

# Intent, Implementation and Impact of Primary Science at Sparsholt CoE Primary school

## Intent

Science teaching at Sparsholt C of E Primary School aims to give all children a strong understanding of the world around them whilst acquiring specific skills and knowledge to help them to think scientifically, to gain an understanding of scientific processes and also an understanding of the uses and implications of Science, today and for the future. We aim to provide a science curriculum which enables them to confidently explore and discover the world around them, so that they have a deeper understanding of the world we live in.

We aim to create fun and stimulating science lessons that nurture children's natural curiosity and their ongoing development through a hands-on, enquiry-based curriculum which promotes questioning, challenge, working practically, investigating, evaluating, making choices, working independently and using scientific vocabulary.

## Implementation

Science teaching at Sparsholt builds upon previously taught knowledge, skills and vocabulary each year. Teachers use the subject progression grids to ensure coverage is relevant and cohesive alongside the planning documents that comprise of the Key Ideas in Science, Hampshire learning journeys and National Curriculum objectives. Science teaching at Sparsholt covers all the objectives set out in the Program of Study in the National Curriculum for EYFS, Key Stage one and two.

Lessons at Sparsholt include reviewing previously taught knowledge, skills and vocabulary to ensure a secure understanding and promote the importance of an investigative approach to Science. Previous knowledge obtained, key skills and further progression has been mapped out for each strand within the Science Curriculum from EYFS through to Year Six.

Plants			
Year 1: Plants			
<b>National Curriculum Objectives</b> <ul style="list-style-type: none"> <li>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</li> <li>Identify and describe the basic structure of a variety of common flowering plants.</li> <li>Identify and name the roots, trunk, branches and leaves of a tree.</li> </ul> <p><i>Pupils should use the local environment to develop their knowledge and understanding about plants growing in their habitat. Where possible, they should identify and name a variety of common wild and garden plants, including deciduous and evergreen trees, and plant structures (leaves, roots, branches, flowers, fruit, bark, etc.).</i></p> <p><i>Pupils make marks connected to the growing process, and using magnifying glasses, and observing and drawing the plants, describing how they were able to identify and name them, and drawing them growing in the area of different plants (e.g. growing in the garden, in the school grounds, etc.).</i></p> <p><i>Pupils might have records of how plants have changed over time, for example the growing of trees and buds opening, and compare and contrast what they have observed about different plants.</i></p>		<b>Key Ideas</b> <ol style="list-style-type: none"> <li>Plants usually grow from seeds and bulbs.</li> <li>Plants need warm, moist water to grow and survive.</li> <li>Plants produce seeds to reproduce and make more plants. Some plants die after producing seeds and others live for many generations.</li> </ol> <p><i>Emphasised in Year 2.</i></p>	
<b>Prior Learning</b>		<b>How do Plants Grow?</b>	
<b>In Early Years:</b> <ul style="list-style-type: none"> <li>Develop an understanding of growth.</li> <li>Share care and concerns for living things and the environment.</li> <li>Make observations of plants and explain why some things grow and talk about changes.</li> <li>Can talk about some of the things they have observed, such as plants.</li> </ul>	<b>Chapter 1: Where plants come from.</b> Most plants start growing from a seed or bulb.  <b>Chapter 2: Plant survival.</b> All plants need water, light and warmth to grow and survive.  <b>Chapter 3: How plants get what they need to survive.</b> A seed produces roots to allow water to get into the plant and shoots to produce leaves to collect the sunlight.  Which direction do shoots and roots grow after germination?  How long does a stem need to be before it produces leaves and is it the same for all plants?  If plants need water could we grow cress in water but no soil? (Let them grow cress in water and on wet cotton wool and examine the differences)  Do all plants have roots, how could we find out?  Do all plants have leaves, how could we find out?  If plants need water to grow, then surely the more the better. How does the amount of water affect how well a plant grows?		
	<b>Chapter 4: Plant structure.</b> Plants have roots, stems, leaves, flowers, fruit, bark, etc.	<b>Vocabulary</b> Learn: blossom, petals, roots, buds, bulb, trunk, branches, stem, evergreen, garden plants, deciduous, wild plants, seeds, wild plants, garden plants.	
<b>In Year 2:</b> <ul style="list-style-type: none"> <li>Observe and describe how seeds and bulbs grow into mature plants.</li> <li>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</li> </ul>			

Prior learning from the previous year group in which the strand would have been taught

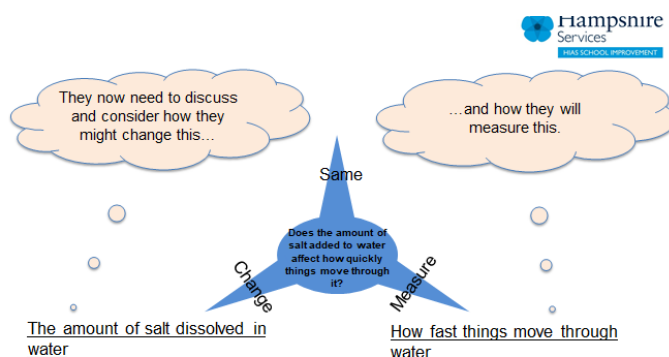
Chapters taken from the Hampshire Learning Journey for each strand

Key vocabulary that should be taught during the unit

Every unit of work has an accompanying whole class assessment sheet that teachers use to assess children's progress.

At Sparsholt we are proud of the rich curriculum and extra-curricular opportunities we offer. Teachers recognise the abilities and skills of all children, differentiating activities to ensure access for all.

There is a clear progression of learning through the school from EYFS through to Year Six in key knowledge acquisition as well as scientific enquiry and investigative teaching and learning through the use of the tri-approach:



Children have access to a range of vocabulary to support learning and when relevant, cross curricular links are made. Educational visits and wider opportunities take place to enhance the children's learning and progress, including experiences led by specialists such as visits to the Gilbert White Centre and Winchester College.

## Impact

Science teaching and learning provides a positive experience for the children at Sparsholt. This is evident through pupil engagement and enthusiasm for Science. Children have access to a range of resources to support their learning and teachers make use of the local environment to strengthen teaching. Subject progression grids have enabled Science across the school to be taught with progression and quality as a focus. Children keep up with the curriculum demands and make good progress, with the ability to apply their knowledge to multiple situations as they move through the school.

We measure the impact of our Science curriculum through the following:

- Assessment grids at the end of each unit
- Tracking of knowledge using KWL grids
- Pupil discussions about their learning

## Eco Team

The children at Sparsholt are passionate about their environment and sustainability. They have been raising awareness around environmental concerns and have created an action plan outlining how as a whole school community we will tackle the issues affecting the environment today.