Kibworth CE Primary School

Let Your Light Shine

Matthew 5:16

Science Policy

This policy was approved as follows:			
Adopted by:	**Grace Parrott**	**Date:**	**January 2023**
Review Date:	January 2026	**Review frequency:**	3 yearly

Rationale

This policy outlines the teaching, organisation and management of the Science taught and learnt at Kibworth Church of England Primary School. The school's policy for Science follows The National Curriculum 2014 for Science Guidelines and the Early Years Foundation Stage Framework and aims 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 a variety of different scientific enquiries that help them to answer 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.

• are encouraged to understand how Science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Where suitable, adaptations have been made to suit our school's environment and ethos.

Role of coordinator:

- To be enthusiastic about Science and demonstrate good practices.
- To work alongside colleagues in planning where needed (progress and activities).
- To work alongside teachers in the classroom (this will depend on release time and other available help).
- To coordinate and arrange staff in-service training as required.
- To audit resources, identify needs and order equipment in school after consultation with colleagues.
- To manage the Science budget.
- To "sample" the work of children across the age range (curriculum monitoring).
- To review and evaluate the effectiveness of teaching and learning of Science.
- To provide guidance on the implementation of the Science policy.
- To suggest appropriate assessment activities where needed.

- To provide support to those colleagues who request/require it, including help with planning and organisation.
- To monitor the planning and delivery of lessons.

Intent

A high-quality Science education provides foundations for understanding the world. Through building key knowledge and understanding of concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of curiosity about natural phenomena.

- For staff to work cooperatively to deliver a broad and balanced Science education which incorporates a range of teaching styles to suit individual needs.
- For children to have the right to equal opportunities in Science in our school regardless of their background, religion, race, gender, physical or intellectual ability.
- For children to become curious about the world around them and the things that they observe, experience and explore.
- For children to use their experiences to develop understanding of the key scientific ideas.
- For children to develop skills of sorting, classifying, planning, predicting, questioning and drawing conclusions from data.
- For children to acquire and refine practical skills necessary to investigate ideas and questions safely.
- For children to practise mathematical skills and enhance literacy skills (where possible) within real contexts.
- For children to develop language skills through talking about their work and presenting their findings.
- For children to use progressively technical scientific and mathematical vocabulary and draw diagrams and charts to communicate scientific ideas.
- For children to use a range of media including ICT to extract scientific information.

Extra-curricular activities:

Children will be given many different opportunities to enrich and enhance their scientific learning in additional ways outside of lesson time. Learning will often link with curriculum content, but on a less formal way. Extra curriculum activities may include science cub, eco scientist, space camp, science conferences, science fairs, etc. Where funding is needed from students to participate, discussions can be had with leadership regarding funding for pupil premium children to allow for equal opportunity.

Let your light shine in Science:

Through the teaching of Science at Kibworth Primary school, we aim to ensure the children are equipped to deal with the demands of the 21st century and become lifelong learners.

- For children to work cooperatively with others, listening to their ideas and treating these with respect.
- For children to develop respect for the environment and living things, including themselves and each other.
- For children to develop responsibility for their own health and safety and that of others when undertaking scientific activities.

Implementation

The Foundation Stage:

At Foundation level, Science is an integral part of topic learning and should be embedded throughout activities. At this stage, the 'understanding the world' area of learning commands at least one hour of structured time per week and is evident throughout other learning tasks. Cross-curricular links will also be made to other subjects so that pupils can develop and apply their scientific skills.

In the foundation stage, appropriate activities which develop young children's understanding of the world around them are to be planned in line with the Early Years Foundation Stage Profile 2014 using the necessary strands.

Content for Key Stage 1 and 2 and curriculum coverage:

Across both key stages the scientific context can be taught either discreetly or as part of a topic where appropriate.

The programmes of study for Science are set out year-by-year for key stages 1 and 2. Schools are, however, only required to teach the relevant programme of study by the end of the key stage. Within each key stage, schools therefore have the flexibility to introduce content earlier or later than set out in the programme of study. 'Working scientifically' specifies the understanding of the nature, processes and methods of Science for each year group and should not be taught as a separate strand. This element should be embedded throughout the delivery of the Science curriculum.

