



# **Roecliffe CE Primary School**

## **Science Rationale**

### **Intent and Implementation**



## Science Intent

*“A high-quality science education provides the foundations for understanding the world. Science has changed our lives and is vital to the world's future prosperity. Pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena.” National Curriculum 2014*

*At Roecliffe CE Primary we aim to develop pupils' knowledge and understanding of our world and beyond, through a range of scientific enquiries. We recognise children's innate desire to understand their world and aim to focus on developing the skills required to investigate a question as a process of enquiry. Extending and developing the pupils conceptual understanding in all areas of science is the aim. We know it is important to provide pupils with opportunities to ask meaningful and exciting questions so they can build their knowledge and develop their skills for working scientifically.*



## Science Intent

### Key Stages One and Two

At Roecliffe CE Primary School, in conjunction with the aims of the National Curriculum, our Science teaching offers opportunities for children to:

- 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;
- be equipped with the scientific knowledge required to understand the uses and implications of Science, today and for the future.
- develop the essential scientific enquiry skills to deepen their scientific knowledge.
- Use a range of methods to communicate their scientific information and present it in a systematic, scientific manner, which includes producing diagrams, graphs and charts.
- Develop a respect for the materials and equipment they handle with regard to their own, and other children's safety.
- Develop an enthusiasm and enjoyment of scientific learning and discovery, working independently or positively together.



# Science Intent

## **EYFS**

In 'Early Years' children develop their science skills and knowledge through play in the provision area 'Understanding the World.' Children find out about objects, materials and living things looking at similarities, differences, patterns and change. A carefully planned and enhanced environment facilitates curiosity and exploratory play, children are motivated to ask questions about why things happen and how things work and then apply their learning in creative, imaginative and challenging ways.



## **Science Implementation**



The acquisition of key scientific knowledge is an integral part of our science lessons. Knowledge organisers can assist children when learning and help them retain key vocabulary and conceptual knowledge associated within each unit.

Skills for working scientifically are developed through the year groups and scientific enquiry skills are of key importance within lessons.

At Roecliffe, teachers 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. Our whole school approach to learning science involves the following;

- Science lessons are planned using Cornerstones units as a springboard and linked to a theme where possible.
- Children are encouraged to formulate their own questions and are given opportunities to use their scientific enquiry skills to make discoveries and connections.
- Our curriculum is progressive. We build upon the learning and skill development of the previous years. Short 'pre-topic quizzes' are designed to identify misconceptions and provide an opportunity for the teacher to plan meaningful lessons that build knowledge and skills.



## **Science Implementation**

Skills for investigating are progressively introduced and there is a progression of vocabulary for each unit.

Teachers find opportunities for children to explore their ideas, investigate their questions and work scientifically both in and out of the classroom.

Enrichment days, such as 'Science Day' are planned and aim to promote the importance of Science in our lives.

