











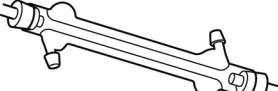












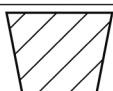




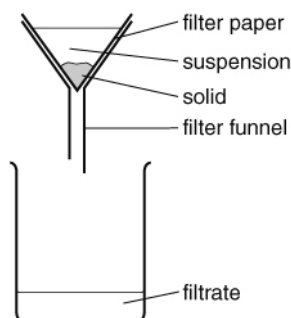
Usually in science we draw diagrams of apparatus rather than pictures. Diagrams are easier to draw, and make it easier to see how the apparatus is joined together.

Imagine the apparatus cut in half. You draw what you would see from the side – this is called a cross-section diagram. Here are some standard diagrams that you should use.

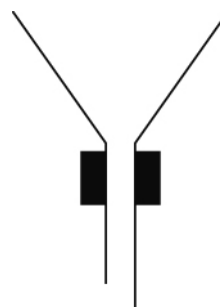
Apparatus	Name	Diagram	What it is used for
	test tube		storing or mixing solids and liquids
	boiling tube		heating solids and liquids
	beaker		holding liquids or solids
	conical flask		holding and mixing liquids
	round-bottom flask		heating liquids
	measuring cylinder		measuring volumes of liquids
	Liebig condenser		cooling a vapour and condensing it into a liquid
	tripod		heating a beaker, flask or crucible over a Bunsen burner
	gauze		supporting a beaker or flask and spreading the heat from the flame
	Bunsen burner		heating things
	evaporating basin		evaporating the water from a solution
	filter funnel (with paper)		separating an insoluble solid from a liquid
	rubber bung		keeping things in a tube or flask
	rubber bung with a hole		the hole is so that a tube or thermometer can be put into the liquid without any gases escaping

Scientific diagrams show how pieces of apparatus are put together to do practical work.

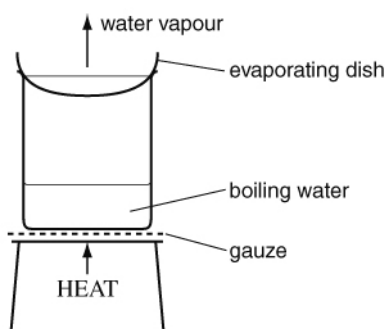
**Example 1: Filtering**



You don't usually need to show the clamps and stands. You know that the filter funnel is not really floating in mid-air. Clamps can be shown like this.

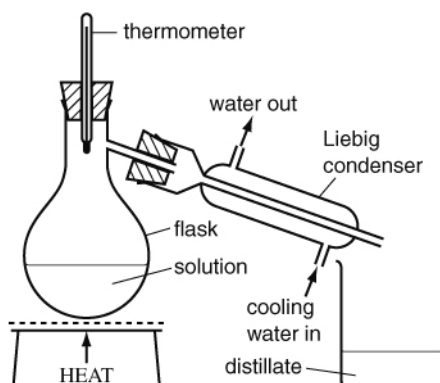


**Example 2: Evaporating**



Keep it simple! You can use an arrow to show heat instead of wasting time trying to draw a Bunsen burner.

**Example 3: Distillation**



This is a much more complicated diagram. Look carefully at the bungs. See how the diagram shows that the thermometer and tubes go through the middle of the bungs. Be careful that you don't 'block off' tubes that are really open. See how the 'water in' and 'water out' tubes are left open at the ends.

- 1 Draw a diagram showing a test tube half full of liquid sitting inside a beaker that is half full of water. The beaker is being heated by a Bunsen burner.

**I can...**

- draw and interpret diagrams that use scientific symbols and conventions.