



# Temple Sowerby CE Primary School

## SCIENCE POLICY

### 2024/26

Approved by	
Name:	Mr K Laithwaite - Headteacher
Signed:	
Date:	10/10/24
Review date:	9/10/26
Subject Leader:	Mr James Farmer

## ***Living for learning; learning for life.***

### **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.

# Intent

## Purpose of Study

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.

At Temple Sowerby C of E Primary School, we aim to stimulate a child's curiosity to find out why things happen in the way they do through the use of quality resources, hands-on experiences, visits and visitors, and exploration of the outdoor environment. We aim to encourage children to enquire, investigate, ask scientific questions and evaluate evidence. Children learn about key scientists both past and present and begin to understand the way science will affect their future lives on a personal, national and global level. Children learn skills to work both individually and collaboratively to plan, carry out and evaluate practical investigations selecting appropriate resources, including the use of ICT.

Across the school, we teach Science to help our pupils acquire and develop a better understanding of 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 the conclusion that 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 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 an 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.

## Implementation

### Our curriculum

At Temple Sowerby Primary School, we base our teaching on the National Curriculum Programmes of Study and this is particularly helpful in 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 acquisition of key scientific knowledge is an integral part of our science lessons. We enable children to learn and retain the important, useful and powerful vocabulary and knowledge contained within each unit. The progression of skills for working scientifically are developed through the year groups and scientific enquiry skills are of key importance within lessons. Science is planned through a carefully planned series of half-termly topics, following a 2-year rolling programme that ensures complete National Curriculum coverage.

The curriculum plan is split into EYFS, Key Stage 1, Lower Key Stage 2 and Upper Key Stage 2. This enables the complete coverage of the curriculum. Key Stage 1 cover a mixture of Year 1 and 2 subject areas, Lower Key Stage 2 cover a mixture of Year 3 and 4 subject areas and Upper Key Stage 2 cover a mixture of Year 5 and 6 subject areas. All of these throughout the rolling 2-year programme to ensure complete National Curriculum coverage.

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

### **Teaching and Learning – Quality of Education**

Throughout our science curriculum, scientific knowledge and enquiry skills are developed with increasing depth and challenge as children move through the year groups. They complete investigations and hands-on activities while gaining scientific knowledge for each unit. Interwoven into the teaching sequence are key assessment questions. These allow teachers to assess children's levels of understanding at various points in the lesson. They also enable opportunities to recap concepts where necessary. The sequence of lessons helps to embed scientific knowledge and skills, with each lesson building on previous learning. There is also the opportunity to regularly review and evaluate children's understanding. Activities are effectively differentiated so that all children have an appropriate level of support and challenge.

We plan to ensure that teachers are equipped with secure scientific subject knowledge, enabling them to deliver high-quality teaching and learning opportunities while making them aware of possible scientific misconceptions.

### **Early Years**

In the Foundation Stage, children begin to develop an understanding of science through the broad area of 'Understanding the World'. Children explore and find out about the world around them and begin to ask questions about it. This is further developed through our outdoor learning sessions, both in the school grounds and locally. Children experience the wonders of nature, helping to spark an interest and enthusiasm for the subject.

## Key Stage 1 and 2

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 a 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 a 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

\*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 (Appendix 1) for the full programme of study that the school will follow.

We recognise the fact that we have children of differing abilities in all our classes, and so we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies which are differentiated by task, scaffolded worksheets, expected outcome and/or support from peers or adults, pre-learning and a variety of differentiated resources. We ensure that the knowledge, skills and vocabulary taught are appropriate to the age of the children (as outlined in the Progressions of Knowledge and Vocabulary shown in Appendix 3).

## Impact

### Assessment:

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

Assessment is done through teacher-based assessment; the teacher looks through the children's work and makes a judgement based on working below, working at, or working above the expected standard. In line with this, at the beginning of each science topic Key Stage 2 children undertake a baseline assessment to illustrate prior knowledge and then at the end of each science topic the children undertake the same assessment to illustrate their progress. This then informs the science lead on individual progress and this informs their assessment based on whether the individual is working 'below', 'at' or 'above' the expected standard based on the National Curriculum for science outcomes.

By the end of EYFS, children will have had the opportunity to explore and discuss similarities and differences in the world around them, in relation to places, objects, materials and living things. The children will be able to talk about the features of their own immediate environment and how different environments might vary from one another. They will be able to make observations of animals and plants and will be able to explain and talk about why some changes occur.

By the end of Key Stage 1, largely through practical, first-hand experiences, children will have developed their understanding of scientific ideas by using different types of scientific enquiry and they will be able to explain their understanding using simple scientific language. They will be able to ask and answer their questions based on their own observations. Children will be able to identify patterns and will be able to group and classify living things by carrying out simple comparative tests.

By the end of Lower Key Stage 2, children will have broadened their scientific view by having the opportunity to explore, discuss, test and develop ideas about the world around them. They will be able to discuss and explain relationships between living things and familiar environments. They will be able to ask their own questions to expand their understanding about what they observe. They will also be beginning to make some decisions about which types of scientific enquiry are likely to be the best ways of answering questions posed to them. The children will now be able to draw simple conclusions and use some specific scientific language, to discuss their findings.

