



Science

INTENT

At Ferriby, our vision is to ignite pupils' curiosity and encourage them to confidently explore and discover the world around them, so that the children are capable, confident, creative thinkers and motivated, resilient, problem-solving learners. We engage pupils with inspirational, practical, purposeful, and challenging learning activities, which have the principles of enquiry and investigation, so they develop a deeper understanding of the world we live in.

We want our pupils to: build on their natural curiosity and enable them to understand and care for the world in which they live; work in an investigative way and communicate their findings in a variety of ways; use equipment safely and sensibly; 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 scientific enquiry that help them to answer scientific questions about the world around them; be equipped with the scientific knowledge and vocabulary required to understand the uses and implications of science, today and for the future.

When planning for the science curriculum, we intend for children to have the opportunity, wherever possible, to learn through varied systematic investigations, leading to them being equipped to ask and answer scientific questions about the world around them. As children progress through the year groups, they build on their skills in working scientifically, as well as on their scientific knowledge, as they develop greater independence in planning and carrying out fair and comparative tests to answer a range of scientific questions. Our Science curriculum ensures that children have a varied, progressive and well-mapped-out sequence of learning that provides the opportunity for progression across the full breadth of the science curriculum from Early Years Foundation Stage to Year 6.

SCIENCE LONG TERM PLAN:

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1/2	Identifying Materials	Human Body Parts and Senses	Humans Keeping Healthy	Plants	Plants	Properties of Materials
Year 1/2	Identifying Materials	Animals	Animals	Life Cycles	Minibeasts and Food Chains	Properties of Materials Seasonal Changes (Y2)
Year 3/4	Rocks and Fossils	States of Matter	Living Things and their Habitats Classification	Animals Skeletal System	Plants	Animals Food Chains
Year 3/4	Light	Sounds	Humans Teeth & Eating	Humans Nutrition	Magnets and Forces	Electricity
Year 5/6	Earth and Space	Materials Changing States	Forces	Materials Properties of Materials	Living Things and their Habitats	The Science of Sport
Year 5/6	Light	Animals Including Humans	Evolution and Inheritance	Electricity	Living Things and their Habitats	Animals including humans



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IMPLEMENTATION: WHAT DOES SCIENCE LOOK LIKE AT NORTH FERRIBY?

Science is embedded within the Early Years Foundation Stage Curriculum using the learning environment and classroom provision. The children are given a wealth of opportunities to engage in activities, both child-initiated and adult-directed, which enable them to develop knowledge of the natural world, to make observations on plants and animals and to develop an understanding of some of the important processes and changes in the world around them. During the children's time in Early Years Foundation Stage, the essential building blocks of scientific understanding are established. Science in the Early Years Foundation Stage is incorporated into all aspects of the curriculum. However, it can primarily be classified as part of 'Understanding the World', which includes the strand 'The Natural World'. The Natural World - Early Learning Goal: • Explore the natural world around them, making observations and drawing pictures of animals and plants; • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class; • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Lesson 1

Each new science unit begins with an introduction and an assessment of the knowledge and understanding the children already have of the new topic. This may be in the form of a knowledge organizer quiz or group discussion. The class will then consider the next steps in their learning and ask questions about the new topic.

Unit lessons

Science lessons will vary from unit to unit but will always be as hands on as possible, whether the children are working with materials, electrical circuits or investigating plants and animals. During each unit of work, the children will design and conduct at least one experiment to answer a scientific question and develop their skills in working scientifically.

Summary

Each unit of work will encourage the children to ask and answer questions about science and the world around them. They will develop their scientific knowledge and vocabulary as well as their practical scientific skills.

SCIENCE WEEK

During the Summer term, all our children get the chance to participate in special science workshops, designed to enthuse them about all areas of science and inspire them to consider STEM careers. Parents and volunteers from local companies are invited to work with the children.

CLASSROOM ENVIRONMENT

Our classroom displays are designed to be working walls, which build as the unit progresses. Key vocabulary is displayed alongside engaging images. Whenever possible and appropriate, scientific learning takes place outside. We also have a wide range of science resources that are brought into the classroom so that the children can engage with science in a practical way.

ASSESSMENT AND IMPACT

Throughout the unit, teachers make formative assessment judgements as pupils learn new concepts and ideas. Quizzes are used to help embed substantive knowledge within the long-term memory. End of unit tests are taken to show knowledge acquired.