

What does Science look like at Vicarage Primary School?

Our curriculum is based upon the National Curriculum 2014: providing a broad, balanced and differentiated curriculum; ensuring the progressive development of knowledge, skills and vocabulary and for the children to develop a love of science. Furthermore, we aim to inspire curiosity about the natural and man-made world and develop a respect for the environment, by giving pupils the opportunities to gain the relevant knowledge and scientific enquiry skills through practical experiences, opportunities for science learning inside and outside the classroom, educational visits, residential and enrichment days.

Pupils develop scientific knowledge and conceptual understanding through the specific disciplines of Biology, Chemistry and Physics. They develop scientific enquiry skills (observation, prediction, investigation, interpretation, communication, questioning and hypothesizing) to deepen their understanding.

Science is taught in discreet lessons; this means that pupils are able to develop depth in their knowledge and skills over the duration of each of their topics. Cross curricular learning is also made, - Literacy and maths skills are utilised when pupils use a range of methods to communicate scientific information and present it in a scientific manner, i.e. oral presentations, reports, charts, graphs and diagrams. The vocabulary pupils will need for that unit are identified on the school's progression document and this builds upon the vocabulary they have learnt in earlier years.

Our Science curriculum is based on four key threshold concepts,

Investigate Space and Location	Investigating Sustainability
Investigating Patterns and Change	Investigating Scale and Size

These concepts are the 'big ideas' that shape our pupil's thinking within the subject. The same threshold concepts are explored and revisited in each unit of work in every year group. This enables pupils to gradually increase their contextual knowledge and opens a door into a new way of thinking about something and therefore enhances the ability to master the subject.

Science contributes to the three core values at Vicarage, **resilience** in risk taking, asking and answering scientific questions, **excellence** in presenting their learning in a wide variety of ways using the appropriate scientific language and **respect** for themselves in terms of their health; for living things; and for the environment, both local and global.

What do the children enjoy about Religious Education at Vicarage Primary School?

"I really enjoy practical investigations and experiments. It makes me feel like a real scientist."

"I liked going to the nature reserve and exploring different habitats, plants and animals."

"I enjoy doing the holiday research project. I like making things with my family and finding out lots of information."

"I like talking about what I have learned with my teacher, friends and family."

Science at Vicarage School

Examples of learning and enrichment activities at Vicarage Primary School.

- Science week
- Home school projects
- Curriculum linked assemblies
- Educational visits
- Memorable experiences i.e. observing the life cycle of a chick and butterfly
- Outdoor learning experiences

Reasons for learning Science

Children are naturally curious. Science at primary school nurtures this curiosity and allows them to ask questions and develop the skills they need to answer those questions. The memorable experiences pupils are given will foster a passion for science.

In science we aim to give all our pupils:

- A strong understanding of the world around them;
- The knowledge and skills to allow them to think scientifically; and an understanding of the uses of science in all aspects of their lives today and in the future.

Through our curriculum pupils develop in confidence and have a clear understanding of how to make healthy lifestyle choices and be environmentally conscious.

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

- ✓ **Pupil conferencing** – Are children happy, engaged, motivated to do well, challenged? Do they know more? Can they remember more?
- ✓ **Assessment** – Exit quiz and evaluations completed at the end of each topic to assess pupil's understanding, knowledge and skills. The information from assessments will be used to inform leaders of school improvements or skills that need to be further enhanced.
- ✓ **Book Looks** – Are all children making at least sufficient progress from their various starting points? Images and videos of pupil's practical learning.
- ✓ **Lesson Visits** – Quality of teaching and learning is good to outstanding
- ✓ **Parent surveys** – Are parents happy with the curriculum we provide, if not – how can we improve?
- ✓ **Subject portfolio** – Can you see progression of skills and knowledge across the school? Is the curriculum ambitious and goes beyond the National Curriculum?