



Temple Sowerby CE Primary School

SCIENCE POLICY

2019/2021

Approved by	
Name:	Mr K Laithwaite - Headteacher
Signed:	
Date:	16 th April 2019
Review date:	15 th April 2021

Our Vision

Our vision for the school community is rooted in a deep respect for our human, social, and cultural values, expressed in a caring Christian ethos. We aim to provide high academic standards and a wide range of experiences and opportunities. In doing so, we encourage all children to flourish by giving them the skills they need to become good citizens and to discover life in all its fullness (John 10:10).

Policy Statement

This policy reflects the school's aims and objectives in relation to the teaching and learning of Science. It sets out a framework within which teaching and non-teaching staff can operate. It gives guidance on planning, teaching and assessment. The policy should be read in conjunction with the Early Years Foundation Stage framework and the National Curriculum. These set out the rationale for teaching each area of the Science Curriculum and specify the skills that will be developed for the majority of pupils in each year group.

Purpose of Study

Temple Sowerby Primary School Science Policy Science makes an increasing contribution to all aspects of life. Children are naturally fascinated by everything in the world around them and Science makes a valuable contribution to their understanding.

Across the school, we teach Science to help our pupils acquire and develop a better understanding about the world around them. Children learn by playing with things in their world. They pick up clues about what they see, touch, smell, taste and hear in order to make sense of it all. Eventually they come to conclusions which they match up with all the experiences they have had. Teachers and parents/carers can help children to take a second, careful look at the world. By talking together children can be encouraged to explore and observe so that they can group objects and events and look for similarities and differences. They will need to measure and record the things they have found out in ways that make sense to them so that later they can talk to other people about what they have discovered. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Aims:

The national curriculum for science aims to ensure that all pupils:

- Develop lively, enquiring minds and the ability to question.
- Learn scientific skills and knowledge.
- Build on their natural curiosity and enable them to understand and care for the world in which they live.
- Are provided with an environment where they can work in an investigative way and can communicate their findings in a variety of ways.
- Can use equipment safely and sensibly.
- Develop the potential scientific links with all other areas of the curriculum.
- 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.
- Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

In Temple Sowerby Primary School, we base our teaching on the National Curriculum Programmes of Study and this is particularly helpful with ensuring that there is continuity and progression. The National Curriculum

document for Science sets out a clear, full and statutory requirement for all children. It determines the content of what will be taught, and sets attainment targets for learning.

The programmes of study set out what should be taught at Key Stage 1 and 2 and The Foundation Stage programmes of study for Understanding of the World are set out in the EYFS.

Organisation Foundation Stage Children enter our Reception classes in the September after their fourth birthday.

The EYFS in Reception sets out the learning objectives for the seven areas of learning:

- Physical Development
- Expressive Arts and Design
- Personal, Social and Emotional Development
- Literacy
- Understanding of the World
- Communication and Language.
- Mathematics

The EYFS aims to give the children knowledge and skills so they can begin the National Curriculum.

Key Stage 1 and 2 Science at Temple Sowerby Primary Science is taught as discrete lessons and as part of cross-curricular themes when appropriate.

Science has links with other areas of the curriculum including Geography, English, Numeracy, Art and Design Technology. The programmes of study describe a sequence of knowledge and concepts. While it is important that pupils make progress, it is also vitally important that they develop secure understanding of each key block of knowledge and concepts in order to progress to the next stage. Pupils should be able to describe associated processes and key characteristics in common language, but they should also be familiar with, and use, technical terminology accurately and precisely. They should build up an extended specialist vocabulary. They should also apply their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data. The social and economic implications of science are important but, generally, they are taught most appropriately within the wider school curriculum: teachers will wish to use different contexts to maximise their pupils' engagement with and motivation to study science.