By the end of Upper Key Stage 2, children will have developed a deep understanding of a wide range of scientific ideas. They will be able to analyse functions, relationships and interactions more systematically. Children will have had the opportunity to encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world

operates. They will be able to select the most appropriate ways to answering science questions, using different types of scientific enquiry. The children will be able to draw conclusions based on their findings and observations. They will be able to justify and explain their ideas using evidence and secure scientific knowledge.

### **Monitoring**

Monitoring takes place regularly through sampling children's work, and teacher planning, through book scrutiny and lesson observations. We also undertake an assessment of each child's work based on the knowledge/skills outcomes of each topic. We have regular visits from foundation governors to discuss our science curriculum, teaching and learning.

### **Resources**

We have a wide range of rich textbooks and interactive textbooks and boards to access the internet as a class. We have a range of scientific equipment which allow the children to plan, conduct and participate in scientific investigation. Children also have the opportunity to use the Chromebooks to access resources supplied by the teacher allowing for a mixture of written and typed work – particularly in Key Stage 2. We also participate in Science Week each year, which enables the children to participate in a range of experiments and activities that promote the subject of science.

## Appendix 1 – National Curriculum Coverage

EYFS - Reception	Key Stage 1	Key Stage 2
<p><b>Pupils should be taught to:</b></p> <p><b>Communication and Language</b></p> <ul style="list-style-type: none"> <li>• Make comments about what they have heard and ask questions to clarify their understanding.</li> </ul> <p><b>Personal, Social and Emotional Development</b></p> <ul style="list-style-type: none"> <li>• Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.</li> </ul> <p><b>Understanding the World</b></p> <ul style="list-style-type: none"> <li>• Explore the natural world around them, making observations and drawing pictures of animals and plants.</li> <li>• Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.</li> <li>• Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</li> </ul>	<p><b>Pupils should be taught to:</b></p> <p><b>Working Scientifically:</b></p> <ul style="list-style-type: none"> <li>• asking simple questions and recognising that they can be answered in different ways.</li> <li>• observing closely, using simple equipment</li> <li>• performing simple tests.</li> <li>• identifying and classifying.</li> <li>• using their observations and ideas to suggest answers to questions.</li> <li>• gathering and recording data to help in answering questions.</li> </ul> <p><b>Year 1 programme of study</b></p> <p><b>Plants:</b></p> <ul style="list-style-type: none"> <li>• identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</li> <li>• identify and describe the basic structure of a variety of common flowering plants, including trees.</li> </ul> <p><b>Animals, including humans:</b></p> <ul style="list-style-type: none"> <li>• identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</li> <li>• identify and name a variety of common animals that are carnivores, herbivores and omnivores</li> <li>• describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</li> <li>• identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</li> </ul> <p><b>Everyday Materials:</b></p> <ul style="list-style-type: none"> <li>• distinguish between an object and the material from which it is made</li> <li>• identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</li> <li>• describe the simple physical properties of a variety of everyday materials</li> <li>• compare and group together a variety of everyday materials on the basis of their simple physical properties</li> </ul> <p><b>Seasonal changes:</b></p>	<p><b>Pupils should be taught to:</b></p> <p><b>Lower Key Stage 2 programme of study</b></p> <p><b>Working scientifically</b></p> <ul style="list-style-type: none"> <li>• asking relevant questions and using different types of scientific enquiries to answer them</li> <li>• setting up simple practical enquiries, comparative and fair tests</li> <li>• making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</li> <li>• gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</li> <li>• recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</li> <li>• reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> <li>• using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li> <li>• identifying differences, similarities or changes related to simple scientific ideas and processes</li> <li>• using straightforward scientific evidence to answer questions or to support their findings.</li> </ul> <p><b>Year 3 programme of study</b></p> <p><b>Plants</b></p> <ul style="list-style-type: none"> <li>• identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</li> <li>• explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant</li> <li>• investigate the way in which water is transported within plants</li> <li>• explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</li> </ul> <p><b>Animals, including humans</b></p> <ul style="list-style-type: none"> <li>• identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat</li> </ul>

