

Subject Overview Science – Year 8

Year 8 science focuses on exploring the key scientific concepts which were introduced in year 7 as well as continuing to build the foundation of knowledge and skills needed for KS4. In year 8 we introduce analysis skills the students will use to help deepen their understanding of the concepts covered.

	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Knowledge & Skills	<p>Unit 1 Working Scientifically 2 (12 Lessons) Develop analysis skills to interpret graphs, draw conclusions, and explain scientific findings.</p> <p>Unit 2 Digestion and Breathing (14 Lessons) Explore balanced diets, digestion, and enzyme function using models and investigations.</p>	<p>Unit 3 Resources from Earth (13 Lessons) Use models to explain the greenhouse effect and Earth's atmospheric evolution over time.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Assessment 1</p> <ul style="list-style-type: none"> • Variation and Reproduction • The Earth as a planet • Sound and Light • Scientific skills </div> <p>Unit 4 Properties of Waves (13 Lessons) Investigate magnets and build electromagnets, explaining how they work using scientific concepts</p>	<p>Unit 5 Evolution and Inheritance (11 Lessons) Explore evolutionary change over time by evaluating theories and interpreting evidence.</p> <p>Unit 6 Magnetism (11 Lessons) Investigate interactions of materials and apply knowledge to understand speakers and microphones.</p>	<p>Unit 7 Building Blocks of Chemistry (14 Lessons) Explore the development of the periodic table and the how atoms can be represented and react.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Assessment 2</p> <ul style="list-style-type: none"> • Digestion and Breathing • Resources from Earth • Properties of Waves </div>	<p>Unit 8 Work and Heating (11 Lessons) Explore heat transfer processes and investigate how insulation reduces energy loss.</p> <p>Unit 9 Energy in an Ecosystem (11 Lessons) Investigate factors affecting respiration and photosynthesis, and explore how the processes are linked.</p>	<p>Unit 10 Energy in Reactions (10 Lessons) Explore energy's role in chemical reactions through hypothesis, planning, and data collection</p> <p>Unit 11 Forces and their interactions (10 Lessons) Explore forces, their interactions, and use equations to describe effects on objects.</p> <p>Unit 12 Space and seasons (8 Lessons) Analyse forces on objects using equations and explore real-world force applications.</p>
Beyond The Curriculum	<p>Suggested places to visit The Old Operating Theatre Museum & Herb Garret</p> <p>Suggested website: https://www.innerbody.com/htm/body.html</p> <p>Suggested reading: Young Scientist Magazine</p>	<p>Suggested places to visit Barnsley Metrodome – for the wave pool Yorkshire Museum, York</p> <p>Suggested website: Welcome to BGS - British Geological Survey</p> <p>Suggested reading: British Science Association</p>	<p>Suggested places to visit West Yorkshire Fossil Walks</p> <p>Suggested website: Evolution and inheritance - KS2 Science - BBC Bitesize</p> <p>Suggested reading: National Geographic Kids</p>	<p>School enrichment in lesson British Science Week</p> <p>Suggested places to visit Leeds City Museum</p> <p>Suggested reading: Chemistry World – Education Section https://www.chemistryworld.com/education</p>	<p>Suggested places to visit Blackpool zoo Leeds Industrial Museum at Armley Mills</p> <p>Suggested reading: BBC Science Focus Kids</p>	<p>Suggested places to visit London Planetarium Leicester National Space Centre Jodrell Bank Discovery Centre, Cheshire</p> <p>Suggested website: https://spaceplace.nasa.gov/seasons/en/</p>