Subject on a page

Science

'The important thing is to never stop questioning.'
Albert Einstein

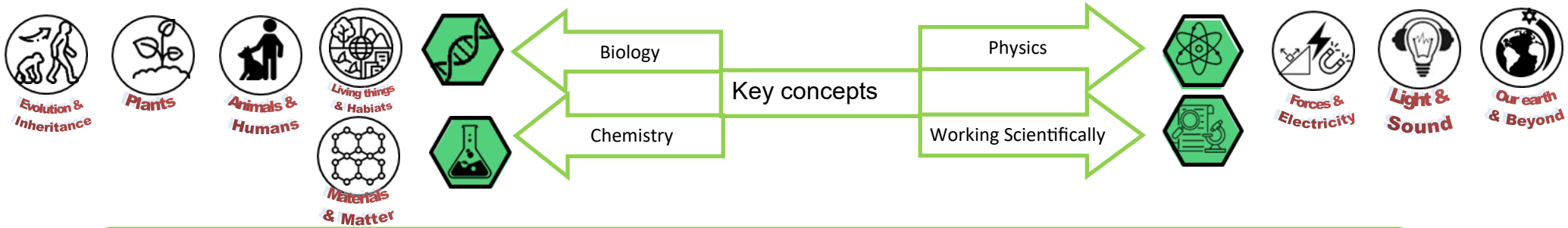
At The Good Shepherd we know that Science is fundamental to understanding the world and how it works.

Intent - we aim to...

- Deliver an ambitious curriculum that allows children to better understand the world around them.
- Promote a love of science that extends beyond the classroom and beyond the topics studied in each year group.
- Foster critical thinking skills through a range of enquiry types.
- Ensure children understand the role that science plays in the world we live in and to understand their contribution.
- Ensure that the majority of children leave KS2 at the expected standard.

Implementation - how do we achieve our aims?

At The Good Shepherd we recognise that Science is underpinned by four key concepts - Biology, Chemistry, Physics and Working Scientifically. Therefore, our Science curriculum ensures children learn all of the key concepts in age-appropriate ways. Though working scientifically is not a specific area of Science, we recognise that enquiry skills are important and children need an understanding of the concept of investigation.



Throughout Science lessons children learn a range of Working Scientifically skills, though we have identified some key skills that are transferable across topics and age groups. This development of the same key skills strengthens understanding of the technical aspects of Science.

Asking questions · Making predictions · Observe over time · Measuring · Handling data · Drawing conclusions · Evaluating

Implementation - continued

Clearly structured learning

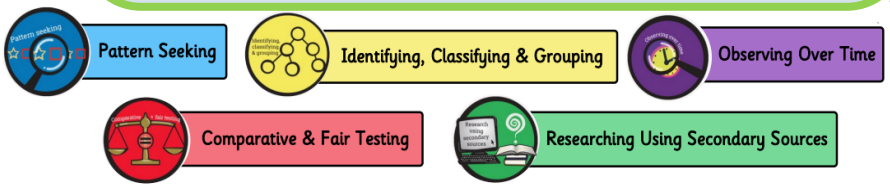
Science lessons involve answering key questions, either through acquiring of knowledge, or through investigation. Lessons begin with retrieval practice revisiting the most important knowledge before engaging in the lesson.

Time-tabling

In EYFS, Science is taught through experiences. In KS1, Science lessons are taught weekly for 40-60 minutes, and in KS2, Science is taught for between 1-2 hours weekly.

Broad range of enquiry

Our Science curriculum offers opportunities for inquiry-led learning using different types of scientific enquiry. Children investigate key questions and follow a process of stating predictions, carrying out tests/ observations, recording results, analysing data and drawing conclusions. For comparative and fair-testing children use our school's investigation sheet. This consistent approach to planning is used across all year groups and develops the scientific enquiry skills progressively, allowing for greater accuracy and understanding of the investigation process.



Consistent Investigation Planning

Across our school children plan science investigations for fair testing and observing over time enquiries on a Science Investigation Sheet. Every investigation includes a graph or table to show results.

Strong Foundations

In EYFS, children learn about the world around them as part of the ***Understanding the World*** strand. They make observations of nature and the school environment and develop an understanding of seasons and what plants and animals need to grow. They compare and contrast different natural world around environments. They learn the names of and descriptions of plants, animals, environments, everyday materials and seasonal changes.

Strong vocabulary development

All classrooms display scientific vocabulary and these words are explored with children to strengthen their understanding. New words are written onto a 'Vocab Sheet', complete with definition and accompanying sentence and either symbol or picture.

Cross-curricular links

Science links well with other STEM subjects. Science knowledge is drawn upon in D&T and Maths skills are used in Science to draw graphs and table and take accurate measurements.

Out of school learning

Children participate in National Science Week and have the opportunity to enter a Science Week competition which is across the Trust. Where possible visits are arranged with a Science focus such as The National Space Centre, Attenborough Nature Reserve and the local park. In addition Year 4 & 5 participate in a Science lesson at the local secondary school.

Intent - we aim to...

Children enjoy Science lessons and demonstrate this by talking confidently about their learning.

Children demonstrate an enjoyment of Science lessons and choose to further their understanding through wider reading and experimenting.

Children experience all enquiry types throughout the key stages and demonstrate confidence in working scientifically.

Children know about the key scientists and their contribution to the world, and understand that they themselves are scientists.

The majority of children at the end of Key Stage 2 leave The Good Shepherd the expected standard.