

| Intent | Implementation |
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| <p>The Primary Knowledge Curriculum (PKC) Science aims to develop pupils' understanding of the world through a scientific lens, fostering curiosity, critical thinking, and a desire for discovery. The curriculum goes beyond National Curriculum expectations, embedding a secure grasp of the three scientific disciplines—biology, chemistry, and physics—while also integrating Earth science and sustainability. Pupils are taught to see science as both a body of substantive knowledge (facts, concepts, laws, and theories) and as a discipline shaped by enquiry, evidence, and human endeavour. By introducing significant scientific figures from diverse backgrounds, the curriculum also broadens pupils' awareness of the history and global nature of scientific discovery. In doing so, pupils learn not only about the science itself, but also about the people and stories behind key discoveries, which helps them see science as a human endeavour that is dynamic, evolving, and relevant to their own lives.</p> | <p>Implementation is carefully sequenced to ensure substantive knowledge is taught before disciplinary enquiry, so pupils can apply secure understanding to practical investigations. Units are structured with clarity: each specifies the core knowledge, vocabulary, and enquiry skills pupils will encounter. Working scientifically is embedded throughout, with opportunities to practise observing over time, pattern seeking, grouping and classifying, comparative and fair testing, and research using secondary sources. Practical investigations are used to deepen and consolidate knowledge rather than replace it, enabling pupils to explain and evaluate scientific phenomena with increasing precision. Links are made to mathematics, geography, and history—for example, graphing weather data, exploring the Industrial Revolution's scientific advances, or studying evolution alongside historical figures like Darwin and Wallace. Lessons are supported by knowledge organisers, retrieval opportunities, and explicit vocabulary teaching to strengthen memory and secure conceptual understanding.</p> |
| Impact | |
| <p>The intended impact is that pupils leave primary school scientifically literate: able to think critically, ask meaningful questions, and use knowledge to understand and explain the natural world. They are expected to build confidence in both substantive knowledge (e.g., the circulatory system, states of matter, or forces) and disciplinary knowledge (methods of enquiry, accurate measurement, fair testing, and analysis). By revisiting concepts cumulatively, children develop secure schemas and a strong scientific vocabulary. They also gain cultural capital through an understanding of how science shapes society, technology, and our future sustainability. Ultimately, the curriculum seeks to cultivate in pupils both the mindset of a scientist and the ability to transfer their scientific thinking to other disciplines, preparing them to succeed in secondary school and as informed citizens in the wider world.</p> | |
| Progression | |
| <p>Progression begins in the Early Years Foundation Stage (EYFS), where children explore body parts, weather, seasons, and simple materials, and learn to ask questions about the world. In Key Stage 1, this develops into knowledge of senses, habitats, plants, and everyday materials, while building early enquiry skills. Through lower Key Stage 2, pupils move into more complexity—learning about the skeletal and muscular systems, rocks, forces, sound, and classification—while extending their ability to measure, record, and interpret data. By upper Key Stage 2, pupils tackle advanced ideas such as puberty and reproduction, solubility and irreversible change, the circulatory system, evolution, astronomy, and meteorology. Alongside this substantive progression, disciplinary knowledge develops from simple observations and data recording in KS1 to planning and conducting controlled investigations, analysing results, and using evidence to explain and justify scientific ideas in KS2. This coherent sequencing ensures children “learn more and remember more” year on year, embedding a secure foundation for the more abstract and mathematically complex science curriculum they will encounter at secondary level.</p> | |

Science Year Group Map

| Year Group | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|------------|----------------------|--------------------------------------|---------------------------------|--------------------------|--------------------------|----------------------------------|
| Nursery | What can my body do? | Winter Weather | Light and Dark | Pushes and Pulls | Plant Life Cycle | Recycling plastic |
| Reception | The Human Body | Changing states | Birds, seasons, and environment | Plants and seasons | Beasts: Mini and Massive | Living things and their habitats |
| Year 1 | The Human Body | Animals and their Needs | Seasons and Weather | Taking Care of the Earth | Plants | Materials and Magnets |
| Year 2 | The Human Body | Living Things in their Environment | Electricity | Plants | Materials and Matter | Astronomy |
| Year 3 | The Human Body | Cycles in Nature | Rocks | Forces and Magnets | Plants | Light |
| Year 4 | The Human Body | Classification of Plants and Animals | Ecology | Sound | The Water Cycle | Electricity |
| Year 5 | The Human Body | Materials | Living Things | Forces | Astronomy | Meteorology |
| Year 6 | The Human Body | Classification of Living Things | Electricity | Light | Reproduction | Evolution |