



KINGSNORTH CHURCH OF ENGLAND PRIMARY SCHOOL

Name of Policy:	Science	
Date Written:	April 2017	
Date Updated:		
Updated By Who:	S Pryke	
Policy Originated from:	Kingsnorth Primary School / Aquila/KCC/SPS	
Date To Be Reviewed:	April 2020	
Policy Approved By:	SLT:	
	Staff:	
	Governors:	

Our Vision Statement:

Kingsnorth...the best days of OUR lives!

Kingsnorth Values Statement

At Kingsnorth we ACHIEVE by...

- Aiming high Academically, Spiritually, Socially and Emotionally
- Challenging ourselves constantly to improve our learning
- Helping each individual reach their potential
- Inspiring others and being inspired
- Encouraging risk taking
- Valuing others and feeling valued
- Enriching lives through our Christian Values to become future citizens of the world

Our 5 Key Christian Values are:

Thankfulness, Friendship, Trust, Compassion and Endurance

Statement of Intent

'Recognising its historic foundation, the school will preserve and develop its religious character in accordance with the principles of the Church of England and in partnership with the Church at parish level and the Diocese of Canterbury.

The school aims to serve its community by providing an education of the highest quality within the context of Christian belief and practice. It encourages an understanding of the meaning and significance of faith and promotes Christian values through the experience it offers all pupils.'

Inclusion and Equal Opportunities

All children have equal access to the curriculum regardless of their race, gender, or disability. Our behaviour policy underpins all that we do at Kingsnorth and should be closely linked to our other policies.

Introduction

This policy outlines the teaching, organisation and management of science taught and learnt at Kingsnorth CE Primary. The implementation of this policy is the responsibility of all teaching staff. The responsibility for monitoring and review rests with the science co-ordinator.

Science Policy

1. Aims

- To develop pupil's enjoyment and interest in science, their outdoor environment and health
- 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;
- To ensure pupils are equipped with the scientific knowledge required to understand the uses and implications of Science, today and for the future
- To develop positive attitudes which encourage collaborative learning and perseverance.
- To develop pupils awareness of how science influences and affects our everyday lives.

2. The Science Curriculum

2.1 EYFS

Science is taught in the EYFS according to the Statutory Framework for Early Years Foundation Stage. It is incorporated in the specific area of learning entitled 'Understanding the World' under the specific Early Learning Goal entitled 'The World', in which pupils develop the crucial knowledge, skills and understanding that helps them make sense of their world. Science in the EYFS is mainly taught through child-initiated activities.

2.2 KS1

The main focus of science teaching in Key Stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly-constructed world around them. They should be encouraged to be curious and ask questions about what they notice. They should be helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests and finding things out using secondary sources of information. They should begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways. Most of the learning about Science should be done through the use of first-hand practical experiences, but there should also be some use of appropriate secondary sources, such as books, photographs and videos. Pupils should read and spell scientific vocabulary at a level consistent with their reading and spelling knowledge at Key Stage 1.

2.3 Lower Key Stage 2 – Years 3 and 4

The main focus of Science teaching in Lower Key Stage 2 is to enable pupils to broaden their scientific view of the world around them. They should do this through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. They should ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple fair tests and finding things out using secondary sources of information. They should draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out. 'Working scientifically' must always be taught through and clearly related to substantive Science content in the programme of study. Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing reading and spelling knowledge.

2.4 Upper Key Stage 2 – Years 5 and 6

The main focus of Science teaching in Upper Key Stage 2 is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. They should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. At Upper Key Stage 2, they should encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They should also begin to recognise that scientific ideas change and develop over time. They should select the most appropriate ways to answer Science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out fair tests and finding things out using a wide range of secondary sources of information. Pupils should draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings. Pupils should read, spell and pronounce scientific vocabulary correctly. 'Working and thinking scientifically' must always be taught through and clearly related to substantive Science content in the programme of study

3. Science Scheme of Work

3.1 The school has opted to follow the 'Kent Primary Science Scheme of Work 2015', written by Andrew Berry. All teachers have had training on how to use the scheme of work, they are expected to pick lessons which cover the statutory expectations for Science and differentiate these accordingly.

3.2 The scheme set covers the curriculum in the following way across year groups, there is some flexibility over the term in which topics are taught, but all topics should be covered throughout the year.

