Metric System Bases

Using the metric system for measuring and converting among units.
Length:

- Measures distance.
- Base Unit: meter
- Abbreviation: m
- Examples:
  - 100 centimeters = 1 meter
  - How long is the race track?

http://www.wisconsin-map.org/wisconsin-road-map.gif
Volume:

- **Measures space.**
- **Base Unit:** liter
- **Abbreviation:** 1
- **Examples:**
  - 1000 ml = 1 l
  - How much gas fits in a balloon?

![Hot Air Balloon](http://www.bravemain.com/hot_air_balloon6.jpg)
**Mass:**

- Measures amount of material.
- Base Unit: **gram**
- Abbreviation: **g**
- Examples:
  - 1 Kg = 1000 g
  - How heavy is the desk?

![Trip beam balance](http://www.montgomerycollege.edu/Departments/biotp/pictures/tripbeam.jpg)
Time:

- Base Unit: second
- Abbreviation: s
- Examples:
  - 1000 ms = 1 s
  - How long did it take for the rocket to launch?
Temperature:

• Base Unit: degrees Celsius
• Abbreviation: °C
• Examples:
  – Copper melts at 1084 °C.
  – The temperature dropped 10 °C.
Why is the metric system more useful than our English system?

• More common worldwide.
• Base of 10 allows for easy conversion.

Which countries are NOT using the metric system?

• U.S.
• Liberia (It’s in western Africa)
• Burma/Myanmar (It’s in Southeast Asia)

1000 mm = 100 cm = 10 dm = 1 m = 0.1 Dm = 0.01 Hm = 0.001 Km
Metric Conversions:

1. Add a decimal point to the number.
2. Note starting location on metric line.
3. Note ending location on metric line.
4. Count the number of spaces in between starting and ending location.
5. Move the decimal point that many times in that direction.
6. Always rewrite the new number and include the unit.