

Curriculum Overview

Science Year 7

	<u>HT1</u>	<u>HT2</u>	<u>HT3</u>	<u>HT4</u>	<u>HT5</u>	<u>HT6</u>
<u>Topic</u>	Substances and properties	<u>Forces:</u> <u>Sound and light</u>	<u>Cells</u> <u>Inheritance and the genome</u>	<u>Particles and structure</u> <u>Chemical reactions</u>	<u>Earth in space</u> <u>Matter</u>	<u>The cellular basis of life</u> <u>Variation</u>
<u>Knowledge</u>	<ul style="list-style-type: none"> • Composite materials Classifying materials • Substance Solutions - Separating solutions • Particle model for the solid, liquid and gas states. • Particles in solutions 	<ul style="list-style-type: none"> • What do forces do • Describing forces • Balanced and unbalanced forces • Friction - • Energy stores and transfers • Production and transmission of sound • Characteristics of light 	<ul style="list-style-type: none"> • Living, dead and never been alive • Cells and cell structures • Cell shape and size • Diffusion and the cell membrane • Heredity and genetic information 	<ul style="list-style-type: none"> • Atoms and molecules • Symbols and formulae • Polymer properties • Comparing solubility • Rearrangement of atoms • Formation of new substances 	<ul style="list-style-type: none"> • Planets and the solar system • Gravity • The night sky, stars and galaxies • Temperature • Heating and cooling • Thermal Conduction • Thermal store of energy 	<ul style="list-style-type: none"> • Working together: cells, tissues and organ systems. • Supplying cells: the human circulatory system. • The human skeleton and muscles • Differences within species

			<ul style="list-style-type: none"> The structure and function of the genome 			<ul style="list-style-type: none"> Changes in species over time; fossil evidence
<p>Skills</p>	<p><u>Devise ways to separate mixtures based on their properties</u></p> <ul style="list-style-type: none"> Collect data Devise questions Test hypothesis Estimate risks 	<p><u>Investigate factors that affect the size of frictional or drag forces:</u></p> <ul style="list-style-type: none"> Analyse patterns Discuss limitations Draw conclusions Present data Communicate ideas Construct explanations Collect data Devise questions Plan variables Test hypothesis 	<p><u>Identify the principal features of a cheek cell and describe their functions.</u></p> <ul style="list-style-type: none"> Communicate ideas Construct explanations 	<p><u>Use models to investigate the relationship between the properties of a material and the arrangement of its particles.</u></p> <ul style="list-style-type: none"> Analyse patterns Discuss limitations Draw conclusions Present data Communicate ideas Construct explanations Estimate risks Review theories 	<p><u>Investigate how to prevent heat loss by conduction, convection and radiation.</u></p> <ul style="list-style-type: none"> Analyse patterns Discuss limitations Draw conclusions Present data Communicate ideas Construct explanations Collect data Devise questions Plan variables 	<p><u>Explore how the skeletal system and muscular system in a chicken wing work together to cause movement.</u></p> <ul style="list-style-type: none"> Analyse patterns Discuss limitations Draw conclusions Present data Communicate ideas Critique claims Justify opinions Devise questions Plan variables Test hypothesis

<p><u>Assessment Opportunities (F&S)</u></p>	<p>Retrieval practice starter Self and peer assessment of knowledge. Mid term assessment - materials End of topic tests. - Substances and mixtures</p>	<p>Retrieval practice starter Self and peer assessment of knowledge. Mid term assessment - Forces End of topic tests. - Sound and light</p>	<p>Retrieval practice starter Self and peer assessment of knowledge. Mid term assessment - Cells End of topic tests. - Inheritance and the genome</p>	<p>Retrieval practice starter Self and peer assessment of knowledge. Mid term assessment - Particles and structure End of topic tests. - Chemical reactions</p>	<p>Retrieval practice starter Self and peer assessment of knowledge. Mid term assessment - Earth in space End of topic tests. - Matter</p>	<p>Retrieval practice starter Self and peer assessment of knowledge. Mid term assessment - Cells End of topic tests. - Variation</p>
<p><u>CEIAG</u></p>	<p>Research scientist</p>	<p>Engineering. Mechanic. Sound technician.</p>	<p>Nursing Physiotherapist</p>	<p>Environmental scientist Youth worker</p>	<p>Optician Astronomer</p>	<p>Metal worker Welder</p>
<p><u>Cultural Capital</u></p>						<p>Blackpool zoo</p>
<p><u>Cross-Curricular Links</u></p>	<p>Maths - measuring, drawing graphs and tables.</p>	<p>Maths - measuring forces, graphs, using equations</p>	<p>PE - how the body works, muscles and joints.</p>	<p>Food technology - changes of state</p>	<p>Maths - angles, measuring distances</p>	<p>Forest school - burning fuels. Maths - equations</p>