

AS 1: Experimental Techniques

Centre No:				Candidate No:			
	Introduction	Materials and apparatus	Risk assessment	Procedure	Results	Conclusion, evaluation, limitations and errors	Total
Assessment Objectives	AO1	AO1 AO2	AO3	AO1 AO2 AO3	AO2	AO3	
Range of available marks	[0 – 2]	[0 – 2]	[0 – 3]	[0 – 8]	[0 – 2]	[0 – 3]	[0 – 20]
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							
Total Mark out of 240							
Total Mark out of 120 [divide by 2 and round up]							
Award [0] for any element of the task not worthy of credit							

Section	Maximum Mark	Mark criteria
Title		Teacher led
Objective		Teacher led
Introduction	[2]	Good introduction to include an appropriate overview of the experiment and hypothesis which is related to the objective. Relevant and accurate definitions with appropriate scientific terminology.
	[1]	Limited introduction which may include an accurate and relevant definition with limited use of scientific terminology.
Materials and apparatus	[2]	Scientifically labelled diagram of the appropriate materials and apparatus.
	[1]	Scientifically labelled diagram of the appropriate materials and apparatus with some errors or omissions.
Risk assessment with reference to COSHH/CLEAPPS	[3]	A good risk assessment including identification of all the safety hazards and a brief statement of the potential hazardous outcomes.
	[2]	A satisfactory risk assessment including identification of most of the safety hazards and a brief statement of at least one potential hazardous outcome
	[1]	A basic risk assessment including limited identification of safety hazards and may include identification of a potential hazardous outcome.
Procedure [max 4 for completion of experiment] [max 4 for recording the procedure]	[6]-[8]	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.
	[3]-[5]	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.
	[1]-[2]	The investigation is carried out with limited independence, displaying 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.
Results	[2]	A complete set of quantitative results and qualitative observations have been recorded in appropriate tabular and graphical format using correct headings and units. Calculations are also included and are accurate to 2 decimal places (where appropriate).
	[1]	Some quantitative results and/or qualitative observations have been recorded in tabular and/or graphical format using headings and units which are sometimes accurate. Some calculations are also included and are mostly accurate.
Conclusion, evaluation, limitations and errors	[3]	Accurate conclusion(s) which relates to the hypothesis. Appropriate identification of the sources of error. Good evaluation of the experiment to include limitations and improvements, using appropriate scientific terminology.
	[2]	Mostly accurate conclusion(s) which relates to the hypothesis. Some identification of the sources of error. Satisfactory evaluation of the experiment, with some use of scientific terminology
	[1]	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.
		Award [0] for any element of the task not worthy of credit