SCIENCE POLICY

The Reason for This Policy

This policy outlines the science curriculum taught in St. Andrew's Church of England Primary School. It reflects the consensus of opinion of the whole teaching staff and is approved by the Governing Body. It is the responsibility of the whole staff to implement this policy.

Aims of the school which relate to this policy are as follows:

- To provide a stimulating learning environment which provides high educational standards.
- To ensure that children work at their own ability level, achieving success as often as possible.
- To help children develop their own self-esteem and confidence.

Principles of the school relating to this policy are that:

- Work undertaken by children will ensure that they achieve success in their learning.
- All children will be offered the same opportunities regardless of race, colour, creed gender or religion.

The Nature of Science

Science in the National Curriculum is a core subject. The National Curriculum for science describes it as a subject that 'develops a sense of excitement and curiosity about natural phenomena in the world around them. It also teaches essential aspects of knowledge, processes and uses of science'.

Our science curriculum places high value on the children exploring the world around them and to raise their own questions through different types of scientific enquiries including practical activities. This will develop to the children making their own decisions about the type of enquiry to undertake and equipment that might be used. By UKS2 they will have a deeper understanding of a wide range of scientific ideas. Ultimately, we hope that these experiences and the knowledge gained will inspire all pupils to be scientifically literate and as they mature, to question the world around them whilst making links between different areas of learning.

The National curriculum is set down under four areas.

These four areas are:

- Scientific Enquiry
- Life Processes and Living Things
- Materials and their Properties
- Physical Processes

Entitlement

1.1 All children have an entitlement to access the National Curriculum Programme of study of science. By planning within a cross curricular framework, children will be provided with effective learning opportunities at an appropriate level.
2.2 All children will undertake a scientific enquiry at least once each half term.

Implementation

3.1 All the elements of Scientific Enquiry will be encouraged in every investigation. The programmes of study will be covered every two years.

3.2 Children in reception will be introduced to science through Early Learning Goals. In addition, they will be given the opportunities to observe everyday objects and events, making use of all their senses, asking questions, looking for similarities and differences and developing the skills of sorting and classifying. During Key Stage 1 children will be given the opportunity to observe, explore and ask questions about living things, materials and phenomena. They will work together to collect evidence to help the answer questions and link this to simple scientific ideas. They will evaluate evidence and consider whether tests and comparisons are fair. Children will be given the opportunity to express their ideas through a variety of methods including charts and diagrams.

3.3 During Key Stage 2 children will build on work previously carried out in Key Stage 1 to extend and develop their ideas. They will begin to think about the positive and negative effects of scientific and technological developments on the environments and other contexts. Children will need to develop a more systematic approach to investigations, working in a variety of situations including teamwork. They will be encouraged to use a range of reference materials and will be given lots of opportunity to communicate their ideas and findings. These ideas will be communicated using a wide range of scientific language, conventional diagrams, charts, graphs, cartoon strips, KWL grids and concept maps.

3.4 At both key stages the knowledge, skill and understanding should be taught through the breadth of study elements as outlined in the programme of study.

3.5 Throughout Key Stage 1 and 2, science will be taught as a separate subject and on occasions with cross-curricular links when appropriate.

3.6 Children will be taught in their normal class group.

3.7 All teachers will be responsible for the planning and teaching of science.

3.8 Activities will be appropriately differentiated to match the needs and abilities of the children. Wherever possible, science work should be placed within the everyday contexts.

3.8A External specialist/providers to be invited in to school to lead either whole school or KS specific activity days. These are to link scientific knowledge & skills to 'real world' contexts and/or to raise the awareness of science learning.

3.9 Wherever applicable children will use IT to support their science work. At the upper end of Key Stage 2 children will use sensor equipment to monitor change over a period of time. The internet and intranet will be used to provide a variety of resource materials when appropriate.

3.10 A variety of starting points, which appeal equally to both boys and girls, are used.

3.11 All our studies of living things include consideration of environmental issues.

3.12 Health & Safety
All science activities comply with the guidelines in the schools health and safety policy. Children will be encouraged to discuss safety implications concerning themselves and others when undertaking work in science.
When working with tools, equipment and materials, in practical activities and in different environments, including those that are unfamiliar, pupils will be taught:

- about hazards, risks and risk control
- to recognise hazards, assess consequences risks and take steps to control the risks to themselves and others
- to use information to assess the immediate and cumulative risks
- to manage their environment to ensure the health and safety of themselves and others
- to explain the steps they can take to control risks

In Foundation, everyday equipment is readily available in order that the children may investigate using appropriate tools. All other science equipment is held in a central resource area and is made available in each classroom as necessary in order that children may select the most appropriate equipment. All staff will be responsible for loaning and returning the equipment to the central store. The science subject leader will be responsible for ordering and replenishing perishable/renewable resources.

Assessment

4.1 The children will be assessed using National Curriculum key skills related to the programmes of study. These will be recorded through the whole school assessment system of Class Key Skills

Booklet. These will be done at the end of each term and reported in the end of year reports.

Background Documentation

This policy was informed by reference to the Statutory Orders for science and guidance from the National Curriculum.

Reviewed : 27th April 2020

Policy Review Date: April 2022

Person to initiate the review: Science Co-ordinator & Clerk