

## AS1: Experimental Techniques

Centre No:													Candidate No:		
Section	Learning Outcomes Marks Awarded												Mark criteria	Mark Range	AO
	1.1.1	1.1.2	1.1.3	1.1.4	1.2.1	1.2.2	1.2.3	1.2.4	1.3.1	1.3.2	1.3.3	1.3.4			
Title													Teacher led		
Objective													Teacher led		
Introduction													Good introduction to include an appropriate overview of the experiment which is related to the objective, and relevant and accurate definitions with appropriate scientific terminology.	[2]	AO1 [2]
													Limited introduction which may include an accurate and relevant definition with limited use of scientific terminology.	[1]	X12
Materials and apparatus													Scientifically labelled diagram of the appropriate materials and apparatus, accurately and independently set-up.	[2]	AO1 AO2
													Labelled diagram of the materials and apparatus, set-up with teacher/technician support.	[1]	[2] X12
Risk assessment COSHH CLEAPPS													A good risk assessment including identification of all of the safety hazards and a brief statement of the potential hazardous outcomes.	[3]	AO3 [3]
													A satisfactory risk assessment including identification of most of the safety hazards and a brief statement of at least one potential hazardous outcome.	[2]	
													A basic risk assessment including limited identification of safety hazards and may include identification of a potential hazardous outcome.	[1]	X12
Procedure													All parts of the investigation are carried out independently, displaying a very good level of technical skills. The methods used are always appropriate. Measurements are accurate. The procedure is detailed in full and accurately recorded. There is a thorough explanation of the procedures used. Health and safety issues are considered throughout and appropriate precautions are taken at all times.	[6]-[8]	AO1 AO2 AO3 [8]
													Most parts of the investigation are carried out independently, displaying a satisfactory level of technical skills. The methods used are mostly appropriate. Measurements are mostly accurate. Most steps of the procedure are recorded and accurate. There is a satisfactory explanation of the procedures used. Health and safety issues are considered and appropriate precautions are taken most of the time.	[3]-[5]	
													The investigation is carried out with limited independence, displaying a basic level of technical skills. The methods used are sometimes appropriate. Measurements are sometimes accurate. A limited procedure is recorded displaying gaps in knowledge and understanding. There is a basic explanation of the procedures used. Health and safety issues are sometimes considered and precautions are sometimes taken.	[1]-[2]	X12

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	1.1.1	1.1.2	1.1.3	1.1.4	1.2.1	1.2.2	1.2.3	1.2.4	1.3.1	1.3.2	1.3.3	1.3.4			
Results													A complete set of quantitative results and qualitative observations have been recorded in appropriate tabular and/or graphical format using appropriate headings and units. Calculations are also included and accurate to 2 decimal places.	[2]	AO2 [2]
													Some quantitative results and/or qualitative observations have been recorded in tabular and/or graphical format using headings and units which are sometime accurate. Calculations are also included and accurate.	[1]	
Conclusion, evaluation, limitations and errors													Accurate conclusion(s). Appropriate identification of the sources of error. Good evaluation of the experiment, using appropriate scientific terminology.	[3]	AO3 [3]
													Mostly accurate conclusion(s). Some identification of the sources of error. Satisfactory evaluation of the experiment, with some use of scientific terminology.	[2]	
													Partially accurate conclusion(s). They may be identification of the sources of error. There may be a basic evaluation of the experiment with little/no use of scientific terminology.	[1]	
Total													<b>Total Mark</b>	<b>/240</b>	

**Award [0] for any element of the task not worthy of credit.**