Year Group	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year R	<p>'The World' Early Learning Goalchildren Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plant and explain why some things occur, and talk about changes.</p>					
Year 1	Seasonal change	Seasonal change Everyday materials	Seasonal change Light	Seasonal change	Seasonal change Plants	Seasonal change Animals including humans
Year 2	Use of everyday materials		Animals including humans		All living things and their habitats	Plants
Year 3	Plants	Animals including humans	Light	Rocks		Forces and magnets
Year 4	Sound		States of matter	Electricity	Animals including humans	All living things
Year 5	Animals including humans	Properties and changes in materials	Forces	Earth and Space		All living things
Year 6	All living things	Evolution and inheritance		Light	Animals including humans	Electricity

3.3 Scientific Enquiry

Science is taught with an emphasis on the pupils engaging in practical enquiry to support/develop their understanding of scientific concepts and skills. Teachers use a range of strategies including: exploration, investigative enquiry and illustrative enquiry.

3.4 ICT

Pupils are taught to use a range of ICT equipment to enhance their scientific learning. E.g. cameras to record investigations, data loggers for accurate measurements of temperature and digital microscopes for close observation. Programmes such as Excel are used to create graphs and charts to record results.

3.5 Recording pupils work

Pupils are taught and encouraged to use a range of recording strategies to communicate their ideas and scientific findings.

3.6 PE

Pupils are taught that a healthy attitude to life is important and are given opportunities to engage in healthy activities and education.

3.7 Relationship & Sex Education

Please see **Relationship and Sex Education Policy – Appendix 1** for full details of how this is incorporated into the Science curriculum.

4. Responsibility of the class teacher

4.1 Assessment

Teachers assess pupils in a range of ways:

- Kent Assessment sheets – located at the end of the planning for each unit of Science work within the Kent Science Scheme.
- Curriculum Skills Progression grids
- Exemplification materials for end of Key Stage 1 and 2 (working towards / expected / working in greater depth) - saved in shared area
- Impact Assessments can be used for a summative assessment of children's learning and for gap analysis

Class teachers are expected to level the children in their class for Science at 3 points throughout the year : At the end of Autumn Term 2, Spring Term 2 and Summer Term 2 these are completed in Excel spreadsheets and submitted to the Assessment Manager following the same levelling statements as for Maths and English – beginning, beginning+, developing, developing+, secure, secure+.

4.2 Marking

Marking is used to acknowledge achievements and to show the pupils what they need to do in order to improve. Scientific spellings are modelled and corrected.

4.3 Reporting

A written report in respect of pupil's progress in science is provided annually.

4.4 Classroom

Class Teachers must display the science vocabulary for the unit they are currently teaching in their classrooms. Science books related to the current topic should be available for children to read in the book corner of each classroom.

5. Responsibility of the Science Leader

- To develop and implement a Science School Improvement plan each year.
- To undertake monitoring of standards in science and use this to inform the science action plan.
- Provide leadership and management of their subject to secure high quality teaching and learning.
- Play a key role in motivating, supporting and modelling good practice for all staff, including the organisation and presentation of School INSET. Take a lead in policy development and review
- To liaise with outside agencies and attend subject specific courses.
- To report to the Head teacher and Governing Body on science related issues.
- To plan and organise the allocation and purchase of resources in accordance with available budget.

6. Resources

6.1 Resources

Class teachers are responsible for informing the Science Leader of resources which are required in order to deliver their planned curriculum. Shared Science resources are stored in 2 dedicated science cupboards (Cupboard 1 – outside Assistant Head teachers' office, Cupboard 2 – Next to Site Managers Office). All resources are sorted into areas of the curriculum and are labelled accordingly.

6.2 Books

Information books on science topics are available in the school library and a range of non-fiction texts relating to science topics are available in classrooms and as part of the guided reading resources within the school.

6.4 Visits

School visits are planned regularly to enhance learning and help the pupils to relate scientific enquiry to the real world. All class teachers are encouraged to use the outside environment as regularly as possible in order to enhance the delivery of the science curriculum.

7. Health & Safety

The safe use of equipment and materials is promoted at all times. Risk Assessments will be completed when necessary with advice from the Science Co-ordinator and H&S Manager.