



Curriculum Handbook  
Key Stage 1 and Key Stage 2  
Science

# Science Curriculum Statement

## Intent

The aim of Science at Eynsham Community Primary School is for our children to be engaged, curious, ambitious and reflective. Our Science lessons aim to start by getting children thinking deeply about science, often through a warm-up activity such as 'Odd One Out' or 'Positive, Negative, Interesting'.

Our lessons always include a main learning objective, broken down into a knowledge ('I know that...') and a skills ('I know how...') objective. Recording in books should align specifically with these two learning objectives (children do not need to spend time recording the entirety of an investigation in their books).



Each unit of Science will begin with a KCV document (these have been carefully developed - with recent edits to all in the summer of 2024 - over time, combining the National Curriculum with our own vision and expectation for the teaching of science) being shared with the children. The document sets out what the children should have covered previously in relation to the topic, relevant vocabulary for their year group and beyond, and the knowledge and skills objectives that they will be aiming to achieve during that term. The KCV documents have been carefully designed to ensure appropriate progression from one year group to another. The scientific skills come from the National Curriculum expectations for Year 1-2, Year 3-4 and Year 5-6, but have been adapted to ensure progression occurs, whilst specific skills objectives are being met in each lesson. Teachers are encouraged to ensure that the teaching sequence provided allows children to cumulatively build knowledge and skills as they progress through the unit, and beyond.

At the beginning of each unit, the class shares their existing knowledge and what they would like to find out about during the unit. This is recorded in books immediately after the KCV. It is our intent that each term children will take part in as many investigations and experiments as is possible within their unit of science. This naturally varies, though, from one unit to another (e.g.

'Light' in Year 6 is a very practical unit, whereas 'Evolution and Inheritance' is not).

The children are to be actively encouraged to think of their own questions to investigate, both through our participation in the annual 'Big Science Event' (incorporated into Term 4's unit 'Working Scientifically') and through the modelling and guidance given to them in class.

Through the warm-up activities, group investigations and experiments, and through the sharing and understanding of scientific vocabulary, it is our intent to ensure that all children are engaged in science lessons, all children are being challenged, all children are making appropriate progress. To this end, different learners' needs are also to be met through the use of special weeks, inviting in specialists and scientific organisations to the school, and the use of video clips within class.



Where appropriate to do so, teachers are encouraged to leave the classroom to engage pupils in their lessons (for example, by making use of the school's marsh area during units of work on plants and animals). Teachers are asked to ensure that expectation is high for all of their pupils, with the appropriate provision put in place to allow all students to access the curriculum. This might come in the form of group work, carefully selected pairs, consistent targeted questioning, recording frames (where necessary) and vocabulary sheets. Adaptive teaching is incorporated, with the emphasis being on all pupils taking part in the same activities, and all pupils achieving to the very best of their ability). Through the use of tools such as Concept Cartoons (to set out ideas for discussion, prediction and investigation) and stories/anecdotes (to engage all pupils and give their work purpose), alongside the work we do with parents, community groups and local businesses and charitable organisations, it is our intent to ensure that all children engage with Science, and that many intend to pursue it as a hobby, area of study, or as a career in the future.

## Implementation

Science should be taught weekly at our school. Investigations and experiments should take place regularly in science lessons, with all pupils accessing the school's wide range of science resources (located both in the science cupboard and in the science lead's classroom). There will normally be a special science week or day at some point in the school year. Year 1-6 will also take part in the

annual 'Big Science Event' (incorporated into the fourth unit of work for each year group), which includes an EPA winner each year.



In their weekly lessons, teachers will regularly begin their lessons with a short, sharp warm-up activity (such as Odd One Out or Positive, Negative, Interesting). Teachers will sometimes use Concept Cartoons as inspiration for their investigations and experiments. Our children will develop an understanding of the notion of a 'fair test', and a follow-up 'investigation', with regular references being made as to the purpose and process of science in the wider world. Students will only record the relevant part (made clear by the learning objectives) of their investigation or experiment in their books.

Partner teachers will work together to ensure that they are clear about their subject knowledge for each unit of work. Teachers are encouraged to ask for time with the science lead to support them in the planning of particular units of science. This has been implemented to good effect in recent

years. Book looks will normally take place three times during the year to ensure that the quality of work being produced is of a high standard, and that pupils are engaging in investigation on a regular basis. The science lead will be involved in regular 'drop ins' to ensure that the delivery of lessons is consistent with our intent at Eynsham Community Primary School, with support being offered to any teachers where it is felt appropriate to do so.

