

Biology Curriculum Overview KS3

7A		
<p>Cells, tissues, organs and systems</p>	<ul style="list-style-type: none"> Recall and describe the life processes. Identify the main parts of animal and plants cells and describe their functions. Identify and recall named tissues in human and plant organs. Identify and locate important plant and animal organs. Identify and recall examples of organ systems. 	<ul style="list-style-type: none"> Describe how to prepare a microscope slide
7B		
<p>Sexual Reproduction in animals</p>	<ul style="list-style-type: none"> Describe how egg cells are fertilised in animal sexual reproduction. Name the parts of the male and female reproductive systems and their functions. Describe how sexual intercourse can lead to the implantation of an embryo Explain how a pregnant woman should care for her foetus. Describe and explain what happens during adolescence. 	<ul style="list-style-type: none"> State the common steps in the scientific method
7C		
<p>Muscles and bones</p>	<ul style="list-style-type: none"> Describe how muscles in the gas exchange system allow ventilation. Describe the heart, blood vessels and blood. Describe the functions of different bones in the skeleton and joints. Explain how antagonistic pairs of muscles allow movement. Recall how different drugs affect the body. 	<ul style="list-style-type: none"> Describe the role of scientific questions in the scientific method

7D		
Ecosystems	<ul style="list-style-type: none"> Recall what a species is and describe continuous and discontinuous variation. Identify and describe some adaptations for different habitats. Describe examples of inherited and environmental variation. Describe ways organisms affect their habitats and compete. Use pyramids of numbers to describe how energy is lost in a food chain. 	<ul style="list-style-type: none"> Present information as bar charts and scatter graphs.
8A		
Food and nutrition	<ul style="list-style-type: none"> Recall the nutrients we need in our diets Recall the tests to detect some nutrients. Recall good sources of different nutrients and describe what their function is. Describe the benefits of a balanced diet. Recall the parts of the digestive system and their functions. 	<ul style="list-style-type: none"> Calculate and describe the importance of surface area
8C		
Breathing and respiration	<ul style="list-style-type: none"> Recall what happens in aerobic respiration. Recall the functions of the organs in the gas exchange system. Describe the effects of exercise on breathing and heartbeat rates. Describe how gas exchange occurs in different organisms Recall what happens in anaerobic respiration. 	<ul style="list-style-type: none"> Recall how we calculate means and ranges

8D		
Unicellular organisms	<ul style="list-style-type: none"> • Use cell features to identify members of different kingdoms • Explain how yeasts are used in brewing and baking. • Describe the functions of the parts of a bacterial cell. • Describe the functions of the common parts of protocist cells • Explain the importance of decomposers • Describe the carbon cycle 	<ul style="list-style-type: none"> • Interpret and draw pie charts
8B		
Plants and their reproduction	<ul style="list-style-type: none"> • Describe how organisms are classified. • Recall the differences between sexual and asexual reproduction. • Explain how the structures of flowers and pollen allow pollination by animals and wind. • Describe how pollination leads to fertilisation. • Describe what happens in germination. 	<ul style="list-style-type: none"> • Use the term accuracy • Complete sampling
9A		
Genetics and evolution	<ul style="list-style-type: none"> • Identify different types of environmental variation and explain their causes. • Identify different types of inherited variation. • Explain the importance of DNA and the relationship between other genetic material. • Explain how organisms become endangered or extinct. • Explain natural selection 	<ul style="list-style-type: none"> • Explain probability

9B		
Plant Growth	<ul style="list-style-type: none"> • Explain what happens when plants photosynthesis and respire • Describe how leaves, roots and stem are adapted to their function. • Explain how and why plants make different substances. • Explain how farmers can improve the yield of crops • Use models to explain changes in an ecosystem, this will include the carbon cycle. 	<ul style="list-style-type: none"> • Describe bias and validity
9C		
Cell Structure and transport	<p>Consolidation of some KS3 topics</p> <ul style="list-style-type: none"> • Recall diagrams of animal and plant cells and describe the cell parts • Describe the difference between eukaryotic and prokaryotic cells • Define diffusion and give examples • Define osmosis and active transport 	
Digestion	<ul style="list-style-type: none"> • Explain the terms, cells, tissues, organ, organ system and organism • Give some examples of these • Label the organs of the digestive system • Describe the functions of the organs in digestive system • Explain how the small intestine is adapted for its function 	