	<ul style="list-style-type: none"> <li>• observe changes across the four seasons</li> <li>• observe and describe weather associated with the seasons and how day length varies.</li> </ul> <p><b>Living things and their habitats</b></p> <ul style="list-style-type: none"> <li>• explore and compare the differences between things that are living, dead, and things that have never been alive</li> <li>• identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other</li> <li>• identify and name a variety of plants and animals in their habitats, including microhabitats</li> <li>• describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</li> </ul> <p><b>Year 2 programme of study</b></p> <p><b>Plants</b></p> <ul style="list-style-type: none"> <li>• observe and describe how seeds and bulbs grow into mature plants</li> <li>• find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</li> </ul> <p><b>Animals, including humans</b></p> <ul style="list-style-type: none"> <li>• notice that animals, including humans, have offspring which grow into adults</li> <li>• find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</li> <li>• describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</li> </ul> <p><b>Uses of everyday materials</b></p> <ul style="list-style-type: none"> <li>• identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</li> <li>• find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li> </ul>	<ul style="list-style-type: none"> <li>• identify that humans and some other animals have skeletons and muscles for support, protection and movement.</li> </ul> <p><b>Rocks and Fossils</b></p> <ul style="list-style-type: none"> <li>• compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</li> <li>• describe in simple terms how fossils are formed when things that have lived are trapped within rock</li> <li>• recognise that soils are made from rocks and organic matter.</li> </ul> <p><b>Light</b></p> <ul style="list-style-type: none"> <li>• recognise that they need light in order to see things and that dark is the absence of light</li> <li>• notice that light is reflected from surfaces</li> <li>• recognise that light from the sun can be dangerous and that there are ways to protect their eyes</li> <li>• recognise that shadows are formed when the light from a light source is blocked by an opaque object</li> <li>• find patterns in the way that the size of shadows change.</li> </ul> <p><b>Forces and magnets</b></p> <ul style="list-style-type: none"> <li>• compare how things move on different surfaces</li> <li>• notice that some forces need contact between 2 objects, but magnetic forces can act at a distance</li> <li>• observe how magnets attract or repel each other and attract some materials and not others</li> <li>• compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials</li> <li>• describe magnets as having 2 poles</li> <li>• predict whether 2 magnets will attract or repel each other, depending on which poles are facing.</li> </ul> <p><b>Year 4 programme of study</b></p> <p><b>Living things and their habitats</b></p> <ul style="list-style-type: none"> <li>• recognise that living things can be grouped in a variety of ways</li> <li>• explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</li> <li>• recognise that environments can change and that this can sometimes pose dangers to living things.</li> </ul>
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		<p><b>Animals, including humans</b></p> <ul style="list-style-type: none"> <li>• describe the simple functions of the basic parts of the digestive system in humans</li> <li>• identify the different types of teeth in humans and their simple functions</li> <li>• construct and interpret a variety of food chains, identifying producers, predators and prey.</li> </ul> <p><b>States of matter</b></p> <ul style="list-style-type: none"> <li>• compare and group materials together, according to whether they are solids, liquids or gases</li> <li>• observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)</li> <li>• identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</li> </ul> <p><b>Sound</b></p> <ul style="list-style-type: none"> <li>• identify how sounds are made, associating some of them with something vibrating</li> <li>• recognise that vibrations from sounds travel through a medium to the ear</li> <li>• find patterns between the pitch of a sound and features of the object that produced it</li> <li>• find patterns between the volume of a sound and the strength of the vibrations that produced it</li> <li>• recognise that sounds get fainter as the distance from the sound source increases.</li> </ul> <p><b>Electricity</b></p> <ul style="list-style-type: none"> <li>• identify common appliances that run on electricity</li> <li>• construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</li> <li>• identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery</li> <li>• recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</li> <li>• recognise some common conductors and insulators, and associate metals with being good conductors.</li> </ul> <p><b>Upper key stage 2 programme of study</b></p> <p><b>Working scientifically</b></p> <ul style="list-style-type: none"> <li>• planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> </ul>
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		<ul style="list-style-type: none"><li>• taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li><li>• recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li><li>• using test results to make predictions to set up further comparative and fair tests</li><li>• reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations</li><li>• identifying scientific evidence that has been used to support or refute ideas or arguments.</li></ul> <p><b>Year 5 programme of study</b></p> <p><b>Living things and their habitats</b></p> <ul style="list-style-type: none"><li>• describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</li><li>• describe the life process of reproduction in some plants and animals.</li></ul> <p><b>Animals, including humans</b></p> <ul style="list-style-type: none"><li>• describe the changes as humans develop to old age.</li></ul> <p><b>Properties and changes of materials</b></p> <ul style="list-style-type: none"><li>• compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets</li><li>• know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</li><li>• use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</li><li>• give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</li><li>• demonstrate that dissolving, mixing and changes of state are reversible changes</li><li>• explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.</li></ul>
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		<p><b>Earth and space</b></p> <ul style="list-style-type: none"><li>• describe the movement of the Earth and other planets relative to the sun in the solar system</li><li>• describe the movement of the moon relative to the Earth</li><li>• describe the sun, Earth and moon as approximately spherical bodies</li><li>• use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</li></ul> <p><b>Forces</b></p> <ul style="list-style-type: none"><li>• explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</li><li>• identify the effects of air resistance, water resistance and friction, that act between moving surfaces</li><li>• recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect.</li></ul> <p><b>Year 6 programme of study</b></p> <p><b>Living things and their habitats</b></p> <ul style="list-style-type: none"><li>• describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals</li><li>• give reasons for classifying plants and animals based on specific characteristics.</li></ul> <p><b>Animals including humans</b></p> <ul style="list-style-type: none"><li>• identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</li><li>• recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</li><li>• describe the ways in which nutrients and water are transported within animals, including humans.</li></ul> <p><b>Evolution and inheritance</b></p> <ul style="list-style-type: none"><li>• recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</li><li>• recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</li><li>• identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</li></ul> <p><b>Light</b></p> <ul style="list-style-type: none"><li>• recognise that light appears to travel in straight lines</li></ul>
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		<ul style="list-style-type: none"><li>• use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye</li><li>• explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes</li><li>• use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</li></ul> <p><b>Electricity</b></p> <ul style="list-style-type: none"><li>• associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</li><li>• compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches</li><li>• use recognised symbols when representing a simple circuit in a diagram</li></ul>
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## Appendix 2 – Our Science Curriculum