Staff meetings allow for opportunities to reflect on book looks and drop ins, sharing good practice and clarifying for staff key areas for further development.

All teachers (Years 1-6) use the school's three tick assessment system in books, with our aim being to give children a solid understanding of how this works and how they can achieve high standards.



## Impact

The overall impact of science lessons at our school should be that children are knowledgeable, skilled, engaged, curious, ambitious and reflective. In other words, our children should enjoy their science lessons, with many pupils aspiring to become scientists, to study science at a higher level, and to see science as something that is both an exciting and essential part of their futures. Children should look forward to their science lessons, and should come to these sessions full of confidence, questions, and ideas for investigations. They should be able to talk confidently about their knowledge and their skills. Most pupils will achieve at least ARE by the end of key stage two, with lots of children being assessed at greater depth by the end of their time at primary school.

## Recording

All science work should be recorded in science books. Each unit will see a KCV being stuck into the books at the beginning of the unit, followed by pupils' initial (whole class) responses to the unit of work ('What I Already Know' + 'What I Would Like To Find Out'), then evidence of one lesson per week. Recording in books should align specifically with the learning objective (children do not need to spend time recording the entirety of an investigation in their books). Where at all possible, recording should be handwritten by pupils (worksheets are only used where it is

deemed more appropriate than handwritten work), of a high standard (underlined date, learning objective stuck in, piece of work or evidence of activity underneath), with diagrams (making use of a ruler when necessary) and tables drawn in pencil, but labelled/filled in in pen. In the event that a lesson only requires photographic evidence, a clear photograph should be stuck into the child's book, with appropriate details of what took place in the lesson typed underneath the picture/s.



Recording will sometimes include cross-curricular links (particularly to Maths, English, PSHE, DT and PE), but the focus in the science book should be on the science learning objective allocated to that lesson. Over time, pieces of work in books may include biographies, explanatory texts and non-chronological reports. There should also be clear progression of the recording of data handling, from pictograms through to Venn diagrams and line graphs.

## Assessment

Each lesson sees our teachers mark the children's work using green and pink pens. The teacher will place either one, two or three ticks next to the knowledge objective and the skills objective. 'Green to grow' comments are written on some pieces of work to give the children feedback or to further challenge/assess their understanding. One tick indicates that the child is working towards ARE, two ticks indicates working at ARE and three ticks tells us that the child has achieved the objective to a standard of greater depth.

At the end of each unit, pupils will complete an assessment paper. This is written by the teachers (using an assessment resource as a starting point) and will include coverage of both the knowledge and the skills that have been learnt during the unit of work. Teachers record the scores for each student in their class on a spreadsheet in a shared drive, which is monitored by the science lead.

At the school's three key assessment points (AP1, AP2 and AP3), teachers will use a combination of the ticks that they have allocated to learning objectives in books, with the assessments carried out at the end of each unit, to inform them of their teacher assessment level for that point in the year. This system (trials and adopted in the academic year of 2023-24) has enabled teachers to feel particularly secure in their judgements, and well-informed as to which pupils and which objectives they need to address moving forward. This might come in the form of increased key questioning of

certain pupils, ensuring that adaptive teaching strategies are allowing all students to be challenged and make progress, reviewing certain areas of knowledge in starter activities, and addressing key skills from lesson to lesson.

Towards the end of Year 6, pupils complete a science sample SATs paper, to further inform end of key stage two assessment.

## Inclusion

In our science lessons, our teachers aim to ensure that every child is valued, every child is challenged and every child is appropriately supported. All children work towards the same (knowledge and skills) learning objectives, with high-expectation for all. Adaptive teaching strategies are implemented to support learners. The use of vocabulary banks, carefully selected

seating partners and groups, providing stimulus such as Concept Cartoons of staff members, offering additional structuring and support with some written recording, and ensuring that experiments and investigations are at the heart of our learning, are all part of the class teacher's consideration when preparing their lessons.

## Cultural Capital

At our school we want every child to enjoy science, every child to experience science, and every child to understand that there are lots of opportunities (globally, nationally and locally) for them to become the scientists and engineers of the future.

