

Duddon Saint Peter's School



Science Policy

Rationale: Science is about developing an understanding and making sense of our environment, primarily through first-hand experience, exploration, interaction with scientific phenomena and developing scientific language. It 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 may ask about the world around us. Science in our 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, as well as using and applying process skills.

Aims: Our aims in teaching science include the following principles.

- Challenge and excite the children through involvement in practical activities and opportunities to work scientifically.
- Provide opportunities for the children to become engaged in scientific enquiry.
- Allocation of a whole afternoon/morning each week to investigate real life and relevant scientific activities.
- Inspire thought, promote the asking of 'why?'
- Promote a love of science and a keenness to learn more.

Teaching:

Science teaching in the school is about excellence and enjoyment. A wide range of scientific enquiry styles will be used with a focus on working practically where applicable. Staff will integrate the development of working scientifically skills into all science teaching.

Science forms part of Understanding of the World strand of the EYFS. Children are encouraged to explore and investigate, drawing on their own personal experiences and observing closely using their senses.

We aim to equip the children with the following skills:

The principal focus of teaching science in Key Stage 1 is to enable pupils to experience and observe phenomena looking at the natural and humanly-constructed world around them. (National Curriculum 2014) In Key Stage 1 teachers foster the importance of curiosity and asking questions. They teach the enquiry skills of pattern seeking, grouping and

classifying, comparative testing and using secondary sources to seek out information. Simple scientific language is developed through first hand practical experiences.

In lower Key Stage 2, the principal focus of teaching is to enable pupils to broaden their scientific view of the world around them. (National Curriculum 2014) Children are taught to ask their own questions, suggest their own type of enquiry to best answer their questions. These enquiry skills include; observing changes over time, noticing patterns, grouping and classifying, carrying out simple and fair comparative tests and finding out things using secondary sources of information. Children in lower Key Stage 2 are taught to develop conclusions using scientific language.

In Upper Key Stage 2 the principal focus of science teaching is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. (National Curriculum 2014) Teachers provide children with the opportunity to analyse functions, relationships and interactions. They allow children to encounter more abstract scientific ideas and phenomena.

Planning:

Children in the Early Years settings will be taught science as part of an integrated curriculum. Planning will reflect the inclusion of developing scientific skills into all 7 areas of learning of the EYFS curriculum.

For Years 1-6, Science will be organised and taught in block units as in the National Curriculum, taking guidance for planning from the National Curriculum objectives. Both KS1 and KS2 will follow a two-year rolling Long Term Plan. This ensures full coverage of all areas of study and a planned progression of learning. Staff will highlight the enquiry skills taught in their Medium Term Planning.

Teachers will plan to give children opportunities for;

- First –hand observations and exploration.
- Investigating and problem solving
- Discussion and evaluating.
- Using different methods to discover and record, including ICT.

Children’s Recording of work:

A variety of approaches are encouraged to record work in Science. Development in the EYFS will be recorded through adult observations and photographs. These will be used to inform future planning. In Key Stage One, children will begin to communicate their ideas and findings through diagrams, pictures and organised writing. These may be supported by photographic evidence. By Key Stage Two, children will be encouraged to adopt more formal recording methods for writing up investigations. Results will be displayed in tables, charts and graphs sometimes using ICT.

Evidence of science activities and the principles of science will be reflected through displays around the school, where the children’s work will be seen to be valued and celebrated. Some work will also be displayed on the school website.

Assessment:

Early Years assessment will be by adult observations recorded on the EYFS profile sheets. Science learning comes under Understanding of the world but is also reflected in the other areas of learning.

Assessment will be through teacher assessment based on questioning and observation. Children complete concept maps as part of the initial assessment process. Teachers are encouraged to use a variety of activities and opportunities to assess the children's prior knowledge. Teachers are expected to provide thorough feedback to the children through marking and verbal response. They should ensure any misconceptions are addressed and suitable challenges are provided for those who require it. Children are assessed against the National Curriculum objectives and it will be decided at the end of each Key Stage whether they are at the expected level or below using a 'best fit' method. Teachers record the children's understanding in the Class Science Assessment File.

ICT:

Science teaching aims to include the development of ICT skills.

Health and Safety:

When working with equipment and materials in practical activities, pupils will be taught to recognise hazards and take steps to reduce risks to themselves.

Further information on specific health and safety issues can be sought from;

- ASE 'Be Safe'
- CLEAPPS

Safety precautions relating to the use of the school pond will be outlined in a risk assessment written specifically for each visit.

Equal Opportunities:

Differentiation will support pupil needs and work will be closely monitored to ensure that the science curriculum is appropriate and accessible to all pupils regardless of gender, race or ability. Adaptations will be made in planning to support SEN or G&T pupils, those with physical impairments or where cultural issues need to be considered.

Management and organisation:

Pupils will normally be organised into small groups and encouraged to work cooperatively. The group size will be determined by age, task and ability of pupils.

Class teachers are considered to be capable of teaching science. The school is committed to giving opportunities for staff training and development as necessary.

The role of the science co-ordinator is to support the teaching and learning of science and to help raise levels of science throughout the school by;

- Monitoring teaching and learning.
- Scrutinising pupils work.
- Monitoring planning.

- Ensuring continuity and progression of the teaching and learning in science across the stages in school.
- To review the Science Policy.
- To report to, and liaise with governors.

Date *October 2017*

Date of review *Autumn 2018*