Elm Court School

Science Curriculum Overview

In Key Stage 3 pupils explore a knowledge and processes-rich curriculum filled with fascinating, practical, and relevant science that enables pupils to fall in love with our subject. We offer a broad range of studies closely aligned with the National Curriculum and adapted to meet the needs of our pupils. The content is divided into areas including scientific enquiry, life processes, materials and their properties, and physical properties. Pupils will develop scientific knowledge and skills through the learning of investigation skills; structure and function of living organisms; material cycles and energy; reproduction, genetics and evolution; elements and compounds; earth and the atmosphere, energy, electricity, and waves; motion and forces and matter.

In KS4 all pupils will follow a vocational course in science and the opportunity to combine it with GCSE science where appropriate. This qualification will be two years and during this period pupils could progress from L1 Award to L1 Certificate and GCSE.

Year 7:	**Year 8:**	**Year 9:**	**Year 10:**	**Year 11:**
In Year 7, pupils complete an initial baseline assessment and termly short topic tests, throughout the year to assess individual learning needs. Multi-sensory approaches to learning are embedded within more traditional learning styles and learning is cross-curricular, enabling pupils to make important connections to real life. Learning themes include: • Introduction to Science/safety in Science; Science equipment and experiments; baseline assessments • Energy and electricity (revise safety when using	In Year 8, pupils study Science curriculum covering areas from scientific enquiry, life processes, materials and their properties, physical properties Learning themes include: • Cells, tissues, organs, organs systems (including reproduction) • Microbes (trip to centre of the cell) • Disease • Lifestyle and Health (see PSHE for cross-curricular links) • Food & Digestion	In Year 9, pupils continue to study topics from all the scientific strands: scientific enquiry, life processes, materials, and their properties, physical properties These topics and how they are taught will equip pupils to start their science qualifications in Year 10 • Plants, Animals, and their environment (photosynthesis, food chains, pollution)	In Year 10, pupils study Science units to enable them to complete a L1 Award or L1 Certificate by the end of Year 11. Once again, the four Science Areas are explored: scientific enquiry, life processes, materials and their properties, physical properties Pupils in Year 10 start to study Gateway Vocational Science. Programs of Study: The study of Living Systems • The structure and function of cells	In Year 11, pupils continue their Science curricular studies, covering areas from scientific enquiry, life processes, materials, and their properties, physical properties Pupils complete their Gateway Level 1 Award/Certificate in Science and Technology Programs of Study: • The nature and Application of Energy, Waves, and Radiation By the end of Year 11 pupils will achieve their Gateway Level 1

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electricity), electrical components/ symbols for electrical components, simple electrical circuits, conductors, and insulators of electricity • Solids, Liquids, and Gases: particle arrangement and behaviour in solids, liquids, and gases, changing states (solids to liquids, to gases) • Amazing Animals invertebrates/vertebrates/feeding relationships (herbivores, omnivores, carnivores); the opportunity to visit Vauxhall Zoo, Capel Manor, Crystal Palace • Precious Plants (structure & function of a flowering plant, life cycle of a plant); labelling of a flowering plant (flower, stem, leaf, roots): dissection of a flower (lily) to show: petals, sepals, stalk, and the reproductive organs) • Forces and their effect (magnetism) • Acids & Alkalis: pupils explore and test a range of acids and alkalis, and learn about the pH scale	• Energy (renewable, non-renewable, fossil fuels) • Light and Sound • Atoms & Elements • Compounds & Mixture Further enrichment could be in the form of a visit to the Science Museum in South Kensington	• Evolution and inheritance (trip to The Horniman Museum and or The National History Museum) • Energy & Electricity • Magnetism and Waves • Metals and Reactivity • Chemical equations • Neutralisation • Gas Tests • Exothermic and endothermic reactions • Rates of Reactions (practical experiments which look at things that speed up chemical reactions; e.g. temperature)	microscopy work (including homeostasis); • Ecosystems (adaptations, food chains, humans' influence on ecosystems) • The Role of Genes in Inheritance and Genetics Pupils should complete their first unit in Living Systems	Award in Science and Technology; Some pupils may complete 5 Units to achieve their L1 Certificate. In addition to the study of Living Systems and the Nature and application of Energy, Waves, and Radiation, they will also study: • Concepts and Techniques for Chemistry • Carrying Out a Science or Technical Project • Healthy Living Pupils will have the opportunity to progress to study the GCSE curriculum content in addition to the vocational course. Those who will be taking GCSE science will sit for a Combined

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				Trilogy Science qualification

How you can support your child in Science:

Encourage your child to watch Scientific documentaries and nature programmes. Don't forget all those Science video clips on YouTube!! There are amazing science documentaries on television and if you miss them, you could always catch up on BBC iPlayer! Another great thing to do is, work through different Bitesize Science Activities (internet) and Science Revision Guides & Work Books (homework books). British Science Week takes place in March of every year. There are many resources available to you and your child. Find out what is going on and get your child involved in this annual extravaganza! Finally, where possible, take your child to museums and exhibitions in order to deepen their understanding and build their passion for Science 'the wonderful world around them'!

Please keep in touch with the Science section should you feel your child is struggling or needs more challenge – let us know. Emails can be sent to: admin@elmcourt.lambeth.sch.uk.