### 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

## Appendix 3 – Progression on Knowledge and Skills

### Progression of Knowledge:

Substantive knowledge in Science builds progressively to develop children's understanding of concepts, models, laws and theories. It is organised into the following four areas:

#### Biology

- Living things and their environment
- Reproduction, evolution and inheritance and evolution
- Plants
- Animals including humans

#### Chemistry

- States of matter
- Materials (properties and changes)
- Rocks

#### Physics

- Electricity
- Forces
- Light
- Sound
- Earth and space
- Seasonal Changes

### Progression of Skills

Disciplinary knowledge in science builds progressively to enable children to work scientifically and covers the following aspects:

- Methods used to answer questions
- Using apparatus and techniques
- Data analysis
- Using evidence to develop explanations.

A EYFS - Reception scientist	Year 1 scientist	Year 2 scientist	Year 3 scientist
<p><b><u>Communication and Language</u></b></p> <ul style="list-style-type: none"> <li>I can learn new vocabulary.</li> <li>I can ask questions to find out more and to check what has been said to them.</li> <li>I can articulate their ideas and thoughts in well-formed sentences.</li> <li>I can describe events in some detail.</li> <li>I can use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.</li> <li>I can use new vocabulary in different contexts.</li> </ul> <p><b><u>Personal, Social and Emotional Development</u></b></p> <ul style="list-style-type: none"> <li>I know and talk about the different factors that support their overall health and wellbeing: <ul style="list-style-type: none"> <li>regular physical activity</li> <li>healthy eating</li> <li>toothbrushing</li> <li>sensible amounts of 'screen time'</li> <li>having a good sleep routine</li> <li>being a safe pedestrian</li> </ul> </li> </ul> <p><b><u>Understanding the World</u></b></p> <ul style="list-style-type: none"> <li>I can explore the natural world around them.</li> <li>I can describe what they see, hear and feel while they are outside.</li> <li>I can recognise some environments that are</li> </ul>	<p><b><u>Working scientifically (Y1 &amp; Y2)</u></b></p> <ul style="list-style-type: none"> <li>I know how to ask simple scientific questions.</li> <li>I know how to use simple equipment to make observations.</li> <li>I know how to carry out simple tests.</li> <li>I know how to identify and classify things.</li> <li>I know how to explain to others what I have found out.</li> <li>I know how to use simple data to answer questions.</li> </ul> <p><b><u>Biology</u></b></p> <p><b><u>Plants</u></b></p> <ul style="list-style-type: none"> <li>I know and name a variety of common wild and garden plants.</li> <li>I know and name the petals, stem, leaves and root of a plant.</li> <li>I know and name the roots, trunk, branches and leaves of a tree.</li> </ul> <p><b><u>Animals, including humans</u></b></p> <ul style="list-style-type: none"> <li>I know and name a variety of animals including fish, amphibians, reptiles, birds and mammals.</li> <li>I classify and know animals by what they eat (carnivore, herbivore and omnivore).</li> <li>I know how to sort animals into categories (including fish, amphibians, reptiles, birds and mammals).</li> <li>I know how to sort living and non-living things.</li> <li>I know how to name the parts of the human body that I can see.</li> <li>I know how to link the correct part of the human body to each sense.</li> </ul> <p><b><u>Chemistry</u></b></p> <p><b><u>Everyday materials</u></b></p> <ul style="list-style-type: none"> <li>I distinguish between an object and the material it is made from.</li> </ul>	<p><b><u>Working scientifically (Y1 and Y2)</u></b></p> <ul style="list-style-type: none"> <li>I know how to ask simple scientific questions.</li> <li>I know how to use simple equipment to make observations.</li> <li>I know how to carry out simple tests.</li> <li>I know how to identify and classify things.</li> <li>I know how to explain to others what I have found out.</li> <li>I know how to use simple data to answer questions.</li> </ul> <p><b><u>Biology</u></b></p> <p><b><u>Living things and their habitats</u></b></p> <ul style="list-style-type: none"> <li>I can identify things that are living, dead and never lived.</li> <li>I know how a specific habitat provides for the basic needs of things living there (plants and animals).</li> <li>I identify and name plants and animals in a range of habitats.</li> <li>I match living things to their habitat.</li> <li>I know how animals find their food.</li> <li>I name some different sources of food for animals.</li> <li>I know and can explain a simple food chain.</li> </ul> <p><b><u>Plants</u></b></p> <ul style="list-style-type: none"> <li>I know how seeds and bulbs grow into plants.</li> <li>I know what plants need in order to grow and stay healthy (water, light &amp; suitable temperature).</li> </ul> <p><b><u>Animals, including humans</u></b></p> <ul style="list-style-type: none"> <li>I know the basic stages in a life cycle for animals, including humans.</li> <li>I know what animals and humans need to survive.</li> <li>I know why exercise, a balanced diet and good hygiene are important for humans.</li> </ul> <p><b><u>Chemistry</u></b></p>	<p><b><u>Working scientifically</u></b></p> <ul style="list-style-type: none"> <li>I know how to ask relevant scientific questions.</li> <li>I know how to use observations and knowledge to answer scientific questions.</li> <li>I know how to set up a simple enquiry to explore a scientific question.</li> <li>I know how to set up a test to compare two things.</li> <li>I know how to set up a fair test and explain why it is fair.</li> <li>I make careful and accurate observations, including the use of the standard units.</li> <li>I know how to use equipment, including thermometers and dataloggers to make measurements.</li> <li>I gather, record, classify and present data in different ways to answer scientific questions.</li> <li>I know how to use diagrams, keys, bar charts and tables; using scientific language.</li> <li>I know how to use findings to report in different ways, including oral and written explanations, presentation.</li> <li>I know how to draw conclusions and suggest improvements.</li> <li>I know how to make a prediction with a reason.</li> <li>I know how to identify differences, similarities and changes.</li> </ul> <p><b><u>Biology</u></b></p> <p><b><u>Plants</u></b></p> <ul style="list-style-type: none"> <li>I know the function of different parts of flowering plants and trees.</li> <li>I know what different plants need to help them survive.</li> <li>I know how water is transported within plants.</li> <li>I know the plant life cycle, especially the importance of flowers.</li> </ul> <p><b><u>Animals, including humans</u></b></p> <ul style="list-style-type: none"> <li>I know about the importance of a nutritious, balanced diet.</li> <li>I know how nutrients, water and oxygen are transported within animals and humans.</li> </ul>

