UNIT 2: MEASUREMENT

Topics Covered:

- ❑ Qualitative and Quantitative
- ❑ Dimensional Analysis
- ❑ SI System
- ❑ Scientific Notation
- ❑ Significant Figures
- ❑ Density

UNIT OBJECTIVES

- Use the SI system in taking and recording measurements in terms of significant figures, precision and accuracy
- Understand temperature in terms of Kelvin and Celsius
- Perform unit conversions including using scientific notation
- Understand matter in terms of mass, volume and density

DIMENSIONAL ANALYSIS

DIMENSIONAL ANALYSIS

A powerful problem solving method that is based on the fact that any number of expressions can be multiplied by one without changing its value

This is an important skill you will use for the rest of your science career, and throughout your life.

DIMENSIONAL ANALYSIS

You are having a party and inviting 16 friends. Each person usually eats 3 slices, and there are 8 slices per pizza. How many pizza's should you order?

$$\frac{16 \text{ people} \mid 3 \text{ slices} \mid 1 \text{ pizza}}{1 \text{ people} \mid 8 \text{ slices}} = 6 \text{ pizzas}$$

DIMENSIONAL ANALYSIS

For spring break you are going to Panama City Beach (1,151 miles from Lincoln). If your car gets 24 miles to the gallon, and gas is $2.58/gal how much will gas cost one way?

$$\frac{1151 \text{ miles}}{24 \text{ miles}} \cdot \frac{1 \text{ gal}}{1 \text{ gal}} \cdot \frac{\$2.58}{} = \$123.73$$