



Teaching of Science

(Sept 2021)

Curriculum paper to read alongside Teaching and Learning policy

At Sutton in Craven CP we seek to provide an education in which children develop a sense of excitement and curiosity about natural phenomena. Our children will be encouraged to understand how science can be used to explain what is occurring, predict how things will behave and analyse their findings. It is also vitally important that children develop a secure understanding of each key block of knowledge and concepts in order to progress to the next stage

Our aims are to ensure that all pupils:

- develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics
- develop understanding of the **nature, processes and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the **uses and implications** of science, today and for the future.

Science is taught once a week and follows the knowledge, skills and content set down in the National Curriculum. Wherever possible knowledge is taught through scientific enquiry and pupils develop their skills as scientists through a wide range of activities.

These include

- practical group work
- teacher demonstration
- research
- question setting and devising ways to answer them
- investigations
- following lines of enquiry
- using ICT to measure, research, record and present
- individual or paired work
- open ended discussion
- debate



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Working scientifically is at the heart of all our teaching. Activities are planned to address the five strands

- ❖ **Observing closely using simple experiments** e.g. Wobbly spuds & Falling magnets
- ❖ **Pattern seeking** e.g. Do the tallest people have longest arms?
- ❖ **Identifying, classifying and grouping** e.g., which things float and which sink?
- ❖ **Comparative and fair testing** e.g., which is the best magnet?
- ❖ **Research using secondary sources** e.g. Before, before and after, after tasks

The expectation is that children will engage in a wide variety of practical tasks such as fieldwork, illustrative tasks, skill-based activities, process-based work, observation and research.

Planning for Science is part of the long term plan and linked to our topic themes wherever possible. Teachers use medium term plans which include the objectives being taught and the scientific enquiry skills being developed. Mathematical and literacy skills are often used in science and developed through its teaching.

Science in EYs is taught through provision and assessed using the Knowledge and Understanding of the World statements.

Safety is paramount and any activity that poses a risk is suitably risk assessed.

Opportunities to enhance the provision in science are taken frequently. These may involve trips, visits from scientists, links with industry (eg Airedale Chemicals) whole school science themes, science club, teachers from the secondary school teaching in KS2 and entering competitions.

We are members of the STEM CASTLE alliance network which supports development of Science across a group of schools. We are also the lead school for the Craven Partnership – an Ogden Trust partnership of 7 schools who work together to promote the teaching of Physics across our schools.