<p>different to the one in which they live.</p> <ul style="list-style-type: none"> <li>I understand the effect of changing seasons on the natural world around them.</li> </ul>	<ul style="list-style-type: none"> <li>I know the materials that an object is made from.</li> <li>I know the difference between wood, plastic, glass, metal, water and rock.</li> <li>I know about the properties of everyday materials.</li> <li>I group objects based on the materials they are made from.</li> </ul> <p><b>Physics</b> <b>Seasonal changes</b></p> <ul style="list-style-type: none"> <li>I observe and know about changes in the seasons.</li> <li>I name the seasons and know about the type of weather in each season.</li> </ul>	<p><b>Use of everyday materials</b></p> <ul style="list-style-type: none"> <li>Identify and name a range of materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard.</li> <li>I know why a material might or might not be used for a specific job.</li> </ul> <p>I know how materials can be changed by squashing, bending, twisting and stretching.</p> <p><b>Physics</b> <b>Seasonal changes</b></p> <ul style="list-style-type: none"> <li>I observe and know about changes in the seasons.</li> <li>I name the seasons and know about the type of weather in each season.</li> </ul>	<ul style="list-style-type: none"> <li>I know about the skeletal system of a human.</li> <li>I know about the muscular system of a human.</li> <li>I know about the purpose of the skeleton in humans and animals.</li> </ul> <p><b>Chemistry</b> <b>Rocks</b></p> <ul style="list-style-type: none"> <li>I compare and group rocks based on their appearance and physical properties, giving a reason.</li> <li>I know how fossils are formed.</li> <li>I know how soil is made.</li> <li>I know about and explain the difference between sedimentary, metamorphic and igneous rock.</li> </ul> <p><b>Physics</b> <b>Forces and magnets</b></p> <ul style="list-style-type: none"> <li>I know about and describe how objects move on different surfaces.</li> <li>I know how some forces require contact and some do not, giving examples.</li> <li>I know about and explain how objects attract and repel in relation to objects and other magnets.</li> <li>I predict whether objects will be magnetic and carry out an enquiry to test this out.</li> <li>I know how magnets work.</li> <li>I predict whether magnets will attract or repel and give a reason.</li> </ul>
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Year 4 scientist	Year 5 scientist	Year 6 scientist
<p><b>Working Scientifically (Y3 and Y4)</b></p> <ul style="list-style-type: none"> <li>I know how to ask relevant scientific questions</li> <li>I know how to use observations and knowledge to answer scientific questions.</li> <li>I know how to set up a simple inquiry to explore a scientific question.</li> <li>I know how to set up a test to compare two things.</li> <li>I know how to set up a fair test and explain why it is fair.</li> <li>I make careful and accurate observations, including the use of standard units.</li> <li>I know how to use equipment, including thermometers and data loggers to make measurements.</li> </ul>	<p><b>Working scientifically (Y5 and Y6)</b></p> <ul style="list-style-type: none"> <li>I know how to plan different types of scientific inquiry.</li> <li>I know how to control variables in an inquiry.</li> <li>I measure accurately and precisely using a range of equipment.</li> <li>I know how to record data and results using scientific diagrams on labels, classification keys, tables, scatter graphs, bar and line graphs.</li> <li>I use the outcome of test results to make predictions and set up a further comparative and fair tests.</li> <li>I report findings from enquiries in a range of ways.</li> <li>I know how to explain a conclusion from an inquiry.</li> </ul>	<p><b>Working scientifically (Y5 and Y6)</b></p> <ul style="list-style-type: none"> <li>I know how to plan different types of scientific enquiry.</li> <li>I know how to control variables in an inquiry.</li> <li>I measure accurately and precisely using a range of equipment.</li> <li>I know how to record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</li> <li>I use the outcome of test results to make predictions and set up a further comparative and fair tests.</li> <li>I report findings from enquiries in a range of ways.</li> <li>I know how to explain a conclusion from an enquiry.</li> </ul>