Key stage One Programmes of Study 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

Overview of units

Temple Sowerby C of E School Whole School Science Curriculum Map							
	Year focus	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1/2	A	Animals including humans Year 2 POS	Uses of everyday material Year 2 POS	The Environment Year 2 POS	Living things and their habitats Year 2 POS	Plants Year 2 POS	Scientists and inventors Year 2 POS
	B	Animals including humans Year 1 POS	Seasonal Changes Autumn/Winter Year 1 POS	Everyday materials Year 1 POS	Seasonal Changes Summer/Spring Year 1 POS	Plants Year 1 POS	Scientists and inventors Year 1 POS
Year 3/4	A	Sound Year 4 POS	Electricity Year 4 POS	Living things and their habitats Year 4 POS	Animals including humans Year 4 POS	States of matter Year 4 POS	Scientists and inventors Year 4 POS
	B	Forces Year 3 POS	Animals including humans Year 3 POS	Light Year 3 POS	Plants Year 3 POS	Rocks Year 3 POS	Scientists and inventors Year 3 POS
Year 5/6	A	Electricity Year 6 POS	Properties and changes of state Year 5 POS	Evolution and inheritance Year 6 POS	Animals including humans Year 5 POS	Living things and their habitats Year 5 POS	Scientists and inventors Year 5 POS
	B	Forces Year 5 POS	Animals including humans Year 6 POS	Light Year 6 POS	Earth and Space Year 5 POS	ALL Living things and their habitats Year 6 POS	Scientists and inventors Year 6 POS

Cycle 1 2016/17, 2018/19

Cycle 2 2017/18, 2019/20

*Working scientifically 'should not be taught as a separate strand'. NC 2014. All objectives from this strand should run alongside all units of work. Ensure all objectives for each Key Stage are met.

See the national curriculum document for the full programme of study that the school will follow;

Assessment:

Assessment in Science is based upon scientific knowledge and understanding, rather than achievement in English or Mathematics.

Foundation Stage:

In the Foundation Stage we assess children's knowledge and understanding according to the EYFS Learning and Development Stages.

Key Stage 1 and 2:

In KS1 and KS2 we use a range of assessment materials to ensure that children are making appropriate progress, including assessment tasks. Pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study. Our Science Co-ordinator records achievement of children working beyond expected levels monitoring planning and provision for the most able children in our school. All staff strive to ensure that our children reach their full potential in Science and that they understand and enjoy their experiences. Children with special educational needs will be monitored by our Science Co-ordinator ensuring that these children follow the National Curriculum Programmes of Study through work schemes that promote the child's development and self-esteem. Multi-Cultural links will be developed wherever possible in the teaching of this National Curriculum subject.

Assessment should:

- Be formative and summative
- Be used to inform the teacher for future planning
- Promote continuity and progression
- Form the basis for reporting to parents
- Be based on observation, participation and written outcomes Recording Children's recording will take many forms according to the nature of the activity:
 - Verbal
 - Pictorial
 - Diagrammatic
 - Graphical
 - Written
 - Symbolic
 - I.C.T.
- Photographic Classroom Organisation Children will be grouped as appropriate for the task in order to encourage flexibility:
 - Ability groups
 - Mixed ability groups
 - Mixed ability partners
 - Ability partners

- Individuals
- Whole class groups Science is a hands on experience and all the children are given the opportunity to use their senses.

Children are encouraged to:

- Observe, discover and experiment
- Develop scientific language
- Question and report
- Sort and classify
- Look for similarities and differences

Assessment is done through teacher-based assessment; the teacher looks through the childrens' work and makes a judgement based on working below, working at or working above the expected standard. In line with this, resources from Association for Science Education is used to assess the children's understanding and this feeds into the teacher assessment.

The Role of the Science Co-ordinator:

- To review changes to the National Curriculum requirements and advise on their implementation.
- Attend relevant CPD courses for Science as appropriate in line with the School Development plan.
- Arrange staff meetings to discuss the scientific aspects of the themes contained in the school's current scheme of work and how these might be presented in the classroom.
- Carry out an annual audit of the school's Science resources, and operate an efficient storage system for these resources to ensure that our children can learn effectively in and through Science.
- Liaise with the school's SENCO regarding the progress of individual and groups of children.
- Collate 'End of topic Assessments' and 'End of Key stage Assessments' and set new priorities for development of Science in subsequent years.
- Monitor the learning and teaching in Science and provide support for staff when necessary.
- Take a lead role in organizing Science Events in school in line with LA and national initiatives and lead in organising a Science Week.
- Endeavour to involve parents/ carers in their children's learning in and through science. This policy was written by the Science Co-ordinator following discussions with the teaching and support staff at Temple Sowerby Primary School.

Policy Updated February 2020

James Farmer (Science Lead) The policy will be reviewed again in February 2021