

Drawing Scientifically

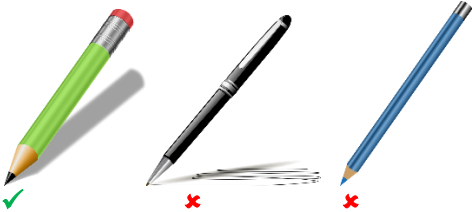
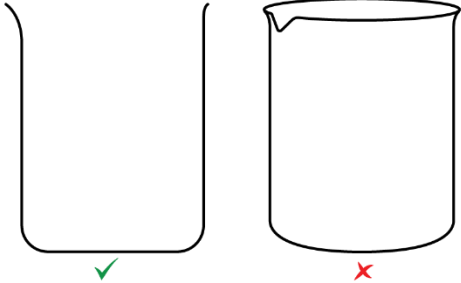
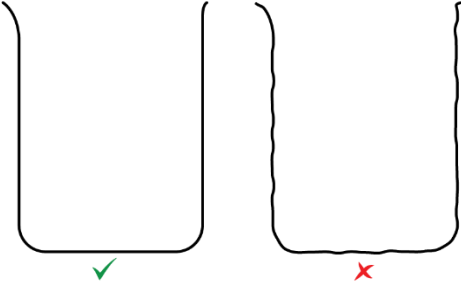
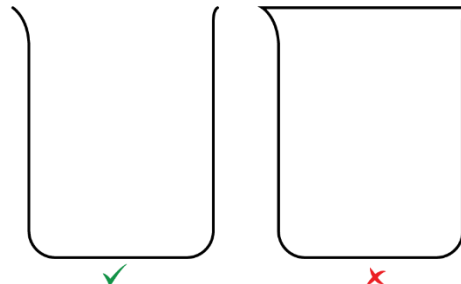
Guided Notes – Teacher Edition

What are Scientific diagrams and why do we use them?

Diagrams are commonly used in science to show an experimental **set up**. Therefore, they need to be simple, **clear** representations of the scientific equipment being used. Scientific diagrams often support a method and therefore they must be easy to construct and easily interpreted by others. The great thing about scientific diagrams is that they are not meant to look like the 'real life' object, so you do not need to be a good at art to draw them.

When drawing scientific diagrams there are several rules which must be followed:

Rules for scientific drawings:

<p>1. Pencil Only - Use a standard, sharp, lead pencil rather than a pen. It should not be blunt or a coloured pencil.</p>	
<p>2. 2D - Drawings should be two-dimensional rather than three-dimensional.</p>	
<p>3. Use clean, single lines rather than sketching.</p>	
<p>4. Glassware should be open – do not close off the top of glassware.</p>	

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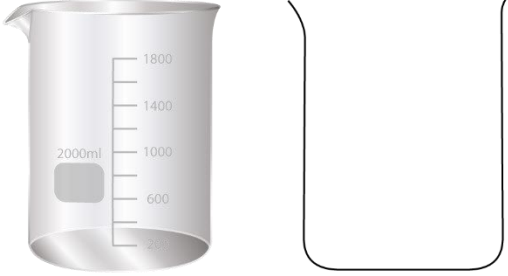

