Carleton Rode CEVA Primary School
Science

"I haven't failed, I've just found 10,000 ways that don't work."
Thomas Edison

Our Vision	Our Values
'Love your neighbour as yourself' ***'Be yourself, but be your best self.'*** Science at our school aims to embody our school vision. The intention is to inspire children to be the best version of themselves through inspiration, creativity and self-expression. By integrating the principles of understanding interconnectedness, promoting well-being, and inspiring ethical considerations, into primary science education, we can help students develop a sense of empathy, responsibility, and respect for others, aligning with the principle of "love your neighbour as you love yourself" and fostering a culture of care and compassion within the classroom and beyond.	***Kindness*** We will encourage cooperative learning activities where students work in groups to conduct experiments or solve problems. This promotes kindness by fostering teamwork, cooperation, and helping others. We will teach students about the importance of respecting living organisms, including plants and animals, by handling them with care and empathy. Emphasising the value of kindness towards all living things and the environment ***Honesty*** Scientific Integrity: Emphasising the importance of honesty in scientific inquiry. We will teach students to report their observations accurately, without bias or manipulation, and to acknowledge uncertainties and limitations in their findings. Opportunities to discuss ethical considerations in scientific research, such as the responsible use of resources, and the potential impacts of scientific discoveries on society. Encourage students to think critically about the ethical implications of scientific practices and decisions. ***Perseverance*** Growth Mindset: Foster a growth mindset in science education by emphasising the importance of perseverance, resilience, and learning from failure. Encourage students to view challenges and setbacks as opportunities for growth and improvement. Engage students in inquiry-based learning experiences that encourage curiosity, exploration, and problem-solving. Provide opportunities for students to investigate real-world phenomena, make hypotheses, and test their ideas through hands-on experiments and investigations

Intent	Implementation	Impact
It is our endeavour to provide a high quality science education that provides children with the foundations they need to recognise the importance of science in every aspect of daily life. We want our children to appreciate how science has changed the lives of human beings and know that it is vital to the world's future prosperity. Therefore, all pupils will be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. Children should be taught to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. Our curriculum also encourages children to become enquiry based learners, collaborating through researching, investigating and evaluating experiences.	Science is taught weekly. Teachers check on what children already know so that children are able to make links to prior learning. Children will be able to build on prior knowledge and link ideas together. Children are also given the opportunity to revisit prior knowledge. Learning revisited is not only component 'knowledge' but also disciplinary knowledge, too- i.e. how to be a scientist. These tasks give children opportunities to reflect upon the key lesson outcomes.	The successful approach to the teaching of science will result 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. Assessment is teacher based and formed using formal strategies (e.g. periodic year group assessment tasks, quizzes) and informal strategies (Use of concept maps, verbal/written outcomes, reflection tasks/presentations). Formative assessment is used as the main tool for assessing the impact of Science as it allows for misconceptions and gaps to be addressed more immediately rather than building on insecure scientific foundations. Children at our school will: • Demonstrate a love of science work and an interest in further study and work in this field • Retain knowledge that is pertinent to Science with a real life context. • Be able to question ideas and reflect on knowledge. • Be able to articulate their understanding of scientific concepts and be able to reason scientifically using rich language linked to science. • Demonstrate a high love of mathematical skills through their work, organising, recording and interpreting results. • Work collaboratively and practically to investigate and experiment.

Progress	Content & Sequencing	Enrichment
Children start each topic with a “What do I know?’ session, and at the start of each lesson the learning from the previous lesson will be revisited. We use a display to promote children’s independence, including key vocabulary or misconceptions. At the end of the topic the children will complete a mini assessment. We will use a variety of teaching and learning styles to ensure that all children are able to achieve within lessons. Children with additional needs will be supported accordingly. We will ensure that children are challenged appropriately. 	Science is taught in weekly lessons. We teach topics with full coverage of the National Curriculum and ensure that these topics are revisited. Prior learning is built upon and misconceptions are addressed. In the EYFS Science is part of much of their learning, such as seasons, materials and plants. Relevant vocabulary is taught and used through lessons and knowledge organisers with reference to our progression of vocabulary document. Teachers use our progression of skills document to ensure previous concepts are built upon and that children’s knowledge is deepened within each year group. 	We want children to experience a wide range of experiences within their learning, such as visits from Scientists, trips and visits outside of school. Every year we celebrate British Science week and provide opportunities for participation across our federation, involving our parents, carers and wider community too. We will promote opportunities to have animal visits and also have a planting and growing area within school. We will explore opportunities from relevant Scientific bodies such as the Royal Microscopical Society, the Primary Science Teaching Trust and others 

Spiritual Development	Cross-curricular links	Monitoring the Impact
Connection to Nature: Teach students to appreciate the wonders of the natural world and develop a sense of awe and wonder about the universe. Engage in activities like nature walks, observations of plants and animals, and discussions about the interconnectedness of living things. 	Identify opportunities to integrate science with other subjects such as mathematics, languages, and the arts. For example, explore the historical and cultural context of scientific discoveries, analyse scientific texts for comprehension and vocabulary development, or create art projects inspired by scientific concepts. 	The teaching and learning of Science is monitored by the Science lead. Monitoring tasks include pupil book study, termly learning walks, data analysis and pupil voice. Teaching staff also feedback on successes and areas needed further focus. The subject lead will then create an annual report which is shared with governors. 

Global Diversity	Financial Understanding
Cultural Context: Integrate examples of scientific contributions and innovations from diverse cultures and regions around the world into the curriculum. Explore indigenous knowledge systems, traditional ecological knowledge, and cultural practices related to science and the environment. 	Integrate financial literacy concepts into science lessons by exploring topics such as the economics of natural resources, the cost-effectiveness of sustainable practices, and the impact of technology on industry and commerce. 