<ul style="list-style-type: none"> <li>• I gather, record, classify and present data in different ways to scientific questions.</li> <li>• I know how to use diagrams, keys, bar charts and tables; Using scientific language.</li> <li>• I know how to use findings to report in different ways, including oral and written explanations, presentation.</li> <li>• I know how to draw conclusions and suggest improvements.</li> <li>• I know how to make a prediction with a reason.</li> <li>• I know how to identify differences, similarities and changes related to an inquiry.</li> </ul> <p><b><u>Biology</u></b>  <b>Living things and their habitats</b></p> <ul style="list-style-type: none"> <li>• I group living things in different ways.</li> <li>• I use classification keys to group, identify a name living things.</li> <li>• I create classification keys to group, identify and name living things (for others to use).</li> <li>• I know how changes to an environment could endanger living things.</li> </ul> <p><b>Animals including humans</b></p> <ul style="list-style-type: none"> <li>• I identify and name the parts of the human digestive system.</li> <li>• I know the functions of the organs in the human digestive system.</li> <li>• I identify the different types of teeth in humans.</li> <li>• I know the functions of different human teeth.</li> <li>• I use food chains to identify producers, predators and prey. I construct food chains to identify producers, predators and prey.</li> </ul> <p><b><u>Chemistry</u></b>  <b>States of matter</b></p> <ul style="list-style-type: none"> <li>• I group materials based on their state of matter (solid, liquid, gas).</li> <li>• I know how some materials contain state.</li> <li>• I explore how materials can change shape.</li> <li>• I measure the temperature at which materials change state.</li> <li>• I know about the water cycle</li> <li>• I know the part played by evaporation and condensation in the water cycle.</li> </ul> <p><b><u>Physics</u></b>  <b>Sound</b></p> <ul style="list-style-type: none"> <li>• I know how sound is made.</li> </ul>	<ul style="list-style-type: none"> <li>• I explain causal relationships in an enquiry.</li> <li>• I know how to relate the outcome from an inquiry to scientific knowledge in order to state whether evidence supports or refutes an argument or theory.</li> <li>• I read, spell and pronounce scientific vocabulary accurately.</li> </ul> <p><b><u>Biology</u></b>  <b>Living things and their habitats</b></p> <ul style="list-style-type: none"> <li>• I know the life cycle of different living things, e.g. mammal, amphibian, insect and bird.</li> <li>• I know the differences between different life cycles.</li> <li>• I know the process of reproduction in plants.</li> <li>• I know the process of reproduction in animals.</li> </ul> <p><b>Animals including humans</b></p> <ul style="list-style-type: none"> <li>• I create a timeline to indicate stages of growth in humans.</li> </ul> <p><b><u>Chemistry</u></b>  <b>Properties and changes of materials</b></p> <ul style="list-style-type: none"> <li>• I compare and group materials based on their properties (e.g. hardness, solubility, transparency, conductivity, [electrical &amp; thermal], and response to magnets).</li> <li>• I know how a material dissolves to form a solution; explaining the process of dissolving.</li> <li>• I know and show how to recover a substance from a solution.</li> <li>• I know how some materials can be separated.</li> <li>• I demonstrate how materials can be separated (e.g. through filtering, sieving and evaporating).</li> <li>• I know and can demonstrate that some changes are reversible and some are not.</li> <li>• I know how some changes result in the formation of a new material and that this is usually irreversible.</li> <li>• I know about reversible and irreversible changes.</li> <li>• I give evidenced reasons why materials should be used for specific purposes.</li> </ul> <p><b><u>Physics</u></b>  <b>Earth and Space</b></p> <ul style="list-style-type: none"> <li>• I know about and can explain the movement of the Earth and other planets relative to the Sun.</li> <li>• I know about and can explain the movement of the Moon relative to the Earth.