

Science Curriculum Statement

Vision

At St. Andrew's CE VC Primary School, we want every child to be happy and enthusiastic learners of Science. We firmly believe that through knowledge-led studies, children will become scientists and learn about the evolution of our planet and beyond and how living organisms and matter has evolved over time. We want our children to develop the necessary declarative, procedural and experiential knowledge, skills and understanding so that they can build their own hypotheses that they can test systematically.

Aims

Science at St. Andrew's CE VC Primary School aims to give all children a strong understanding of the world around them while acquiring specific skills and knowledge to help them to **think scientifically**, to gain an understanding of scientific processes and an understanding of the implications of Science on today and for the future.

At St. Andrew's, Science is at the heart of our curriculum, we aim to promote a love of Science as we nurture and develop children as critical, creative and collaborative thinkers.

Scientific enquiry skills are embedded in each **topic/Learning theme/ Learning arc** the children study (where appropriate) and these **topic/Learning theme/ Learning arc** are revisited and developed throughout their time at school. This model allows children to build upon their prior knowledge and increases their enthusiasm for the topics whilst embedding this **procedural knowledge** into the long-term memory.

All children are encouraged to develop and use a range of **skills** including **observations, planning and investigations**, as well as being encouraged to question the world around them and become independent learners in exploring possible answers for their scientific based questions. Specialist **vocabulary** for **topic/Learning theme/ Learning arc** is taught and built up, and effective questioning to communicate ideas is encouraged. Concepts taught should be reinforced by focusing on the key features of scientific enquiry, so that pupils learn to use a variety of approaches to answer relevant big scientific questions.

Characteristics of a Scientist

The ability to think independently and raise questions about working scientifically and the knowledge and skills that it brings.

Confidence and competence in the full range of practical skills, taking the initiative in, for example, planning and carrying out scientific investigations.

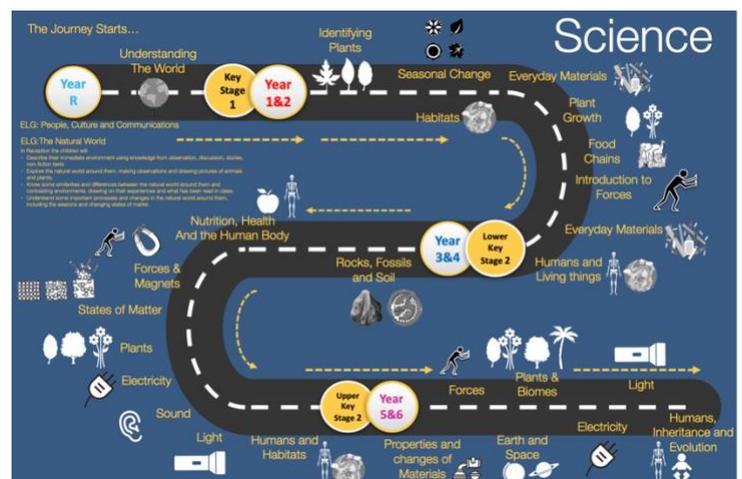
Excellent scientific knowledge and understanding which is demonstrated in written and verbal explanations, solving challenging problems and reporting scientific findings.

High levels of originality, imagination or innovation in the application of skills.

The ability to undertake practical work in a variety of contexts, including fieldwork.

A passion for science and its application in past, present and future technologies

Our Learning Journey



A Knowledge rich curriculum

Our principal aim is that children leave St. Andrews's CE VC Primary School with a wide range of happy and rich memories in Science formed through interesting and exciting experiences. Ensuring that children see learning in Science as an ongoing process not a one-off event.

Children will develop a deep understanding of the subject they are studying. They will increasingly use their prior knowledge to solve problems and develop their sophistication of Scientific thinking. They will also take part in **regular practice and retrieval tasks** to ensure that the **declarative knowledge** is remembered not merely encountered.

Opportunities will exist for children of all ages to experience learning beyond the classroom. This will allow them to enrich their knowledge by, for example, visiting science museums, taking part in STEM Competitions, and engagement with local Secondary Schools and Businesses.

Science in Action

Science is underpinned by the children putting their knowledge and understanding into action by understanding several key concepts:



Asking questions



Planning fair tests



Making observations



Recording results



Presenting results



Interpreting results

Knowledge to be remembered not merely encountered

At St. Andrew's, Science is carefully planned sequentially so that elements of it are regularly returned to, supporting children to accumulate knowledge over time. The knowledge will be carefully mapped and shared through a knowledge organiser in order to build a strong schema. This will then be assessed through regular practice and retrieval **Quizzes/Strategies**.