

## MEASURING UP WITH CORE LEARNING



The Imperial system of measurement is used in the United Kingdom and the United States. (The Metric system of measurement is used in most other countries, including Canada.) The Imperial system has units to measure lengths, weights, volumes and areas. The units in the Imperial system relate to each. We are able to write parts of units as simple fractions of other units. For example:

- 3 inches is the same as  $\frac{1}{4}$  of a foot
- 1 ounce is the same as  $\frac{1}{16}$  of a pound
- 1 cup is the same as  $\frac{1}{2}$  pint.

### Length Measurement

Some of the units of length measurement are inches, feet, yards and miles. Here is how they compare to each other:

12 inches	=	1 foot	1 inch	=	$\frac{1}{3}$ foot
3 feet	=	1 yard	1 foot	=	$\frac{1}{3}$ yard
1760 yards	=	1 mile	1 yard	=	$\frac{1}{1760}$ mile
5280 feet	=	1 mile	1 foot	=	$\frac{1}{5280}$ mile



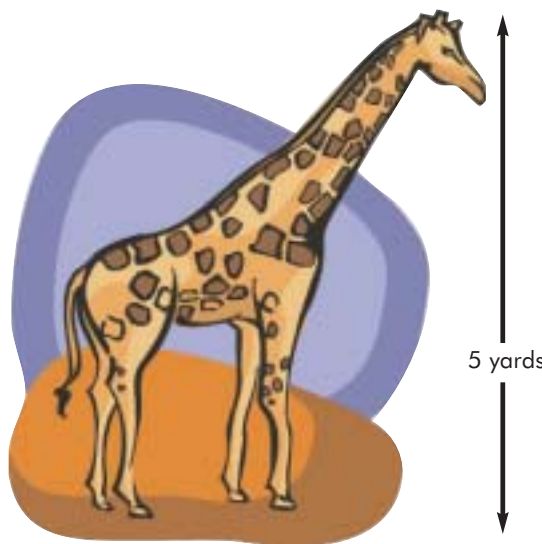
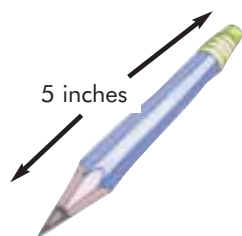
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Here are some examples of length measurements:

## Imperial Length

Unit	Abbreviation	Example
inch	in	length of arm --- 25 in length of a pencil --- 8 in
foot	ft	height of a basketball player --- 6 ft length of a car --- 12 ft
yard	yd	length of a car --- 4 yd length of a whale --- 20 yd
mile	mi	distance between two towns --- 30 mi distance around the planet earth --- 25 000



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### Weight (or Mass) Measurement

Some of the units used for measuring weight (or mass) are ounces, pounds and tons.

Here is how they compare to each other:

16 ounces = 1 pound

1 ounce =  $\frac{1}{16}$  pound

2000 pounds = 1 ton

1 pound =  $\frac{1}{2000}$  ton



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Here are some examples of weight measurements:

## Imperial Weight

Unit	Abbreviation	Example
ounce	oz	weight of a mouse --- 2 oz weight of a newspaper --- 10 oz
pound	lb	weight of a person --- 110 lbs weight of a baby --- 8 lbs
ton	ton	weight of an elephant --- 3 tons weight of a car --- 2 tons

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### Volume Measurement

Volume is a measure of the amount of space in a solid object. Some units used for volume measurement are cups, pints, quarts and gallons. Also, there is something called a fluid ounce which is different from the ounce used to measure weight.

Here is how they compare to each other:

8 fluid ounces	= 1 cup	1 fluid ounce	= $\frac{1}{8}$ cup
2 cups	= 1 pint	1 cup	= $\frac{1}{2}$ pint
2 pints	= 1 quart	1 pint	= $\frac{1}{2}$ quart
4 quarts	= 1 gallon		



12 fl. oz.



5 cup



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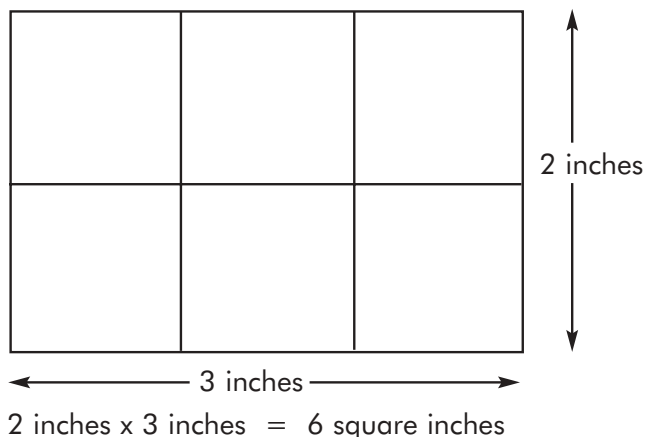
Here are some examples of volume measurements:

## Imperial Volume

Unit	Abbreviation	Example
fluid ounce	fl.oz.	a bottle of pop --- 12 fl.oz.
pint	pt	a big glass of milk --- 1 pint
cup	c	loaf of bread --- 5 c
quart	qt	package of milk --- 1 qt
gallon	gal	tank of gas --- 25 gal

## Area Measurement

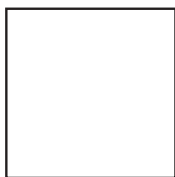
Area is the measurement of how much space is on the surface of a shape. For a rectangle, area is calculated by multiplying its length by its width.



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The area of the rectangle is 6 square inches. "Square inches" is used because the rectangle is made up of 6 squares, each with length and width of 1 inch.



Some other units used to measure area are square feet, square yards and square miles. There is also a unit called an acre. An acre is the area of a rectangle measuring 240 yards by 16 yards. An acre is 3840 square yards.

