

Access to Higher Education Unit

This unit forms part of an Access to HE Diploma. If delivering the graded version of this unit, please refer to the Provider Handbook for details on grading descriptors and the application of these across units within your programme.

Unit Title: Practical Scientific Project

Graded Unit Reference Number: GA36SCI01

Ungraded Unit Reference Number: UA36SCI01

Module: Biology; Chemistry; Human Biology; Microbiology; Physics

Level: Three (3)

Credit Value: Six (6)

Minimum Guided Learning Hours: 60

Learning Outcome (The Learner will):	Assessment Criterion (The Learner can):
1. Be able to identify and define a practical research project	1.1 Identify and justify a relevant scientific topic with reference to appropriate sources
	1.2 Produce a hypothesis and clear aims for the project
2. Be able to plan and design a practical scientific project	2.1 Develop a plan which addresses all relevant tasks including: <ul style="list-style-type: none"> a) Timescale/ priority b) Acquisition of equipment and materials
	2.2 State anticipated method of data collection with regard for subsequent method of analysis
	2.3 Explain and justify planned methods with reference to controlled and uncontrolled variables, accuracy and reliability
	2.4 Link probable outcomes to relevant theories or previous work
	2.5 Identify any ethical, practical or safety issues and how these will be managed/overcome

	2.6	Carry out and record a risk assessment of the work
3. Be able to carry out and refine practical scientific research	3.1	Use planned and stated techniques to obtain results/data with due regard for: a) Precision and accuracy b) Reliability
	3.2	Make modifications to plan as appropriate
	3.3	Record raw data appropriately for future processing
	3.4	Identify and record errors in equipment or method
	3.5	Work with due regard for health and safety
4. Be able to process, represent, and analyse data/results	4.1	Process data/results using appropriate diagrammatic, tabular, graphical or statistical techniques to illustrate results
	4.2	Analyse results including reference to validity and reliability of data
5. Be able to consider evidence and reach appropriate conclusions	5.1	Draw relevant conclusions from processed results, with reference to the original hypothesis or aim
	5.2	Use scientific knowledge, where appropriate to explain and clarify the conclusions
6. Be able to evaluate own practical scientific project	6.1	Evaluate strengths and limitations of design and procedure
	6.2	Suggest justified improvements and modifications to design and procedures
7. Be able to present the practical scientific project in an appropriate style	7.1	Produce the practical scientific project using correct scientific convention throughout
	7.2	Present the practical scientific project clearly and logically using correct scientific terminology
	7.3	Use appropriate scientific citation and referencing