</li> <li>• I know and demonstrate how night and day are created.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain causal relationships in an inquiry.</li> <li>• I know how to relate the outcome from an enquiry to scientific knowledge in order to state whether evidence supports or refutes an argument or theory.</li> <li>• I read, spell and pronounce scientific vocabulary accurately.</li> </ul> <p><b><u>Biology</u></b>  <b>Living things and their habitats</b></p> <ul style="list-style-type: none"> <li>• I classify living things into broad groups according to observable characteristics and based on similarities and differences.</li> <li>• I know how living things have been classified.</li> <li>• I give reasons for classifying plants on animals in a specific way.</li> </ul> <p><b>Animals including humans</b></p> <ul style="list-style-type: none"> <li>• I identify and name the main parts of the human circularity system.</li> <li>• I know the function of the heart, blood vessels and blood.</li> <li>• I know the impact of diet, exercise, drugs and lifestyle on health.</li> <li>• I know the ways in which nutrients on water are transported in animals, including humans.</li> </ul> <p><b>Evolution and inheritance</b></p> <ul style="list-style-type: none"> <li>• I know how the Earth and living things have changed over time.</li> <li>• I know how fossils can be used to find out about the past.</li> <li>• I know about reproduction and offspring (recognise in that offspring normally vary and are not identical to their parents).</li> <li>• I know how animals and plants are adapted to suit their environment.</li> <li>• I link adaptation overtime to evolution.</li> <li>• I know about evolution and can explain what it is.</li> </ul> <p><b><u>Chemistry</u></b>  <b><u>Physics</u></b>  <b>Light</b></p> <ul style="list-style-type: none"> <li>• I know how light travels.</li> <li>• I know and demonstrate how we see objects.</li> <li>• I know why shadows have the same shape as the object that casts on them.</li> <li>• I know how simple optical instruments work, e.g. periscope. telescope, binoculars, mirror, magnifying glass etc.</li> </ul> <p><b>Electricity</b></p>
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<ul style="list-style-type: none"> <li>• I know how sound travels from a source to our ears.</li> <li>• I know how sounds are made, associating some of them with vibrating.</li> <li>• I know the correlation between pitch and the object producing a sound.</li> <li>• I know the correlation between the volume of a sound and the strength of the vibrations that produced it.</li> <li>• I know what happens to a sound as it travels away from its source.</li> </ul> <p><b>Electricity</b></p> <ul style="list-style-type: none"> <li>• I identify and name appliances that require electricity to function.</li> <li>• I construct a series circuit.</li> <li>• I identify a name the components in a series circuit (including cells, wires, bulbs, switches and buzzers).</li> <li>• I know how to draw a circuit diagram.</li> <li>• I predict and test whether a lamp will light within a circuit.</li> <li>• I know the function of a switch in a circuit. I know the difference between a conductor and an insulator; giving examples of each.</li> </ul>	<ul style="list-style-type: none"> <li>• I describe the Sun, Earth and Moon (using the term spherical).</li> </ul> <p><b>Forces</b></p> <ul style="list-style-type: none"> <li>• I know what gravity is and its impact on our lives.</li> <li>• I identify and know the effect of air resistance.</li> <li>• I identify and know the effect of water resistance.</li> <li>• I identify and know the effect of friction.</li> <li>• I explain how levers, pulleys and gears allow a smaller force to have a greater effect.</li> </ul>	<ul style="list-style-type: none"> <li>• I know how the number &amp; voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer.</li> <li>• I compare and give reasons for why components work and do not work in a circuit.</li> <li>• I draw circuit diagrams using correct symbols.</li> </ul>
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## Appendix – Progression of Language

