

Qualification Unit

This unit forms part of a regulated qualification.

Unit Title: Reproduction, DNA and Inheritance

Unit Reference Number: K/618/3231

Level: Level Two

Credit Value: Three (3)

Minimum Guided Learning Hours: 24

Learning Outcome (The Learner will):	Assessment Criterion (The Learner can):
1. Understand how reproductive systems work	1.1 Outline the basic structure and function of the male and female reproductive systems
	1.2 Compare mitosis and meiosis
	1.3 Describe the change in chromosomes during meiosis and fertilisation
	1.4 Give examples of methods of contraception, including: a) Hormonal b) Non-hormonal
	1.5 Outline the different stages of pregnancy from embryo to birth including cell differentiation
2. Understand the role genetics plays in the human body	2.1 Give a definition for the genome
	2.2 Describe/show the structure of DNA

	<p>2.3 Define key terms associated with DNA:</p> <ul style="list-style-type: none"> a) Gamete b) Chromosome c) Gene d) Allele e) Dominant f) Recessive g) Homozygous h) Heterozygous i) Genotype j) Phenotype
	2.4 Describe how traits/characteristics can be inherited
	2.5 Complete a punnet square for gene inheritance and calculate probability of phenotype
	2.6 Describe how the sex of a person is determined in terms of XY XX
3. Understand variation and evolution of species	3.1 Identify environmental and inherited variations within a species
	3.2 Identify ways the environment can affect the genome
	3.3 Explain the theory of evolution by natural selection
	3.4 Describe the evidence for evolution
	3.5 Describe factors which may contribute to the extinction of a species
	3.6 Describe the process of artificial selection
	3.7 Discuss the impact of artificial selection
	3.8 Explain the potential benefits and risks of genetic engineering in farming
	3.9 Describe the main steps in the process of genetic engineering