

How Do Scientists Measure?

When _____ first started to _____ things, the _____ were different in different parts of the _____. Many systems were based on parts of the _____.

	English Standard System	Metric System (SI)
Based on (Number)	_____	10 (like U.S. money)
Generally uses	Fractions	_____
For length	inch, foot, yard, mile	_____
For Area	square inch, square foot, square yard, acre, square mile	_____
For Volume	gallon, quart, pint, fluid ounce, teaspoon, tablespoon	_____
For Mass	_____	gram (metric ton)

In metric, to make a bigger or smaller size we add a prefix like: _____

Not even the _____ (British) use the English Standard system of measurement today. Over _____ of the world uses the Metric System. As of _____, only the United States, _____ (Africa) and _____ (formerly Burma in Asia). Every other country, and _____, uses the metric system.

How Do Scientists Measure?

Back Ground: When people first started to measure things, the systems were different in different parts of the world.

Many systems were based on parts of the body. *For example in England, a foot is approximately the length of a grown man's foot. In Egypt, a palm was used to measure some things. An inch is the middle portion of your index finger and a yard is about a man's arm length from his nose to the tip of his middle finger.*

But *it was hard to decide how to sell things in a market. Which person's arm do people use? Do you only buy from the seller with the longest arm?*

Many countries tried to make a system of measurement. Both France and England came up with systems that are used today. England started the English Standard System and France started the Metric System.

	English Standard System	Metric System (SI)
Based on (Number)	<u>2, 3, 4, 8, 16</u>	10 (like U.S. money)
Generally uses	Fractions	<u>Decimals (or converts)</u>
For length	inch, foot, yard, mile	<u>meter</u>
For Area	square inch, square foot, square yard, acre, square mile	<u>Square meter</u>
For Volume	gallon, quart, pint, fluid ounce, teaspoon, tablespoon	<u>liter</u>
For Mass	<u>pound, ounce, ton</u>	gram (metric ton)

In metric, to make a bigger or smaller size we add a prefix: micro, milli, centi, deci, deca, hecto, kilo, mega.

Not even the English (British) use the English system of measurement today. Over 95% of the world uses the Metric System. As of the late 1970s, only the United States Liberia (Africa) and Myanmar (formerly Burma in Asia) used the English Standard System. Every other country, and scientists worldwide, uses the metric system.