

The Science Curriculum

	Year 7	Year 8	Year 9	Year 10	Year 11
Half term 1	<p>Biology 1: The human Body</p> <p>Diet and exercise Healthy eating Weight problems Inheritance, exercise and health How do we deal with disease</p>	<p>Biology 2: How the body works.</p> <p>Respiration Word equations Healthy diet Food groups Effects of an unbalanced diet Lifestyle and disease Alcohol Investigating your pulse rate Taking your pulse Anaerobic respiration Increasing the risk of disease</p>	<p>Biology 3: How the body fights disease</p> <p>Pathogens and disease Defense mechanisms Using drugs to treat disease Immunity</p>	<p>Component 1: The human body</p> <p>What is the body made of? Animal cells Looking at cells Levels of organization The circulatory system The digestive system Plant and animal cells Transport in cells Blood vessels Enzymes How the body works Respiration Healthy diet Lifestyle and disease Investigating pulse rate Anaerobic respiration Increasing the risk of disease Infectious diseases Vaccinations Medical drugs</p>	<p>Component 1: The human body</p> <p>What is the body made of? Animal cells Looking at cells Levels of organization The circulatory system The digestive system Plant and animal cells Transport in cells Blood vessels Enzymes How the body works Respiration Healthy diet Lifestyle and disease Investigating pulse rate Anaerobic respiration Increasing the risk of disease Infectious diseases Vaccinations Medical drugs Testing the effects of antibiotics Bacteria and viruses Preventing the spread of disease Testing new drugs</p>

<p>Half term 2</p>	<p>Chemistry 8: Atoms, elements and compounds</p> <p>Atoms and the periodic table Groups in the periodic table Making compounds The model of the atom Atoms and electrons Metals and the periodic table Non-metals and the periodic table</p>	<p>Chemistry 13: Fuels and the atmosphere</p> <p>Development of the atmosphere Crude oil Fractional distillation Fuels and combustion Air pollution Climate change Cracking Carbon footprint</p>	<p>Chemistry 9: Mixture and compounds</p> <p>Mixtures and compounds States of matter Properties Boiling point Condensation Mixtures Chromatography Structures of carbon</p>	<p>Testing the effects of antibiotics Bacteria and viruses Preventing the spread of disease Testing new drugs Nervous systems Testing reactions Hormones and the menstrual cycle Controlling fertility The menstrual cycle and contraception Homeostasis</p>	<p>Nervous systems Testing reactions Hormones and the menstrual cycle Controlling fertility The menstrual cycle and contraception Homeostasis</p>
<p>Half term 3</p>	<p>Physics 15: Energy.</p> <p>Types of energy Sources of energy Changes in energy stores Energy transfer Energy conservation Friction Reducing waste energy Energy transfer by heating Energy and the environment</p>	<p>Physics 19: Electrical circuits</p> <p>Electric current How to measure electrical current and voltage Resistance Types of current Electrical frequency Investigating components Series and parallel circuits</p>	<p>Physics 21: Magnetism and electromagnetism</p> <p>Magnetism and electromagnetism Magnetic fields Magnetic fields around an electric current Electromagnets Plotting magnetic fields</p>	<p>Component 3: Elements, mixtures and compounds.</p> <p>Atoms, elements and compounds Atoms and the periodic table Groups in the periodic table Making compounds The model of the atom Atoms and electrons Metals and the periodic table Non-metals and the periodic table Mixtures and compounds States of matter Mixtures Chromatography Structures of carbon Polymers</p>	<p>Component 3: Elements, mixtures and compounds.</p> <p>Atoms, elements and compounds Atoms and the periodic table Groups in the periodic table Making compounds The model of the atom Atoms and electrons Metals and the periodic table Non-metals and the periodic table Mixtures and compounds States of matter Mixtures Chromatography Structures of carbon Polymers</p>