Each unit of learning is taught and developed during the children's time at the school through a variety of Science topics which have been adapted from the National Curriculum 2014. Cross-curricular links are also made where possible to enhance the learning of Science.

Progression and continuity of key knowledge or skills:

The skills and knowledge will be taught progressively across the year groups and key stages, as progression maps show.

Teaching and learning strategies:

It is important that the teacher identifies the most appropriate teaching strategy to suit the purpose of the particular learning situation and should use their flair, enthusiasm and professional judgement to identify the most sensible, enjoyable and safe methods for the work being conducted.

There are a variety of ways in which the teaching may be effective, and our school aims to encourage learning through investigation, with an emphasis on first-hand experience. Science lessons have no imposed formal structure but should typically contain some of the following elements:

Discussion: what they already know from experience, what they have learnt so far, what they will be finding out next. Where necessary, mind mapping and question boards are appropriate methods for recording these discussions if desired.

Teaching: directly to the whole class or through group or individual work.

Practical tasks or investigative work: working within groups or individually, practising scientific skills, finding out answers, being encouraged to think

scientifically. Where groups are required, the teacher should consider which type of grouping will best suit the needs of the children.

Recording: recording what they have found out, drawing charts and tables and diagrams, using the computer and other media to record what they have done or found out about.

Communicating: sharing ideas, predictions, knowledge, and what they have found out with each other, the teacher, other classes and adults as appropriate.

Links with other curriculum areas – Knowledge and Skills:

Where appropriate links with other curriculum areas will be made explicit during teaching, i.e. mathematical links of graphs and measuring should be made when teaching investigations.

Resources:

Central resources in Science are the responsibility of the Science Lead who has a budget available. All staff will aid the Science Lead in keeping the resources tidy and return items to the correct place to ensure that resources are easy for all staff to find. Staff are to report all items that are missing, broken or to request equipment required in order to enhance the teaching and learning of Science to the Science lead.

Links with other cross curricular areas – spirituality, PSHE, citizenship, multi-cultural, British Values:

Our programme of science education aims to develop skills and attributes such as self-esteem, resilience, risk management, critical thinking, tolerance of others and teamwork.

Inclusion: Provision for more able, SEND, EAL etc:

If a child has a special educational need, we will do our best to meet their individual needs. We comply with the requirements set out in the SEND Code of Practice in providing for children with special needs. If a child displays signs of having special needs, his/her teacher liaises with our Inclusion Manager to assess their needs and to set up an individualised provision. In most instances the teacher is able to provide resources and educational opportunities which meet the child's

needs within the usual class organisation. If a child's need is more severe, we will ensure that they have the appropriate provision to meet their needs. We may involve appropriate external agencies if needed.

Equal opportunities:

All pupils will have equal opportunity to reach their full potential across the History Curriculum regardless of their race, gender, cultural background, ability or any physical or sensory disability.

Health and Safety:

The safe use of equipment and consideration of others is promoted at all times. The Association for Science Education publication, "Be Safe!", should be used by staff as a point of reference for issues regarding health and safety. A copy of this is held in the Science cupboard and teachers are encouraged to use this as an aid. The school's "Health and Safety Policy" should be consulted for details regarding scissors, craft tools, electrical equipment, wet areas, heavy equipment and use of other tools. When planning activities, safety issues should be identified in detail in the weekly plans and acted upon accordingly. Children should be made aware of safety issues and, where appropriate, the reasons behind them. Activities which take place away from the school's premises (for example, a seashore outing) will require a risk assessment form to be filled in.

Impact

Assessing progress:

Children's progress will be monitored using informal assessment i.e. observations, marking of work and questioning children to identify what they have understood. Individual trackers will be completed by the class teacher, recording which children are working towards age related expectations and those working above. These assessments will be made termly. This information can then be relayed to the next year group during handover.

Individual progress is also reported back to parents on a termly basis, either through parents' evenings or a written report.

Policy review:

Review Date:	*This policy* will be reviewed every year by the Science Lead. Any suggested amendments will be presented to the Advisory Board for approval.