



# BIOLOGY



<b>YEAR 7</b>	<b>1. CELL BIOLOGY</b> <ul style="list-style-type: none"> <li>Plant and animal cells</li> <li>Unicellular and multicellular organisms</li> <li>Movement in and out of cells</li> <li>Levels of organisation</li> <li>Specialised cells</li> </ul>	<b>2. INTERDEPENDENCE</b> <ul style="list-style-type: none"> <li>Food chains and food webs</li> <li>Bioaccumulation</li> <li>Predators and prey</li> </ul>	<b>YEAR 8</b>	<b>3. BODY AND ECOSYSTEMS</b> <ul style="list-style-type: none"> <li>Muscles, bones and joints</li> <li>Ligaments and tendons</li> <li>Environmental science</li> <li>Population sampling</li> </ul>	<b>4. PLANTS AND REPRODUCTION</b> <ul style="list-style-type: none"> <li>Plant structure</li> <li>Plant reproduction</li> <li>Variation</li> <li>Adaptations</li> <li>Human reproduction</li> <li>Foetal development</li> <li>Adolescence and puberty</li> </ul>
---------------	---	--	---------------	--	--

<b>GCSE</b>		<b>YEAR 9</b>		<b>A LEVEL</b>	
<b>2. CELL DIVISION, TRANSPORT AND ORGANISATION</b> <ul style="list-style-type: none"> <li>Chromosomes and the cell cycle</li> <li>Mitosis</li> <li>Stem cells</li> <li>Diffusion</li> <li>Osmosis</li> <li>Active transport</li> <li>Digestive system</li> <li>Heart structure and function</li> <li>Blood</li> </ul>	<b>1. ECOLOGY AND CELLS</b> <ul style="list-style-type: none"> <li>Eukaryotes and prokaryotes</li> <li>Cell structure and function</li> <li>Microscopy and magnification</li> <li>Biotic and abiotic factors</li> <li>Communities</li> <li>Levels of organisation</li> </ul>	<b>8. BIOENERGETICS</b> <ul style="list-style-type: none"> <li>Photosynthesis</li> <li>Limiting factors</li> <li>Aerobic respiration</li> <li>Anaerobic respiration</li> <li>Effects of exercise on the body</li> </ul>	<b>7. BREAKING DOWN MOLECULES</b> <ul style="list-style-type: none"> <li>Digestion</li> <li>Healthy diets</li> <li>Food testing</li> <li>Digestive system</li> <li>Enzymes</li> </ul>	<b>6. GENETICS</b> <ul style="list-style-type: none"> <li>Inheritance</li> <li>Evolution</li> <li>Mutations</li> <li>Extinction</li> <li>Natural selection</li> </ul>	<b>5. GAS EXCHANGE AND MICROBIOLOGY</b> <ul style="list-style-type: none"> <li>Breathing</li> <li>Lung structure and function</li> <li>Gas exchange</li> <li>Microbes</li> <li>Communicable and non-communicable disease</li> </ul>

<b>3. DISEASE</b> <ul style="list-style-type: none"> <li>Communicable and non-communicable disease</li> <li>Plant disease</li> <li>Cancer</li> <li>Pathogens</li> <li>Heart disease and treatment</li> </ul>	<b>4. ECOLOGY</b> <ul style="list-style-type: none"> <li>Cycling materials</li> <li>Biodiversity</li> <li>Waste management</li> <li>Deforestation</li> <li>Global warming</li> <li>Fishing and farming</li> </ul>	<b>5. GENETICS</b> <ul style="list-style-type: none"> <li>Sexual and asexual reproduction</li> <li>Meiosis</li> <li>DNA structure and genomes</li> <li>Genetic inheritance</li> <li>Genetic disorders</li> <li>Sex determination</li> <li>Selective breeding</li> <li>Genetic engineering</li> <li>Classification</li> <li>Evolution</li> </ul>	<b>6. HOMEOSTASIS AND CONTROL</b> <ul style="list-style-type: none"> <li>Endocrine system</li> <li>Negative feedback</li> <li>Menstrual cycle</li> <li>Control of fertility</li> <li>Contraception</li> <li>Nervous system</li> </ul>	<b>1. CELLS AND BIOLOGICAL MOLECULES</b> <ul style="list-style-type: none"> <li>Cell ultra-structure</li> <li>Water</li> <li>Carbohydrates</li> <li>Lipids</li> <li>Proteins</li> <li>Nucleic acids</li> </ul>
--	---	---	---	--

<b>7. HOMEOSTASIS AND MANIPULATING GENOMES</b> <ul style="list-style-type: none"> <li>Thermoregulation</li> <li>Liver function</li> <li>Kidney function</li> <li>DNA profiling</li> <li>Genetic engineering</li> </ul>	<b>6. COMMUNICATION AND INHERITANCE</b> <ul style="list-style-type: none"> <li>Nervous system</li> <li>Endocrine system</li> <li>Cellular control</li> <li>Genetic inheritance</li> </ul>	<b>5. BIODIVERSITY AND EVOLUTION</b> <ul style="list-style-type: none"> <li>Sampling techniques</li> <li>Calculating biodiversity</li> <li>Conservation</li> <li>Classification</li> <li>Variation and evolution</li> </ul>	<b>4. CELLS</b> <ul style="list-style-type: none"> <li>Plasma membrane</li> <li>Cell division</li> <li>Stem cells</li> </ul>	<b>3. COMMUNICABLE DISEASE</b> <ul style="list-style-type: none"> <li>Plant and animal diseases</li> <li>Transmission</li> <li>Defense mechanisms</li> </ul>	<b>2. EXCHANGE AND TRANSPORT</b> <ul style="list-style-type: none"> <li>Gas exchange</li> <li>Animal transport</li> <li>Plant transport</li> </ul>
--	---	---	--	--	--

<b>8. RESPIRATION AND BIOTECHNOLOGY</b> <ul style="list-style-type: none"> <li>Respiration in detail</li> <li>Plant and animal cloning</li> <li>Culturing microorganisms</li> </ul>	<b>9. PHOTOSYNTHESIS AND ECOSYSTEMS</b> <ul style="list-style-type: none"> <li>Photosynthesis in detail</li> <li>Energy transfers</li> <li>Recycling</li> <li>Succession</li> </ul>	<b>10. PLANT RESPONSES AND SUSTAINABILITY</b> <ul style="list-style-type: none"> <li>Plant hormones</li> <li>Tropisms</li> <li>Competition</li> <li>Conservation</li> <li>Ecosystem management</li> </ul>	
---	---	---	--