MEADOW PARK SCHOOL

Year 9 Curriculum Overview: Science

Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Magnets and Electromagnets: Students explore magnetic fields, permanent magnets, electromagnets, and simple motors while developing practical investigative skills. **Atomic Structure:** Students explore the structure of the atom, the differences between elements, compounds, and mixtures, separation techniques, and how atomic models have developed over time. **Plant Nutrition and Photosynthesis:** Students explore how plants make food by photosynthesis, absorb water and minerals, exchange gases, and support life on Earth.	**Hidden Forces:** Students explore how forces affect objects, including pressure, moments, Hooke's Law, work done, and simple machines. **Periodic Table:** Students explore the structure of the periodic table and how the arrangement of elements explains their properties and reactivity.	**Transport Systems in Animals and Plants:** Students explore how animals and plants transport substances, including the circulatory system, xylem, phloem, and transpiration. **Waves:** Students explore the properties of sound and water waves, including how waves travel, reflect, and transfer energy.	**Materials:** Students explore the properties and uses of metals, polymers, and ceramics, and how materials are selected for different applications. **Fighting Disease:** Students explore how pathogens cause disease, how the body defends itself against infection, how vaccinations and antibiotics help prevent and treat disease, and the causes and risk factors of non-communicable diseases.	**Fighting Disease (continued from previous term)** **Resistance and Parallel Circuits:** Students explore resistance and how current and potential difference behave in parallel electrical circuits.	**Chemical Tests:** Students explore methods used to identify substances, including tests for gases, ions, and pure substances, as well as chromatography and instrumental analysis. **Our Changing Atmosphere:** Students explore the composition and evolution of Earth's atmosphere, the causes and effects of climate change, and the impact of human activity on air quality.

Assessment	Key Concepts/ Skills	Reading
Teachers regularly mark students' work and provide feedback to help students reflect on their learning and make improvements. Assessment focuses on applying knowledge, using scientific vocabulary accurately, and explaining scientific ideas clearly.	Throughout the year students develop important scientific skills, including: • Working scientifically and planning investigations • Making observations and recording results • Analysing data and drawing conclusions • Interpreting graphs and scientific diagrams • Using scientific vocabulary accurately	Students develop their scientific literacy through reading scientific texts, case studies, and explanations of real-world scientific discoveries. Students practise interpreting diagrams, graphs, and written information to build confidence in reading scientific material. Students are taught the BUG strategy to help them approach exam questions effectively.

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	• Applying knowledge to explain real-world phenomena	
Enrichment	**Careers**	**Useful resources and revision**
Students have opportunities to take part in enrichment activities such as: • Science Club • British Science Week activities • STEM challenges and competitions • Practical investigations and demonstrations	Throughout the curriculum, students are introduced to careers that use science, including: • Medicine and healthcare • Engineering and technology • Environmental science • Research and laboratory science These links help students understand how science connects to real-world careers and future opportunities.	Students can support their learning using: • Knowledge organisers and revision materials • Teacher resources and recommended websites • Educational science videos and reading materials