

	Name	
	Class: Biology	
	Period	
	Date	
	Topic: Metrics	
SI or Metrics System	Le Systeme International d'Unites (SI) <ul style="list-style-type: none"> <li>• AKA Metrics System</li> <li>• Adopted: 1960</li> <li>• Standard international measurement</li> <li>• Powers of Ten</li> </ul>	
What is the difference between <u>mass</u> and <u>weight</u> ?	<ul style="list-style-type: none"> <li>• <b>Mass</b> measures the quantity of matter</li> <li>• Standard unit = kg (kilogram)</li> <li>• Instrument = Balance</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Weight</b> measures the gravitational pull on matter</li> <li>• Standard unit = N</li> <li>• Instrument = Spring Scale</li> </ul>
Length	Distance measurement Standard unit = m (meter) Instrument = Ruler	
Volume	Amount of space occupied by an object For non-liquid volumes, standard unit = m <sup>3</sup> For liquid volumes, standard unit = L (liter) 1 mL = 1 cm <sup>3</sup> Instrument = graduated cylinders or ruler	
Temperature	Standard unit = Celsius Using Celsius, water freezes at 0 degrees, and boils at 100 degrees $F = \frac{9}{5}C + 32$ $C = \frac{5}{9}(F - 32)$	

<p>Metrics Prefixes and Conversions</p>	<table> <thead> <tr> <th></th> <th><b>(k)</b></th> <th><b>(h)</b></th> <th><b>(da)</b></th> <th></th> <th><b>(d)</b></th> <th><b>(c)</b></th> <th><b>(m)</b></th> </tr> <tr> <th></th> <th><b>kilo</b></th> <th><b>hecto</b></th> <th><b>deca</b></th> <th></th> <th><b>deci</b></th> <th><b>centi</b></th> <th><b>milli</b></th> </tr> </thead> <tbody> <tr> <td><b>Length</b></td> <td><b>km</b></td> <td><b>hm</b></td> <td><b>dam</b></td> <td><b>m</b></td> <td><b>dm</b></td> <td><b>cm</b></td> <td><b>mm</b></td> </tr> <tr> <td><b>Mass</b></td> <td><b>kg</b></td> <td><b>hg</b></td> <td><b>dag</b></td> <td><b>g</b></td> <td><b>dg</b></td> <td><b>cg</b></td> <td><b>mg</b></td> </tr> <tr> <td><b>Volume</b></td> <td><b>kL</b></td> <td><b>hL</b></td> <td><b>daL</b></td> <td><b>L</b></td> <td><b>dL</b></td> <td><b>cL</b></td> <td><b>mL</b></td> </tr> </tbody> </table>		<b>(k)</b>	<b>(h)</b>	<b>(da)</b>		<b>(d)</b>	<b>(c)</b>	<b>(m)</b>		<b>kilo</b>	<b>hecto</b>	<b>deca</b>		<b>deci</b>	<b>centi</b>	<b>milli</b>	<b>Length</b>	<b>km</b>	<b>hm</b>	<b>dam</b>	<b>m</b>	<b>dm</b>	<b>cm</b>	<b>mm</b>	<b>Mass</b>	<b>kg</b>	<b>hg</b>	<b>dag</b>	<b>g</b>	<b>dg</b>	<b>cg</b>	<b>mg</b>	<b>Volume</b>	<b>kL</b>	<b>hL</b>	<b>daL</b>	<b>L</b>	<b>dL</b>	<b>cL</b>	<b>mL</b>
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<p>Sample Metrics Problems</p>	<p><i>(get notes from another student on sample problems!)</i></p>																																								