

Science Curriculum Statement

Intent

Cummersdale School has been awarded the Primary Science Quality Mark (Gilt Award), which celebrates our commitment to developing Scientific knowledge and understanding. At Cummersdale, Science involves children asking and answering questions. Science teaching and learning is fun, engaging and practical. It frequently takes place outside the classroom and involves exploring and investigating ideas that are exciting and relevant to learners and their wider world. The importance of collaboration in Science is recognised and a range of wider opportunities outside of the classroom are offered to pupils. The value of resilience, and learning through mistakes and self-led investigation is encouraged and celebrated. Children are proud to make good progress with Science in every session.

The school's approach to Science takes account of the school's own context, ensuring access to people with specialist expertise and places of scientific interest as part of the school's commitment to learning outside the classroom (Forest Schools Year 3/4, EYFS).

Implementation

Teachers create a positive attitude to Science learning within their classrooms and reinforce an expectation that all pupils are capable of achieving high standards in Science. Our whole school approach to the teaching and learning of Science involves the following;

- Science will be taught in planned and arranged topic blocks by the class teacher. We use the Plymouth Science Scheme of work to support our planning. Our learning sequences for Science have been carefully planned, ensuring children are building on prior learning. Regular practice ensures that the knowledge becomes 'sticky' and encourages productivity.
- Existing knowledge is checked at the beginning of each topic, as part of the KWL strategy (What I know, What I would like to Know and What I have Learned). This ensures that teaching is informed by the children's starting points and that it takes account of pupil voice, incorporating children's interests.
- Through our planning, we involve problem solving opportunities that allow children to apply their knowledge, and find out answers for themselves. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom and throughout the school. Planning involves teachers creating engaging lessons, often involving high-quality resources to aid understanding of conceptual knowledge. Close links with the local secondary school allows us to borrow more sophisticated scientific apparatus (such as light boxes and dissection kits). Teachers use precise questioning in class to test conceptual knowledge and skills, and assess pupils regularly to identify those children with gaps in learning, so that all pupils keep up. Tasks are selected and designed to provide appropriate challenges to all learners, in line with the school's commitment to inclusion.
- We build upon the knowledge and skill development of the previous years. As the children's knowledge and understanding deepens, they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- Working Scientifically skills are the focus of lessons, whereby pupils are empowered to become more independent learners using the skills developed systematically throughout their school career and using appropriate vocabulary. Challenging concepts are introduced

through direct teaching using a combination of Enquiry Skills and Working Scientifically Skills. In Year 5 and 6 the children used dissection tools confidently and safely to study the anatomy of a cow's eye. They have also had the opportunity to dissect a fish. Observing organs and understanding how they work within a single animal strengthens children's comprehension of biological systems and creates a lasting impression on their minds.

- Science skills are reinforced in many areas of the curriculum, pupils understand Science learning is not isolated and influences the world around us. Cross curricular opportunities are also identified, mapped and planned to ensure contextual relevance (Testing astronaut suit materials in Year 1 and 2, Troutankhamun Year 3 and 4, Programming a Mars Rover in Year 5 and 6).
- Children are offered a wide range of extra-curricular activities, visits, trips and visitors to complement and broaden the curriculum. These are purposeful and link with the knowledge being taught in class. Year 5 and 6 visit the Life Centre as part of their topic on Space and experience how it feels to be an astronaut. Year 1 and 2 visit the aquarium as part of their seaside animals topic. After school clubs are planned for which have included STEM, Weird Science and Nature Club.
- Regular events, such as Science Week, project weeks or activity days, allow all pupils to come off-timetable, to provide broader provision and the acquisition and application of knowledge and skills. During these events, the children have been able to observe the effects of dry ice making potions and rockets whilst gaining an understanding of changes of state.
- At the end of each topic, key knowledge is reviewed by the children and results are put into formative assessment grids to systematically manage progress being made and is used to inform future planning.

Impact

The successful approach at Cummersdale results in a fun, engaging, high-quality Science education that provides children with the foundations and knowledge for understanding the world. Our engagement with the local environment ensures that children learn through varied and first hand experiences of the world around them. Frequent, continuous and progressive learning outside the classroom is embedded throughout the Science curriculum. Through various workshops, trips and interactions with experts, children have the understanding that Science has changed our lives and that it is vital to the world's future prosperity. Children at Cummersdale overwhelmingly enjoy Science and this results in motivated learners with sound scientific understanding.

Curriculum Map

<u>Cycle 24/25</u>	<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
<u>Reception</u>	Colour Keeping Healthy Celebrations Seasons	Mini beasts and growing People Who Help Us Seasons	Animals Under the sea All About Me Materials Seasons
<u>Year 1 and 2</u>	Material Worlds	Humans and Staying Healthy	Looking after plants
<u>Year 3 and 4</u>	Rocks and Fossils Animals including humans	Living things and their Habitats Animals and Humans (Human digestion / teeth and functions)	Light
<u>Year 5 and 6</u>	Living things and their habitats Properties and Changes of Materials	British Scientists	Light and Dark Evolution and Adaptation

<u>Cycle 25/26</u>	<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
<u>Reception</u>	Colour Keeping Healthy Celebrations Seasons	Mini beasts and growing People Who Help Us Seasons	Animals All About Me Materials Under the Sea Seasons
<u>Year 1 and 2</u>	Animal Safari	Changing Materials	How does your garden
<u>Year 3 and 4</u>	Forces and Magnets States of Matter	Plants	Electricity / Sound
<u>Year 5 and 6</u>	Earth and Space Forces	Advanced circuits	Animals including humans