WADDINGTON REDWOOD
A PRIORY ACADEMY

Science Curriculum

Intent

At Waddington Redwood Primary Academy, our science curriculum is underpinned by our four key drivers: citizenship, curiosity, communication and contentment.

Our vision is that children will leave the school as scientifically literate **citizens of the future**, able to think critically across the curriculum. They should understand their role in caring for the world around them by questioning what they can do to help be part of a sustainable future.

We strive to foster a strong sense of **curiosity**, ensuring that children develop a sense of wonder about the world. Through engaging, purposeful teaching, children are encouraged to ask questions, explore ideas, and develop a genuine desire to learn more about scientific concepts and phenomena.

Communication is at the heart of our science curriculum. Children are supported to confidently express their ideas, ask and answer questions, and share their findings using appropriate scientific vocabulary. Through discussion, research and collaborative learning, pupils develop the ability to articulate their understanding and justify their thinking.

We are committed to promoting **contentment** in learning by ensuring that children feel confident, successful and engaged in science. Through hands-on investigations, practical experiments and opportunities to revisit and build upon prior knowledge, children should experience a sense of achievement and enjoyment in their learning journey.

Our curriculum provides children with the appropriate substantive and disciplinary knowledge, as set out in the National Curriculum Programme of Study (2014) and the EYFS Framework (2021), in order to help our children to be scientists both in and out of lessons. In order to answer questions, children will be confident in using the five scientific enquiry skills: carrying out fair and comparative tests; completing research using books and digital sources; carrying out observations over time; grouping, classifying and identifying the things they are looking at; and seeking patterns in what they can observe and investigate.

Through a planned progression of knowledge and skills, children are given opportunities to build on prior learning, deepening their understanding of biology, chemistry and physics. By working scientifically and thinking critically, pupils are equipped not only to succeed in science but to contribute thoughtfully and responsibly to the wider world.

Implementation

Science is taught in weekly lessons, using an interleaving approach to learning so that key scientific concepts are repeatedly taught throughout EYFS, KS1 and KS2. Our curriculum is taught over a two-year cycle (Year A and Year B) and within phases (EYFS, Years 1/2, Years 3/4 and Years 5/6). Disciplinary knowledge, substantive knowledge and subject specific vocabulary has been mapped out to ensure

progression across the curriculum. Furthermore, short term plans include reference to previous learning to ensure that key links are made and staff know what has been taught previously. Planning is informed by, and is aligned with, the statutory curriculum areas as detailed in the National Curriculum and EYFS Framework. In addition to this, staff have access to the PLAN primary science assessment and progression resources developed by the ASE (Association for Science Education). Teachers also have access to further guidance and resources developed by companies such as PlanBee, the Ogden Trust and Oak National Academy to ensure that lesson design is not limited by the scheme. The curriculum has some further non-statutory elements planned into it, so that children are familiar with key aspects of a unit when they are introduced in subsequent years. By the end of Year 6, children will understand key concepts in biology, chemistry and physics and be able to work scientifically.

Impact

As scientists, at the end of each Milestone, the majority of children will have mastered the substantive knowledge of the unit. They will be able to carry this knowledge forward to subsequent years where the it will be revisited and built upon. Children will have developed their disciplinary knowledge allowing them to investigate as scientists with an appropriate level of skill.