

## Science: Woking Like a Scientist

## 1. Safety in the lab.



Safe	ty Rules			
1	DO NOT eat or drink in the laboratory.			
2	Wear safety glasses during practicals.			
3	Stand up and tuck the stool under when carrying out practicals.			
4	All coats and bags should be stored neatly under the desk.			
5	DO NOT smell any chemicals in the laboratory.			
6	All broken glassware should be reported immediately to the teacher who will safely clear it away.			
7	Hands should be washed after using chemicals.			
8	Electrical sockets should be turned off when not in use.			
9	All hair should be tied up.			
10	No running in the laboratory.			

2. Key Vocabulary			
Hazard	The object or action that could cause harm.		
Risk	The injury that could be caused by the hazard.		

3. Variables			
Independent	Variable changed in an investigation.		
Dependent	Variable measured in an investigation.		
Control	Variables kept the same in an investigation.		

4. Hazard Symbols				
	<b>Irritant or harmful.</b> If contact is made with the skin, they can make skin sore and red. They must be washed off immediately.			
Ly Del	<b>Corrosive</b> . Will cause damage to skin and materials. Damage includes chemical burns and blistering.			
	<b>Flammable</b> . Will easily set on fire. Extra caution must be taken when using these substances around flames.			
¥	Harmful to the environment. Substances with this symbol must NOT be put down the sink.			

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5. Writing a r	nethod.		8. Presenting Resu	sults			
<ul> <li>Always use numbered steps.</li> <li>Organise steps in the order needed to complete the investigation.</li> <li>Do not include steps for setting up equipment.</li> <li>Use command words like – Put, Measure, Pour, Start, Record.</li> </ul>			In science it is important that we use <b>evidence</b> to support statements make. We often get this evidence from collecting <b>results</b> . When results have been collected, it is important that they are prese <b>clear</b> and <b>useful</b> way. One example of this is drawing graphs of the data				
	ke the instructions ea		collected.		a		
			Graph to show the bl	lood groups of the population of the UK.			
<ul> <li>6. Risk Assessment</li> <li>A risk assessment is used to identify potential safety concerns in an investigation so that we can ensure we minimise the risk as much as possible.</li> <li>For example, a risk assessment for using a Bunsen burner to burn magnesium.</li> </ul>			Scale is	Bars drawn with a pencil and a ruler.			
			goes up by 40 5 each 6 35	Bars are evenly sized with space between			
Hazard	Risk	Control	unter 30	them.	_		
Bunsen burner	Burns.	Use safety flame when not heating. Do not leave Bunsen burner unattended. Use tongs to hold the magnesium.	Dependent variable is				
Magnesium burning	Damage to eyes from bright light.	Do not look directly at the magnesium when it burns.	on the y axis.		-		
				A B AB <b>Blood Group</b>			

7. Scales	
Example	Each line is worth
0 5 10 15 20 25 <b>1</b> 1 1 1 <b>1 1 1 1 1 1 1 1</b>	1
0 10 20 30 40 50 <b>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 </b>	2
0 50 100 150 200 250 <b>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 </b>	10

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varia on	able is 10 the y 5 xis. 5	5			
		A	В	AB	0
Axes are Blood Group labelled.					
Draw	ing Graphs (	Check List			
1	The independent variable (what you change) is always on the X axis.				
2	The dependent variable (what you measure) is always on the Y axis.				
3	The scale must be in even integers.				
4	The axes must be labelled.				
5	The bars must be drawn with a pencil and a ruler.				
6	The bars must be evenly sized with a space between them.				