

Metric/Scientific Method Test Review 2010

#1 The Cube

- Scientists use the scientific method to develop new scientific knowledge
- What kind of questions can science answer? (Ones which evidence can be gathered to support)

#2 Metric Linear Measurement

- What units are used to measure distance, area, and volume (of cubes)?
 - Distance – one dimensional examples: meter, cm, mm
 - Area – two dimensional, examples: m^2 , cm^2
 - Volume – three dimensional, examples: m^3 , cm^3
- Why are units squared or cubed for some measurements?
 - Area is measured along 2 dimensions-units are squared
 - Volume along 3 dimensions-units are cubed

#3 Metric Prefixes HW

- Memorize prefixes and the power functions that go with them.
- Know the base units for measuring distance, mass & volume-meter, gram, Liter.

#4 Metric Mass and Volume Measurement

- What units and scientific tools are used to measure mass, volume?
 - Mass=grams=balance
 - Volume= ml or cm^3 = graduated cylinder

#5 Density Lab

- What is density?
 - Comparison between mass of an object and the volume of space it occupies
- What units is it measured in?
 - Usually grams per milliliter (g/mL) or grams per cubic centimeter (g/cm³)
- How can you estimate the density of something floating in the water with out measuring it?
 - The percent of the object floating below the water's surface when converted to a decimal is the density. Ice cubes float with 90% below the water's surface therefore the density is .9 g/mL
- Things more dense than water sink, less dense float.

#7 Float My Boat

- How can you determine the mass it will take to sink a boat without actually sinking it?