

## Biology Key Stage 3 Curriculum

	Autumn Term	Spring Term	Summer Term
<b>Y7</b>	<b>Ecology</b> Habitats Energy Flow Decomposers  <b>Cells and organisms</b> Microscopes Cell structures and functions Tissues and organs	<b>Variation and classification</b> Types of variation Species Classification  <b>Reproduction</b> Adolescence Human reproductive systems Pregnancy	<b>Plants</b> Organs of plants Transpiration Photosynthesis
<b>Y8</b>	<b>Diet and digestion</b> Balanced diets Digestive system Digestive enzymes  <b>Blood and circulation</b> Circulation system Components of blood Heart structure and disease	<b>Respiration and breathing</b> The respiratory system Aerobic and anaerobic respiration Smoking and lung damage  <b>Microbes and Disease</b> Useful microbes Pathogens	<b>Plant Reproduction</b> Flower structure and function Pollination and fertilisation Seed formation Germination
<b>Y9</b>	<b>Classification</b> Five kingdom classification system Vertebrates, invertebrate and plants  <b>Cells</b> Cell structure and specialised cells Bones and muscle functioning  <b>Biochemistry</b> Protein, carbohydrate and lipid structure Biochemical testing	<b>Movement in and out of cells</b> Diffusion, osmosis and active transport  <b>Enzymes</b> Lock and key hypothesis Investigating effect of different conditions on enzyme activity	<b>Variation and Genetics</b> Species and variation Theory of evolution Causes of endangering and extinction of organisms

## Biology GCSE Curriculum Overview

	Autumn Term	Spring Term	Summer Term
<b>Y10</b>	<p><b>Photosynthesis and plant transport</b>            Reactants and products of photosynthesis            Limiting factors            Transpiration and translocation</p> <p><b>Plant reproduction</b>            Sexual and asexual reproduction            Structure of a leaf            Pollination types            Fertilisation and germination</p> <p><b>Reviewing</b>            Water potential            Enzymes</p> <p><b>Biotechnology</b>            Fermenters            Use of pectinases</p>	<p><b>Biochemistry</b>            Elements within biological molecules            Testing for different biological molecules</p> <p><b>Nutrition and digestion</b>            Different food/nutrient disorders and diseases            Mechanical and chemical digestion            Absorption            Cholera</p> <p><b>Animal transport</b>            Structure of heart and heart disease            Blood composition and blood vessels            Lymph</p> <p><b>Respiration</b>            Aerobic respiration            Anaerobic respiration in humans            Anaerobic respiration in yeast</p>	<p><b>Gas exchange in humans</b>            Lungs structure and function.            Ventilation            Smoking related diseases</p> <p><b>Diseases and Immunity</b>            Pathogens and transmission            Body defences and hygiene            Immunity            Vaccination</p> <p><b>Coordination and response</b>            Nervous control            Neurones and synapses            How the eye works</p>

<b>Y11</b>	<p><b>Plant responses</b></p> <ul style="list-style-type: none"> <li>Phototropism</li> <li>Gravitropism</li> <li>Commercial uses of growth hormones</li> </ul> <p><b>Homeostasis</b></p> <ul style="list-style-type: none"> <li>Temperature</li> <li>Blood glucose</li> <li>Adrenaline</li> </ul> <p><b>Excretion</b></p> <ul style="list-style-type: none"> <li>Role of liver</li> <li>Role of kidney</li> <li>Dialysis and transplants</li> </ul> <p><b>Drugs</b></p> <ul style="list-style-type: none"> <li>Medicinal drugs</li> <li>Misuse of drugs</li> </ul> <p><b>Human Reproduction</b></p> <ul style="list-style-type: none"> <li>Reproductive systems</li> <li>Hormones and conception</li> <li>Development in the womb</li> <li>Antenatal care</li> <li>Controlling fertility</li> <li>Diseases</li> </ul> <p><b>Cell division</b></p> <ul style="list-style-type: none"> <li>Mitosis and meiosis</li> <li>DNA</li> <li>Protein synthesis</li> </ul>	<p><b>Genetic inheritance</b></p> <ul style="list-style-type: none"> <li>Monohybrid inheritance</li> <li>Codominance</li> <li>Sex-linked inheritance</li> <li>Genetic engineering</li> </ul> <p><b>Humans and the environment</b></p> <ul style="list-style-type: none"> <li>Population size</li> <li>Food production</li> <li>Sustainability</li> <li>Conservation</li> </ul> <p><b>Variation</b></p> <ul style="list-style-type: none"> <li>Types of variation</li> <li>Mutation</li> <li>Adaptive features and fitness</li> <li>Artificial selection</li> </ul> <p><b>Ecology</b></p> <ul style="list-style-type: none"> <li>Energy flow</li> <li>Cycles in nature</li> <li>Pollution</li> <li>Conservation and sustainability</li> </ul>	<p><b>Revision &amp; Exam Skills</b></p>
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