<p>Half term 4</p>	<p>Biology 7: How life developed on Earth.</p> <p>DNA, genes and chromosomes Male and female organisms</p> <p>A sexual and sexual reproduction</p> <p>Investigating variation</p> <p>Evolution and natural selection</p> <p>Fossils</p>	<p>Biology 6: Organisms and the environment</p> <p>Organisms and the environment</p> <p>Competition</p> <p>Factors in competition</p> <p>Living and non- living factors</p> <p>Pollution</p> <p>Loss of biodiversity</p> <p>Maintaining biodiversity</p>	<p>Biology 5: Feeding relationships</p> <p>Producers and consumers</p> <p>Photosynthesis</p> <p>Word equations</p> <p>Animal and plant adaptations</p> <p>Food chains</p> <p>Food webs</p> <p>Ecosystems</p> <p>Decay cycle</p> <p>Interdependence</p> <p>The carbon cycle</p>	<p>Component 3: Elements, mixtures and compounds.</p> <p>Pure substances and formulations</p> <p>Concentration</p> <p>Covalent molecules</p> <p>Ionic compounds</p> <p>Metals</p> <p>Alloys</p> <p>Extracting metals</p> <p>Recycling metals</p> <p>The reactivity series</p> <p>Electrolysis</p> <p>Investigating electrolysis</p> <p>Sustainability</p>	<p>Component 3: Elements, mixtures and compounds.</p> <p>Pure substances and formulations</p> <p>Concentration</p> <p>Covalent molecules</p> <p>Ionic compounds</p> <p>Metals</p> <p>Alloys</p> <p>Extracting metals</p> <p>Recycling metals</p> <p>The reactivity series</p> <p>Electrolysis</p> <p>Investigating electrolysis</p> <p>Sustainability</p>
<p>Half term 5</p>	<p>Chemistry 10: Metals and Alloys.</p> <p>Structure of metals</p> <p>Properties of metals</p> <p>Uses of metals and alloys</p> <p>What are alloys</p> <p>Extracting metals</p> <p>Recycling metals</p> <p>The reactivity series</p> <p>Electrolysis</p> <p>Sustainability</p>	<p>Chemistry 14: Water for drinking</p> <p>Drinking water</p> <p>Investigating water</p> <p>Waste water treatment</p> <p>Global problems linked to clean water</p>	<p>Chemistry 11: Reactions of acids</p> <p>Reactions of acids</p> <p>Neutralisation</p> <p>Metals and acids</p> <p>Investigating acids and carbonates</p> <p>The pH scale</p> <p>Balanced symbol equations</p>	<p>Component 2: Environment, evolution and inheritance</p> <p>Feeding relationships</p> <p>Photosynthesis</p> <p>Adaptations</p> <p>Food chains and food webs</p> <p>Decay</p> <p>Interdependence</p> <p>Factors affecting photosynthesis</p> <p>The carbon cycle</p> <p>Organisms and the environment</p> <p>Competition</p> <p>Living and non-living factors</p> <p>Investigating plant distribution</p> <p>Pollution</p>	<p>Component 2: Environment, evolution and inheritance</p> <p>Feeding relationships</p> <p>Photosynthesis</p> <p>Adaptations</p> <p>Food chains and food webs</p> <p>Decay</p> <p>Interdependence</p> <p>Factors affecting photosynthesis</p> <p>The carbon cycle</p> <p>Organisms and the environment</p> <p>Competition</p> <p>Living and non-living factors</p> <p>Investigating plant distribution</p> <p>Pollution</p>

<p>Half term 6</p>	<p>Physics 16: Forces at work</p> <p>Types of forces Push and pull forces Work done Friction Weight Work done and power Forces and elasticity</p>	<p>Physics 20: Domestic electricity</p> <p>Electrical appliances Electrical power Using electrical energy Cost effectiveness matters. Fuses and earth wires Transferring energy Power The national grid Practical include:</p>	<p>Physics 17: Speed and stopping distances.</p> <p>Speed Average speed Braking distance Friction Distance time graph Investigating acceleration Velocity time graphs</p>	<p>Component 2: Environment, evolution and inheritance.</p> <p>Loss of biodiversity Maintaining biodiversity How life developed on Earth Genetic material Asexual and sexual reproduction Investigating variation Evolution and natural selection Artificial selection Genetic engineering Dominant and recessive alleles Genetic crosses</p>	<p>Component 2: Environment, evolution and inheritance.</p> <p>Loss of biodiversity Maintaining biodiversity How life developed on Earth Genetic material Asexual and sexual reproduction Investigating variation Evolution and natural selection Artificial selection Genetic engineering Dominant and recessive alleles Genetic crosses</p>
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