Intent

Science stimulates and excites pupils’ curiosity about phenomena and events in the world around them. It links ideas and knowledge with direct practical experience and can engage learners at many levels. Scientific method develops and supports inquiry through experimentation and proposition. It develops creativity in thought and analysis in practice.

Roose School understands the need for all pupils to develop their Scientific ability as an essential component of all subjects and as a subject in its own right. A good understanding of scientific knowledge and conceptual understanding helps to support pupils work across the curriculum.

We aim for children to be inspired by science, to ask questions and to wonder about the world around them. Children are encouraged to design their own investigations and consider predictions and conclusions. There is never an incorrect outcome in a science investigation. You can always learn something.

We believe that a high quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world’s future prosperity. All pupils will be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up key foundational knowledge and concepts, pupils will be encouraged to recognise the power of rational explanation. They will develop a sense of excitement and curiosity about natural phenomena. They will be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

In studying Science, pupils gain understanding about how ideas contribute to scientific change – in industry, business, medicine and improving the quality of life. They learn to question and discuss issues that may affect their own lives, and the future of the world.

Implementation

In ensuring high standards of teaching and learning in science, we implement a curriculum that is progressive throughout the whole school. Planning for science is taken from the national curriculum 2014, and covers all aims and objectives. As a school we decided to add extra physics topics into Key Stage 1 to allow children to explore all aspects of science over both Key Stages.

Science teaching involves adapting and extending the curriculum to match all pupils’ needs. Where possible, Science is linked to class topics. Science is also taught as discrete units and lessons where needed to ensure coverage. Science is taught on a yearly rolling programme.

Outdoor learning is very important to us and children in Key Stage 1 take part in outdoor and Forest Schools learning. All Key Stages use our extensive outdoor space to explore the world around them.

Children are encouraged to design their own investigations and we use planning formats to allow them to ask questions, create hypothesis, carry out tests and analyse results.

We inspire enthusiasm in science through our science week where we hold workshops and carry out fun, often messy, investigations. All children look forward to Science Week.

We invite STEM representatives into school to hole workshops.

Children are encouraged to consider sustainability and recycling as much as possible and we have Eco monitors in the classrooms for making sure we recycle as much as possible. We also have a battery collection point in the front entrance and children and families are encouraged to recycle their batteries with us.

Vocabulary is vitally important to the understanding of science and is taught and displayed throughout the topics using vocabulary mats and word bank displays in the classrooms.

Impact

Science is assessed through the use of mind maps both before and after a topic to allow children to express prior learning and then add new understanding and knowledge as they progress. Teachers assess objectives half termly through the use of a RAG document. This allows for targeted support.

The impact and measure of this is to ensure children not only acquire the appropriate age related knowledge linked to the science curriculum, but also skills which equip them to progress from their starting points, and within their everyday lives.

All children will have:

* A wider variety of skills linked to both scientific knowledge and understanding, and scientific enquiry/investigative skills.
* A rich vocabulary that 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.