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| **Year 7 Biology** | |
| **Cells** | * Basic cell structure and specialised cells * Comparing plant and animal cells |
| **Organ systems** | * Hierarchy of multicellular organisms * Human skeletal, muscular and reproductive systems |
| **Genetics and Evolution** | * Gametes and fertilisation * Variation within and between species * Adaptation and competition |
| **Biological molecules** | * DNA |
| **Plant Biology** | * Producers in food chains * Plant reproduction * Ecosystems and sampling |
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| **Cells** | * Roles of specialised cells in human organ systems * Roles of organelles in respiration and photosynthesis |
| **Organ systems** | * Human digestive system * Human respiratory and circulatory systems |
| **Genetics and Evolution** | * Inheritance * Natural selection and evolution * Genetic modification |
| **Biological molecules** | * DNA * Digestive enzymes |
| **Plant Biology** | * Photosynthesis and plant mineral deficiencies * Gas exchange in leaves * Genetic modification of plants |

**Year 8 Biology**

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| **Year 9 Biology** | |
| **Cells** | * Prokaryotic and eukaryotic cells * Studying cell structure using microscopy * Transport of substances in and out of cells * Respiration and metabolism |
| **Organ systems** | * Effect of exercise on human respiratory, circulatory and muscular systems |
| **Genetics and Evolution** | * Chromosomes, mitosis and the cell cycle * Stem cells |
| **Biological molecules** | * Uses of glucose in plants |
| **Plant Biology** | * Plant cell structure and differentiation * Movement of substances in roots and leaves * Photosynthesis and respiration in plants |
| **Year 10 Biology** | |
| **Cells** | * Prokaryotic and eukaryotic pathogens * Roles of white blood cells in the immune response |
| **Organ systems** | * Digestive system and enzyme function * Respiratory system and gaseous exchange * Circulatory system and coronary heart disease * Immune system and vaccination |
| **Genetics and Evolution** | * Risk factors and cancer * Antibiotic resistance in bacteria * Monoclonal antibody production and application |
| **Biological molecules** | * Qualitative food tests for glucose, starch, proteins and lipids * Digestive enzymes as biological catalysts * Haemoglobin and oxygen transport * Immunological proteins and antibiotics |
| **Plant Biology** | * Plant tissues, organs and the vascular system * Viral and fungal plant diseases * Plant mineral deficiencies and defence responses |
| **Year 11 Biology** | |
| **Cells** | * Roles of receptor cells in detecting different stimuli * Structure and roles of neurones in stimulus-response chain * Comparing mitosis and meiosis |
| **Organ systems** | * Human nervous system * Human endocrine and excretory systems |
| **Genetics and Evolution** | * Sexual and asexual reproduction * DNA and the genome * Genetic inheritance and inherited disorders * Genetic engineering , variation and evolution |
| **Biological molecules** | * Roles of hormones in the homeostasis, reproduction, contraception and fertility * Protein synthesis * Neurotransmitters in synaptic transmission |
| **Plant Biology** | * SATF153Plant hormones and tropisms * Ecosystems and recycling * Trophic levels, biodiversity and food production |