

Science at Coatham CE Primary School

Curriculum Intent

The 2014 national curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific skills required to understand the uses and implications of science, today and for the future. We understand that it is important for lessons to have a skills-based focus, and that the knowledge can be taught through this.

We encourage children to be inquisitive throughout their time at Coatham. The Science curriculum fosters a healthy curiosity in children about our universe and promotes respect for the living and non-living. Throughout the programmes of study, the children will acquire and develop the key knowledge that has been identified within each unit and across each year group. 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. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. We develop children's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying process skills.

Curriculum Implementation

All staff create a positive attitude to science learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards in science.

Science is taught in planned and arranged topic blocks by the class teacher from the national curriculum. Through our planning, we involve problem solving opportunities that allow children to find out 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. Planning involves teachers creating engaging lessons, using high-quality resources to aid understanding of conceptual knowledge and educational visits/visitors if possible. Teachers use precise questioning in class to test conceptual knowledge and skills. Scientific vocabulary is displayed in classrooms and children are encouraged to use and interact with. Different oracy strategies are used during science lessons, giving children the opportunity to use this vocabulary in context. Working Scientifically skills are embedded into topics to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching.

Curriculum Impact

Staff use assessment in every lesson to inform their short-term planning and to provide opportunities for intervention or support in future lessons. AFL is completed on planning sheets which is used to inform summative assessment judgements for each topic. This information is shared with the subject leader in order to monitor and provide an insight into the quality of teaching and learning. Further monitoring includes book scrutiny, pupil voice and staff voice in staff meetings. By the end of school, all children will have:

- A wider variety of skills linked to both scientific knowledge and understanding, and scientific enquiry/investigative skills.
- A richer vocabulary which will enable to articulate their understanding of taught concepts.
- High aspirations, which will see them through to further study, work and a successful adult life.