

WJEC Biology – Unit 4 – Double Science

VARIATION, HOMEOSTASIS and MICRO-ORGANISMS

Topic	Content	Completed?	Any issues?
4.1 Classification and biodiversity	a) Variation in populations		
	b) Scientific identification and grouping		
	c) Adaptations		
	d) Biodiversity		
	e) Sampling		
	f) Biological control agents		
	g) Population size		
4.2 Cell division and stem cells	a) Chromosomes		
	b) Mitosis		
	c) Meiosis		
	d) Stem cells		
	e) Cancer		
4.3 DNA and inheritance	a) DNA structure		
	b) Genetic profiling		
	c) Genes and alleles		
	d) Inheritance and genetic cross diagrams		
	e) Sex determination		
	f) Gene transfer		
4.4 Variation and evolution	a) Types of variation		
	b) Sexual and asexual reproduction		
	c) Mutations		
	d) Inheritance of diseases		
	e) The theory of natural selection		
	f) Historical and modern examples of evolution		
	g) Use of the human genome in medicine		

4.5 Response and regulation	a) Sense organs and the central nervous system		
	b) Reflex actions		
	c) Homeostasis		
	d) Hormone control e.g. diabetes		
	e) Homeostasis in the skin		
	f) Lifestyle choices and homeostasis.		
4.6 Disease, defence and treatment	a) Types and structures of micro-organisms		
	b) Micro-organisms that cause communicable diseases.		
	c) Body defences against disease		
	d) Vaccination		
	e) Antibiotics and resistance to them.		
	f) Drug development and testing		