=1$ yard


## 4/4 in.

## Using a Ruler $1 / 2 \mathrm{in}$. or 1 in.

Inches on a ruler are broken into 4 sections. Each section is PART of the whole inch.


This is a metric ruler. Always make sure you line the object on the EDGE of the ruler, at the 0 !


## Capacity/Volume

What is capacity/volume?

- Capacity is the amount of liquid a container can hold when filled
- Volume is the amount of space a liquid takes up

Tools used to measure capacity/volume:

- Gallon, Quart, Beaker, Graduated Cylinder, Measuring Cup

Units used to measure capapcity/volume:

| US CuStomary | Metric |
| :---: | :---: |
| (in order from SMALLEST to LARGEST) | (in order from SMALLEST to LARGEST) |
| - Cup (c) | - Milliliter (mL) |
| - Pint (pt) | - Liter (L) |
| - Quart (qt) |  |
| - Gallon |  |

Important Conversions:
Remember the Gallon picture we drew!

> G = Gallon


Q = Quart

$P=$ Pint


C = Cup

## What is weight/mass?



- Mass-The amount of matter something contains
- Weight-How heavy something is
*The difference is that mass will NEVER change, but weight changes depending on gravitational pull
Tools used to measure weight/mass:
- Balance, Double Pan Balance, Triple Beam Balance, Scale, Spring Scale Units used to measure weight/mass:

| Us customary | Metric |
| :---: | :---: |
| (in order from SMALLEST to LARGEST) <br> - ounce (oz)-Ex: one pencil <br> - pound (lb) -Ex: one football <br> - ton -Ex: an elephant | (in order from SMALLEST to LARGEST) <br> - milligram (mg)-Ex: one grain of sand <br> - gram (g)—Ex: one paperclip <br> - kilogram (kg)-Ex: one book |

Important Conversions:

- 1 pound $=16$ ounces
- 1 kilogram = 1,000 grams


## Perimeter and Area

- PERIMETER is the DISTANCE

AROUND a figure.

- To figure out the perimeter of a figure, you should ADD all the sides.
- Think of the perimeter as the fence that surrounds a yard


60 ft Perimeter $=20 \mathrm{ft}+20 \mathrm{ft}+60 \mathrm{ft}+60 \mathrm{ft}=160 \mathrm{ft}$

- AREA is the amount of space (square units) INSIDE a 2D shape.
- Measured in square units (ex: $\left.\mathrm{ft}^{2}, \mathrm{in}^{2}\right)$
- To figure out the area of a figure, you should MULTIPLY the LENGTH $\times$ WIDTH. 7 ft
$5 \mathrm{ft} \quad \mathrm{L} \times \mathrm{W}$
$5 \mathrm{ft} \times 7 \mathrm{ft}=35 \mathrm{ft}^{2}$

