



## **Stretton Handley CE (VC) Primary School Science Policy**

Science at Stretton Handley CE (VC) Primary School is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation and using and applying process skills.

Science is a body of knowledge built up through experimental testing of ideas. Science is also methodology, a practical way of finding reliable answers to questions we ask about the world around us.

### **Aims**

1. Deliver the Science National Curriculum in a way that is imaginative, purposeful and enjoyable.
2. Developing and extending the children's scientific concept of their world and encourage the asking of deeper questions.
3. Deliver clear and accurate explanations and questioning. Acting as a guide for the children but also allowing children to explore independently where possible.
4. Use Science in a cross-curricular way where this is possible, using ICT in a purposeful way.
5. Develop children's Scientific vocabulary and encourage children to use this accurately and independently as much as possible.
6. Develop the skills of investigation (observation, measuring, predicting, hypothesising, experimenting, communicating and interpreting).

### **2. Implementation- Teaching and Learning of Science**

Science is important because;

- It is a knowledge that helps understand the world around us.
- Promote concern about, and promote active care of the environment
- The skills and knowledge developed have a real world application to everyday life.
- Science is a core subject in the National Curriculum. The skills and knowledge are set out in the National Curriculum for each year group.

At Stretton Handley CE (VC) Primary School, within Key Stage One and Key Stage Two, children have weekly science lessons over one afternoon, allowing them the required time to develop their scientific skills and build upon their prior knowledge. Within the Early Years Foundation Stage, science is taught through 'Understanding the World', allowing all pupils to start gaining scientific experiences from the beginning of their school journey. This allows children to consistently experience high quality science lessons, which advances their expertise and understanding of science.

Across Years 1-6, Science is taught in units, in line with the National Curriculum. Where relevant, cross curricular links are made with other subjects and Forest School. We also endeavour to use the outdoor space to enhance and enrich our science learning as much as possible.

### **3. Planning**

Science topics are on a rolling programme of study where children in each Key Stage will cover a variety of scientific topics. Planning for Science is influenced by the National Curriculum outcomes where each child will be taught what is required for their year group and assessed against these. We ensure progression between year groups with the support of the progression maps.

#### **EYFS Curriculum**

In EYFS children are taught Science within the concepts of:

Understanding the world

- Explore the natural world around them, making observations and drawing pictures of animals and plants.
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Physical development

- Observe the effects of physical activity on the body.
- Know the importance for good health of physical exercise and a healthy diet.

Understanding the World is covered through continuous provision in the indoor and outside environment linked to our topics. In particular, the small world area, investigation area, creative area, sand area and water area provide endless opportunities for science led exploration. We have developed an area under the shelter where children have free access to binoculars, magnifying glasses, garden equipment and bug pots to help them explore the world around them whenever they wish to do so. It is important that the children are able to lead their own learning and find things are themselves. Adults sensitively support the children's ideas and learning through modelling, questioning and joining in the children's play.

#### **The National Curriculum**

##### **Key Stage 1**

During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content.

- asking simple questions and recognising that they can be answered in different ways.
- observing closely, using simple equipment.
- performing simple tests.
- identifying and classifying.
- using their observations and ideas to suggest answers to questions.
- gathering and recording data to help in answering questions.

Programme of Study

Year 1: Plants, Animals including humans, Everyday materials, Seasonal changes

Year 2: Living things and their habitats, Plants, Animals including humans, Uses of everyday materials

### **Lower Key Stage 2**

During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking relevant questions and using different types of scientific enquiries to answer them.
- setting up simple practical enquiries, comparative and fair tests.
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.
- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
- identifying differences, similarities or changes related to simple scientific ideas and processes.
- using straightforward scientific evidence to answer questions or to support their findings.

Programme of Study

Year 3: Plants, Animals including humans, Rocks, Light, Forces and magnets

Year 4: Living things and their habitats, Animals including humans, States of matter, Sound, Electricity

### **Upper Key Stage 2**

During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- planning different types of scientific enquiries to answer questions, including
- recognising and controlling variables where necessary.
- taking measurements, using a range of scientific equipment, with increasing
- accuracy and precision, taking repeat readings when appropriate.
- recording data and results of increasing complexity using scientific diagrams and
- labels, classification keys, tables, scatter graphs, bar and line graphs.
- using test results to make predictions to set up further comparative and fair
- tests.
- reporting and presenting findings from enquiries, including conclusions, causal
- relationships and explanations of and degree of trust in results, in oral and
- written forms such as displays and other presentations.
- identifying scientific evidence that has been used to support or refute ideas or
- arguments.

Programme of Study

Year 5: Living things and their habitats, Animals including humans, Properties and changes to materials, Earth and space, Forces

Year 6: Living things and their habitats, Animals including humans, Evolution and inheritance, Light, Electricity

### **Impact- Assessment**

The impact and measure of this is to ensure children not only acquire the appropriate age related knowledge linked to the science curriculum, but also skills which equip them to progress from their starting points, and within their everyday lives.

The approach at Stretton Handley CE (VC) Primary School results in a fun, engaging, high-quality science education, that provides children with the foundations for understanding the world. Our engagement with the local environment ensures that children learn through varied and first- hand experiences and promotes a respect for the environment.

### **Resources**

- Most resources are stored centrally in the school hall in the bottom white cupboards.
- Resources must be returned to where they came from once the lesson is over.
- Staff should notify the coordinator of any extra resource required, any damage or Breakage.

### **Equality, Diversity and Inclusion**

We aim to ensure that no pupil experiences harassment, less favourable treatment or discrimination within the learning environment because of their age; any disability they may have; their ethnicity, colour or national origin; their gender; their religion or beliefs. We value the diversity of individuals within our school and do not discriminate against children because of 'differences'. We believe that all our children matter and we value their families too.

### **Monitoring**

Monitoring is the responsibility of the Science Lead.