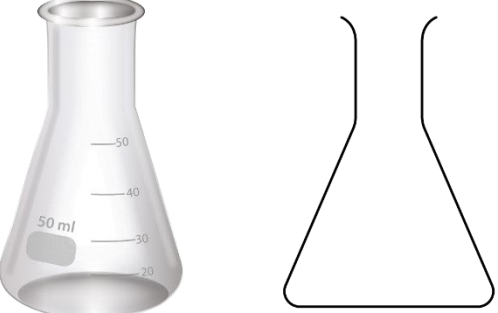

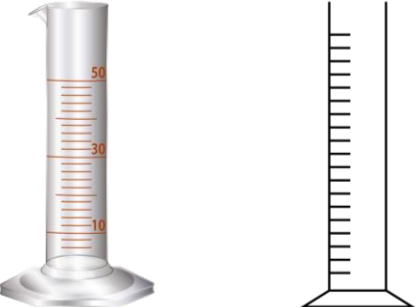

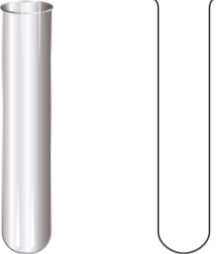
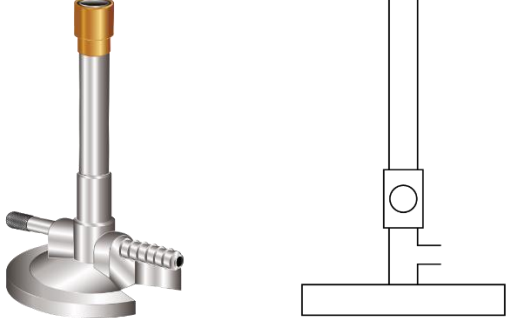
<p>5. Use a ruler – all straight lines should be drawn with a ruler rather than freehand.</p>	
<p>6. Outlines only - diagrams need to be clear and simple, so no coloring or shading is needed.</p>	
<p>7. Size matters – scientific diagrams should be roughly $\frac{1}{4}$ of a page in size so that all details and equipment can be seen.</p>	
<p>8. Accuracy – objects which touch each other in 'real life' should be touching in the diagram. Objects should not be floating.</p>	
<p>9. Labels - Label each piece of equipment with a straight (ruled) line and no arrow heads. Avoid crossing over lines.</p>	

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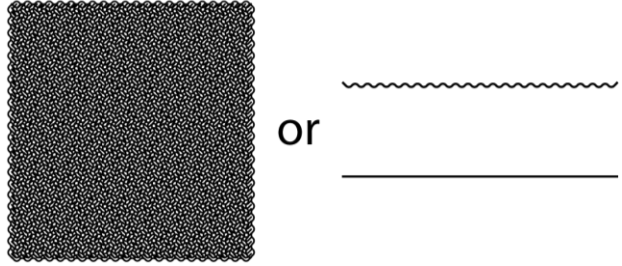


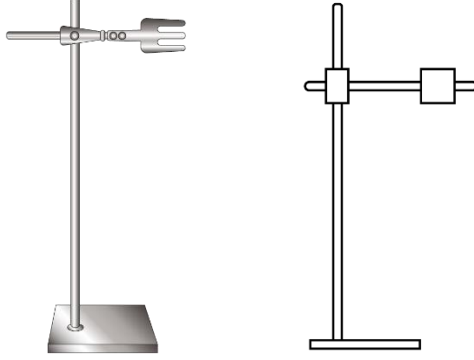
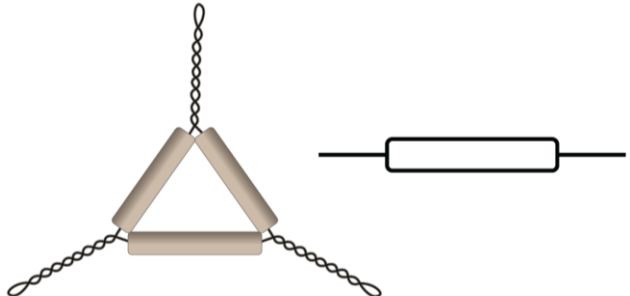
Drawing Laboratory Equipment

The table below shows each of the common pieces of lab equipment drawn correctly. Use them as a reference to help you learn how to draw each piece of equipment.

<p>Beaker:</p> 	<p>Funnel:</p> 
<p>Erlenmeyer Flask:</p> 	<p>Stirring Rod</p> 
<p>Measuring (graduated) Cylinder</p> 	<p>Watch Glass</p> 
<p>Test tube</p> 	<p>Bunsen Burner</p> 

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<p>Tripod:</p> 	<p>Gauze Mat:</p> 
<p>Evaporating Dish:</p> 	<p>Crucible:</p> 
<p>Ring stand, Boss head and Clamp:</p> 	<p>Clay triangle:</p> 
<p>Heat proof mat:</p> 