



GREAT KIMBLE
C OF E SCHOOL

BIG HEARTS BOLD FUTURES

Science Curriculum Statement

Intent:

At Great Kimble Church of England School, our Science curriculum is designed to nurture **big hearts and bold futures** by inspiring curiosity, wonder and a lifelong love of learning about the world around us. We aim to stimulate children's interest and enthusiasm for Science while enabling them to develop a deep and meaningful understanding of natural phenomena.

Through carefully planned and engaging learning experiences, pupils build knowledge across Biology, Chemistry and Physics while developing key scientific skills such as researching, observing, working methodically, recording, categorising and drawing thoughtful conclusions. Children work both independently and collaboratively to plan and carry out investigations, developing confidence in their own learning and an understanding of the value of teamwork.

Using the Kapow Primary Science curriculum, we foster excitement and curiosity while helping pupils understand how the scientific community has shaped our past, informs our present and will influence our future. Inclusive and meaningful learning ensures that all children can experience the joy of Science and make connections between their classroom learning and the world beyond school.

By encouraging critical thinking and the ability to question the hows and whys of the world, our curriculum develops **big hearts** through respect for evidence, responsibility and global awareness. In doing so, we prepare pupils for **bold futures** as reflective, resilient learners who understand the power of scientific knowledge in addressing local and global challenges.

The Kapow Scheme encourages:

- A strong focus on developing knowledge alongside scientific skills across Biology, Chemistry and Physics.
- Curiosity and excitement about familiar and unknown observations.
- Challenging misconceptions and demystifying truths.
- Continuous progression by building on practical and investigative skills across all units.
- Critical thinking, with the ability to ask perceptive questions and explain and analyse evidence.
- Development of scientific literacy using wide-ranging, specialist vocabulary.

Implementation:

- Delivered through 2 hourly slots once a week
- Taught through the Kapow curriculum – adapted to fit Year A and B mixed classes using the following strands: Scientific knowledge and understanding of: Biology - living organisms and vital processes; Chemistry - matter and its properties; Physics - how the world we live in 'works'.
- Working scientifically - processes and methods of science to answer questions about the world around us.
- Science in action - uses and implications of science in the past, present and for the future.

Kapow Primary's Science Scheme is a spiral curriculum, with essential knowledge and skills revisited with increasing complexity, allowing pupils to revise and build on their previous learning. A range of engaging recall activities promote frequent pupil reflection on prior learning, ensuring new learning is approached with confidence. The Science in Action strand is interwoven throughout the scheme to make the concepts and skills relevant to pupils and inspiring for future application. Cross-curricular links are included throughout each unit, allowing children to make connections and apply their science skills to other areas of learning. The 6 key areas pupils explore are: plants, animals, including humans, living things and habitats, materials, energy, forces, Earth and space. Pupils explore knowledge and conceptual understanding through engaging activities



AMBITION



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and an introduction to relevant specialist vocabulary. As suggested in Ofsted's Science research review (April 2021), the 'working scientifically' skills are integrated with conceptual understanding rather than taught discretely. This provides frequent, but relevant, opportunities for developing scientific enquiry skills. The scheme utilises practical activities that aid in the progression of individual skills and also provides opportunities for full investigations. Each year group has a 'Making Connections' unit that delves beyond the essential curriculum, assimilating prior knowledge and skills to evoke excitement and to provide an additional method of assessing scientific attainment.

Impact

The approach to the teaching of science at Great Kimble results in a fun, engaging, high quality science education, that provides children with the foundations for understanding the world that they can take with them once they complete their primary education. It gives them an introduction to the possibilities ahead of them in the fields of science. Each unit has a unit quiz and a knowledge and skills catcher, which can be used to provide a summative assessment. Opportunities for children to communicate using scientific vocabulary also forms part of the assessment process in each unit. As we use the Kapow Primary Science Scheme, children have the opportunity to:

- Develop a body of foundational knowledge for the Biology topics in the National curriculum: Plants; Animals, Including Humans; Living Things and Their Habitats; Evolution and Inheritance.
- Develop a body of foundational knowledge for the Chemistry topics in the National curriculum: Everyday Materials; Uses of Everyday Materials; Properties and Changes of Materials; States of Matter; Rocks.
- Develop a body of foundational knowledge for the Physics topics in the National curriculum: Seasonal Changes; Forces and Magnets; Sound; Light; Electricity; Earth and Space.
- Be able to evaluate and identify the methods that 'real world' scientists use to develop and answer scientific questions.
- Identify and use equipment effectively to accurately gather, measure and record data.
- Be able to display and convey data in a variety of ways, including graphs.
- Analyse data in order to identify, classify, group, and find patterns.
- Use evidence to formulate explanations and conclusions.
- Demonstrate scientific literacy through presenting concepts and communicating ideas using scientific vocabulary.
- Understand the importance of resilience and a growth mindset, particularly in reference to scientific enquiry.
- Meet the end of key stage expectations outlined in the National curriculum for Science.



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