Class Notes 3: The Metric System

Always use the Metric System in science!

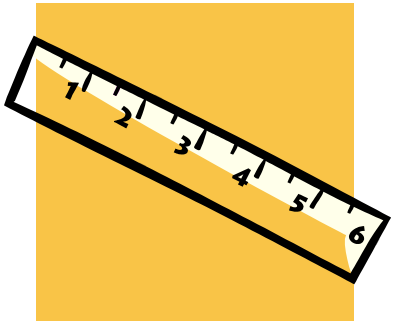
1. Units

- In the Metric System, each type of measurement has a basic unit
- Length: meters
- Mass: grams
- Temperature: degrees Celsius
- Volume: liters
- Time: minutes

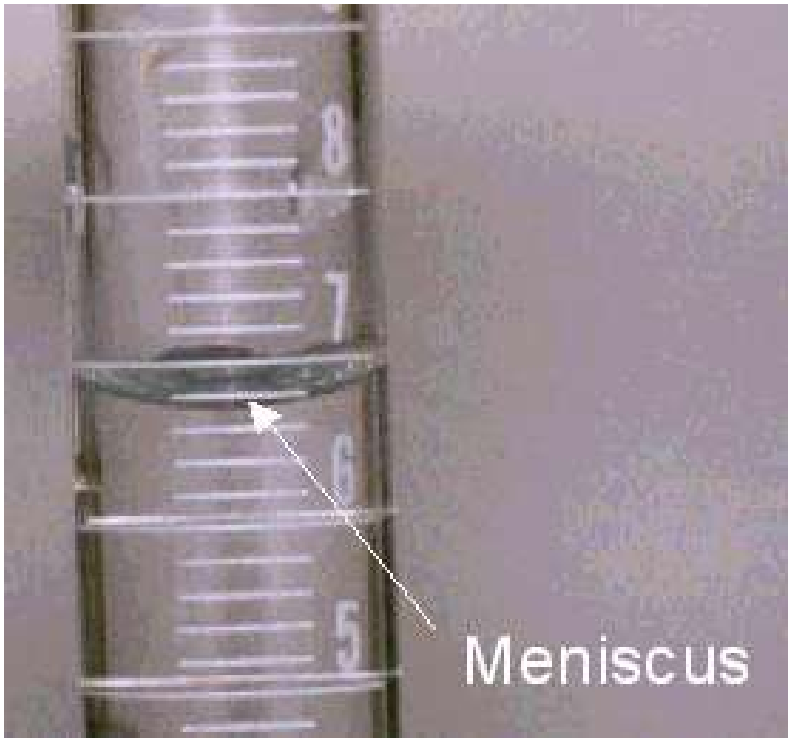
2. Length

- 1 kilometer (km) = 1000 meters (m)
- 1 meter= 100 centimeters (cm)
- 1 cm= 10 millimeters (mm)
- 1 mm= 1000 micrometers (μm)

The metric system uses meters, not feet and inches!



3. Volume: The amount of space it takes up



- length x width x height
- 1 milliliter (mL) = 1 cm cubed
- 1 Liter (L) = 1000 mL
- Use water displacement to calculate volume of an odd shaped item!
- Use a graduated cylinder to measure liquids, not a beaker, because the markings are more accurate!

4. Mass: the amount it weighs

- 1 gram (g) = 1000 milligrams (mg)
- 1 kilogram(kg) = 1000 grams
- 1 metric ton(t) = 1000 kilograms
- Use a digital scale or triple beam balance

5. Density: a measure of mass per unit of volume

- mass/ volume
- Grams/ milliliters

6. Temperature

- Fahrenheit to Celsius

C= 5/9 (F -32)

- Celsius to Fahrenheit

F= (9/ 5 C) + 32

0 Celsius is freezing!

100 is boiling!!!!

Summary

What system of measurement do we use in biology? What are the basic units for length, mass, time, and temperature?