



Scampton Church of England Primary School

POLICY FOR THE TEACHING AND LEARNING OF SCIENCE

Introduction

Scampton CE Primary is a rural school with close connection to farming and the RAF. Our science reflects the local foci on growing crops in the immediate environment and the aerospace industry through time. The current basing of the Red Arrows RAF display team at nearby RAF Scampton offer fantastic opportunities for Science/Technological/Engineering and Mathematical hands –on learning experiences. Our extensive school grounds offer further high- quality input into environmental and ecological enquires. The nearby Lincolnshire show ground and Riseholme Agricultural college also offer great opportunities to engage with the world of farming and agro-technology.

At Scampton Primary school our children study physical, chemical and biological sciences through direct experimentation and observation of natural processes. We hope to instil: a broad but detailed knowledge of scientific concepts and facts; an enthusiasm for scientific questioning and independent young scientist who work through the scientific process confidently. Pupils will build on their existing knowledge in this subject throughout each Key Stage.

Intent (How we have planned our Science Curriculum)

Science makes an increasing contribution to all aspects of life. Children are naturally fascinated by everything in the world around them and Science makes a valuable contribution to their understanding. Science is a body of knowledge built up through experimental testing of ideas. Science is also a methodology, a practical way of finding reliable answers to questions we may ask about the world around us. As well as learning scientific skills and knowledge, it is important for children to develop lively, enquiring minds and the ability to question. Science in our school is about building on children's natural curiosity and developing ideas and ways of working scientifically, that enable them to make sense of the world in which they live through a process of enquiry and investigation.

Pupils should be encouraged to develop their sense of excitement and curiosity about natural phenomena. By talking together, children can be encouraged to explore and observe so that they can group objects and events and look for similarities and differences. They will need to measure and record the things they have found out in ways that make sense to them so that later they can talk to other people about what they have discovered. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and begin to analyse causes.

Science has changed our lives and is vital to the world's future prosperity. A high-quality Science education at the primary stage provides a strong foundation for understanding the world. This understanding should be consolidated as pupils develop their appreciation of applications of Science, in society and the economy.

- Because our school has usually been made up of three classes, our Science curriculum has been made to be flexible in order to accommodate a number of different permutations of mixed age classes. Our three classes in our curriculum map are defined as Phase 1, Phase 2 and Phase 3. Each phase may be made up of up to three year groups.
- For Science individual year group knowledge and skills expectations have been devised that show a progression from EYFS to Year 6 through a number of strands (Animals and Humans; Living Things and Plants; Material and Changes of State/Rocks and Soils; Earth and Space; Electricity and |Forces and Light and Sound). Teachers are expected to pitch the intended learning to these expectations.
- Science Topics studied are planned over a two-year cycle. Our progression of skills and knowledge means that a year if a group repeats a topic, teaching will be at a higher level than previously taught. We have detailed the learning objectives that we want each phase to learn for each term of



our two year rolling program so that our teachers know exactly what part of the science curriculum will be taught and when that will happen. Each unit of work has a list of learning objectives for knowledge, vocabulary and process skills that each teacher will teach during the particular unit.

- For Science, we have tried to find cross curricular links with Geography, History and Art which we believe will enthuse pupils through a project style approach. Other subjects (Computing, RE, Music, PSHE, Modern Foreign Languages and PE) are mostly taught as discrete subjects however where opportunity arises to relate these to Science, this is encouraged. Maths and English are taught discretely but where opportunity arises to apply them with Science, this is highly encouraged.
- When planning a programme of work, teachers should refer to our Curriculum Drivers (Community, Diversity, Resilience, Growth) as a foundation to their teaching. Teachers should also refer to our Statement of Uniqueness so that the needs of our learners and additional experiences are provided.

Implementation (How we teach our Science Curriculum)

When teaching Science, teachers should take into account the following principles:

- Learning should be fun so that it is memorable to pupils. Delivery and experiences should be exciting and of a high standard.
- Strands of the Science curriculum should be closely referred to so as to ensure a good progression of skills and knowledge through the school that builds on prior learning.
- Where possible, first hand experiences such as observations and experimenting should be used.
- Science should be allocated time equivalent to a weekly lesson however it is recognised that the cross curricular nature of this subjects may mean that they are taught in longer blocks of work in some weeks than others.
- Lessons should be knowledge and vocabulary rich (see knowledge and skills progressions).

Impact (How we know that children are learning and making progress)

Evidence of learning can be captured in a number of ways including pictures and writing in books, photographs, assessments, mind maps. Speaking with children is a good way of finding out what has been learnt. Subject progressions show expected vocabulary that children should be able to use by the end of each year.

Science work should be recorded in writing books and topic books.

Assessment:

Because we know exactly what each class or phase will be taught, in any particular term, we are able to adopt knowledge organisers. These are focussed documents that state what has been taught and what the children should have learned. A short written test is then constructed from this document that the children can either answer orally or write their responses too. The results of these tests are then used to assess the children's level of knowledge from the taught science curriculum. This gives us as a school a clear measure of the knowledge that we imparting at each stage of the science curriculum throughout each child's learning journey.

Assessments will be scrutinised at the end of each large term/year and results will feed in to teacher CPD requirements and pupil progress meetings.