EYFS - Reception	Year 1	Year 2	Year 3
<p><b>Plants:</b> Seed, Plant, Grow, Change, Fruit, Vegetable</p> <p><b>Animals including humans:</b> Human,,Animal, Head, Ear, Eye, Mouth, Nose, Face, Hair, Baby, Child, Boy, Girl, Man, Woman, Parent, Family,</p> <p><b>Materials:</b> Touch, Shiny, Hard, Rough</p> <p><b>Seasonal Changes:</b> Weather, Seasons</p>	<p><b>Plants:</b> Trees, Deciduous, Evergreen, Roots, Trunk, Bark, Branch, Leaves, Wild plants, Garden Plants, Bulb, Seed, Stem, Petals</p> <p><b>Animals including humans:</b> Fish, Reptiles, Mammals, Birds, Amphibians (+ examples of each) Herbivore, Omnivore, Carnivore, Leg, Arm, Elbow, Head, Ear, Nose, Back, Wings, Beak</p> <p><b>Everyday Material:</b> Wood, Plastic, Glass, Paper, Water, Metal, Rock, Hard, Soft, Bendy, Rough, Smooth</p> <p><b>Seasonal Changes:</b> Summer, Spring, Autumn, Winter, Sun, Day, Moon, Night, Light, Dark</p> <p><b>Working Scientifically:</b> What...?, How ....?, Why ...?, similar, different, best and worst, change, plan, look, biggest and smallest, compare, sort and group</p>	<p><b>Plants:</b> Seeds, Bulbs, Plants, Dispersal, Pollination, Germination, Water, Light, Suitable temperature, Growth, Healthy, Decompose</p> <p><b>Animals including humans:</b> Survival, Water, Air, Food, Adult, Baby, Offspring, Kitten, Calf, Puppy, Exercise, Hygiene</p> <p><b>Living things and their habitats:</b> Living, Dead, Habitat, Energy, Food chain, Predator, Prey, Woodland, Pond, Desert</p> <p><b>Materials:</b> Hard, Soft, Stretchy, Stiff, Shiny, Dull, Rough, Smooth, Bendy, Waterproof, Absorbent, Opaque, Transparent Brick, Paper, Fabrics, Squashing, Bending, Twisting, Stretching Elastic, Foil</p> <p><b>Working Scientifically:</b> Observe, change, slowly, quickly, describe, name Identify, label, record, measure, bigger and smaller Pattern, notice, cycle, predict</p>	<p><b>Plants:</b> Air, Light, Water, Nutrients, Soil, Reproduction, Transportation, Dispersal, Pollination, Flower</p> <p><b>Animals including humans:</b> Movement, Muscles, Bones, Skull, Nutrition, Skeletons,</p> <p><b>Rocks:</b> Fossils, Soils, Sandstone, Granite, Marble, Pumice, Crystals, sedimentary, metamorphic, igneous, absorbent/porous, durable, permeable, impermeable</p> <p><b>Light:</b> Light, Shadows, Mirror, Reflective, Dark, Reflection, light source, cast</p> <p><b>Forces and Magnets:</b> Force, push, pull, open, surface, magnet, magnetic, attract, repel, magnetic poles, North, South</p> <p><b>Working Scientifically:</b> Gradually, identify, observe, recognise Investigate, record, units, table, fair, evidence Research, length, observations, prediction</p>
Year 4	Year 5	Year 6	
<p><b>Animals including humans:</b> : Mouth, Tongue, Teeth, Oesophagus, Stomach, Small Intestine, Large Intestine, Herbivore, Carnivore, Canine, Incisor, Molar</p> <p><b>Living things and their habitats:</b> Vertebrates, Fish, Amphibians, Reptiles, Birds, Mammals, Invertebrates, Snails, Slugs, Worms, Spiders, Insects, Environment, Habitats</p> <p><b>States of Matter-</b> Solid, Liquid, Gas, Evaporation, Condensation, Particles, Temperature, Freezing, Heating, Precipitation</p> <p><b>Sound:</b> Volume, Vibration, Wave, Pitch, Tone, Speaker</p> <p><b>Electricity:</b> Cells, Wires, Bulbs, Switches, Buzzers, Battery, Circuit, Series, Conductors, Insulators, brightness</p> <p><b>Working Scientifically:</b> Similarities, differences, research and source, scientists, discovery, process, cycle, measurements, conclude, evaluate, rank, plan, vary, keep the same/constant, bar graph, table, tally</p>	<p><b>Animals including humans:</b> Foetus, Embryo, Womb, Gestation, Baby, Toddler, Teenager, Elderly, Growth, Development, Puberty; Circulatory, Heart, Blood Vessels, Veins, Arteries, Oxygenated, Deoxygenated, Valve, Exercise, Respiration</p> <p><b>Living things and their habitats:</b> Mammal, Reproduction, Insect, Amphibian, Bird, Offspring; Classification, Vertebrates, Invertebrates, Microorganisms, Amphibians, Reptiles, Mammals, Insects</p> <p><b>Properties and Changes of States</b> Hardness, Solubility, Transparent, Opaque, Translucent, Magnetic, Filter, Evaporation, Dissolving, Mixing, Thermal conductor, thermal insulator, electrical conductor, electrical insulator</p> <p><b>Forces and Magents:</b> Air resistance, Water resistance, Friction, Gravity, Newton, Gears, Pulleys, lever, force, pivot (fulcrum)</p>	<p><b>Animals including humans:</b> Nutrients, Organs, Muscles, Veins, Blood vessel, Blood, Arteries</p> <p><b>Living things and their habitats:</b> Arachnid, Reptile, Amphibian, Crustaceans, Vertebrate, Invertebrate, Bird</p> <p><b>Evolution and Inheritance:</b> Fossils, Adaptation, Evolution, Characteristics, Reproduction, Genetics, Inherit</p> <p><b>Light:</b> Light source, Reflection, Refraction, Spectrum, Shadow, Light</p> <p><b>Electricity:</b> Voltage, Switch, Current, Cell, Conductor, Circuit, Buzzer, Bulb</p> <p><b>Energy and Climate Change:</b> greenhouse effect emissions climate change sustainable solar power wind power hydro power fossil fuels carbon dioxide</p> <p><b>Working Scientifically:</b> Hypothesis, variable, constants, evaluate, plan, conclude Interpret, classify, categorise, database, enquiry, control Repeat, support, refute, degree of trust, scatter graph</p>	

	<p><b>Earth and Space:</b> Earth, Sun, Moon, Axis, Rotation, Day, Night, Phases of the Moon, star, constellation, waxing, waning, full, new, year, month,</p> <p><b>Working Scientifically:</b> Classify, interpret, pattern, relationship, prediction, analyse, Interpret, conclude, evaluate, rank, variable, constants, control Repeat, key, relationship, line graph.</p>	
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