

Access to Higher Education Unit

This unit forms part of an Access to HE Diploma. This is a developmental unit so is only available as ungraded.

Unit Title: Science: Introduction to Biology

Graded Unit Reference Number:

Ungraded Unit Reference Number: UD23DEV06

Module: Developmental

Level: Two (2)

Credit Value: Three (3)

Minimum Guided Learning Hours: 30

Learning Outcome (The Learner will):	Assessment Criterion (The Learner can):
1. Understand the characteristics and variety of living organisms	1.1 Briefly describe the eight characteristics of living organisms
	1.2 Use the characteristics of life to distinguish between a named living organism and a named non-living organism
	1.3 Identify organisms from the features of the major taxonomic groups to which they belong (limited to the five kingdoms, and the phylum and classes of vertebrates)
2. Understand the structure and function of animal and plant cells	2.1 Identify the main parts of plant and animal cells as observed using the light microscope
	2.2 List the differences between plant and animal cells
	2.3 Describe the main function of the nucleus, cell membrane, mitochondria and chloroplasts
	2.4 Describe how the membrane controls movement into and out of cells by osmosis and diffusion
3. Understand the nature of some metabolic processes in living	3.1 Explain the differences between anabolic and catabolic processes

organisms	3.2	Write a word equation for photosynthesis
	3.3	Write a word equation for respiration
	3.4	Explain the activity and importance of enzymes in metabolic processes
4. Understand some of the interrelationships between living organisms	4.1	Explain the difference between producers, consumers and decomposers in a living community
	4.2	Provided with information draw food chains and food webs to represent the flow of energy and materials in a community
	4.3	Provided with data draw and interpret pyramids of number and energy
5. Understand basic principles of cell division, inheritance and natural selection	5.1	Distinguish between mitosis and meiosis in terms of the number of cells produced, number of chromosomes in the cells produced and the fate of these cells
	5.2	Use diagrams to explain how different characteristics, e.g. blood type, eye colour or an individual's sex are inherited
	5.3	Explain using examples some of the ways that inheritance can be controlled
	5.4	Outline the mechanism of natural selection and explain how it might lead to evolution