

## Measurement-A Common Language

### A Standard Measurement System

#### The Metric System

When and why was the metric system invented?

- The metric system was invented in 1790
- The metric system was invented because countries were using many different systems of measurement causing confusion and lack of consistency

Who invented the metric system?

- The metric system was invented by a group of French scientists

#### **Metric System**

- A system of measurement used by the majority of countries on Earth based on the number 10

### A Standard Measurement System

#### The International System of Units (SI)

Scientists all over the world use the International System of Units to measure:

- Length • Volume • Mass • Density • Temperature • Time

<b>Prefix</b>	<b>Symbol</b>	<b>Meaning</b>
Kilo-	k	1,000
Hecto-	h	100
Deka-	da	10
Deci-	d	.1 (one tenth)
Centi-	c	.01 (one hundredth)
Milli-	m	.001 (one thousandth)

**Figure 1: Calculating** - How much larger is a kilo- than a deka-?

- 100 times

**-SI units are based on multiples of what number?**

- SI units are based on multiples of 10
- Add a zero • Subtract a zero

**Key Concept:** Why do scientists use a standard measurement system?

- Using SI as the standard system of measurement allows scientists to compare data and communicate with each other about their results
- Using SI measurement also allows experiments to be repeated and most importantly achieve a desired result