Eynsham Community Primary School strives to showcase the wide range of future professions available to pupils in the fields of science and

engineering. Every year, we host a science week where parents, local science and engineering companies, local educational establishments and paid organisations visit the school to work with the children and share their passion and expertise in the world of science and engineering.

The school also takes part in Science Oxford's annual 'Big Science Event', giving pupils the opportunity to devise their own lines of scientific enquiry. The Eynsham Partnership Academy also hosts its own annual final for this event, inviting teams from our local primary schools to take part in a showcase of investigation and scientific presentation.

We hold strong links with Science Oxford, with our aim being that each child either visits their centre or is visited by one of their experts for a workshop or show, each academic year.

## EYFS

Science at Foundation Stage is covered in the **'Understanding the World'** area of the EYFS Curriculum. It is introduced indirectly through a variety of activities that encourage every child to explore, problem solve, observe, predict, think, make decisions and talk about the world around them.

During their first years at school, our children will explore creatures, people, plants and objects in their natural environments. They will observe and manipulate objects and materials to identify differences and similarities. Pupils will also learn to use their senses, for example, feeling the texture of dough or listening to sounds in the environment, such as sirens or farm animals. They will make observations of animals and plants and explain why some things occur whilst talking about changes. Children will be encouraged to ask questions about why things happen and how things work. They might do activities such as increasing the incline of a slope to observe how fast a vehicle travels, or opening a mechanical toy to see how it works. Children will also be asked questions about what they think will happen, to help them communicate, plan, investigate, record and evaluate findings.

### Our Continuous Provision:

These are the activities that are available, linked to the children's ongoing needs:

- Water tray (floating, sinking, absorbency of materials)
- Sand tray/pit (consistency of materials, role play)
- Bug hunts (mats/logs to turn over, wild flowers and long grass)
- Construction area (junk modelling, different types of materials)
- Growing area (seeds, plants, minibeasts)
- Texture kitchen (consistency of materials, scented herbs, stones, minibeasts)
- Stage performance area (musical instruments and sound)
- Small world (different animals, props, dolls' house)
- Playdough area (birthday props/cake decorations to encourage talk about changing and growing)

### Our Enhanced Provision

Each week we set up different opportunities for children to access independently during exploring time. These are often based on the weekly text, to provide a hook.

At other times they may be linked to the topic, for example 'Come Outside', where children would look at a variety of texts to learn about what plants need to grow, the planting of a seed, the life cycle of a plant

(linking to the life cycle of an animal), and observing growth over time.

Small world play with props encourages children to talk about where animals live, how to look after them and different environments. Using dolls' house characters and furniture may give children opportunities to talk about families and changes.

Key to this provision is the adults' responses and questioning, encouraging children to give explanations about what is happening.

Sometimes there may be a challenge, for example The Bear Hunt – Can you create a new home for the bear? Children would use different materials and construction kits to build suitable homes.

### Assessment in EYFS

Pupils in EYFS are assessed in science as part of their wider, ongoing assessment. This is conducted using the documents 'Pre School Assessment Snapshots' and 'Reception Assessment Snapshot'.

### The Curriculum in EYFS

Our curriculum for the EYFS is set out in our Early Years Handbook, and within skills and knowledge progression documents (see New Curriculum) for Cygnets (aged 2-3), Ducklings (aged 3-4) and Foundation (Robins and Kingfishers) - in particular, Understanding The World.

## Curriculum Overview

Topics covered within each year group.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 1</b>	<a href="#"><u>Science KCV Year 1 Everyday Materials</u></a>	<a href="#"><u>Science KCV Year 1 Seasonal Changes</u></a>	<a href="#"><u>Animals Including Humans</u></a>	Working Scientifically	<a href="#"><u>Science KCV Year 1 Plants</u></a>	<a href="#"><u>Science KCV Year 1 Investigating Forces</u></a>
<b>Year 2</b>	Everyday Materials	Animals, Including Humans	Living Things and Their Habitats	Working Scientifically	Plants	Biodiversity
<b>Year 3</b>	Forces and Magnets	Rocks	Animals, Including Humans	Working Scientifically	Plants	Light
<b>Year 4</b>	Sound	Electricity	Living Things and Their Habitats	Working Scientifically	Biodiversity	States of Matter
<b>Year 5</b>	Forces	Animals, Including Humans	Earth and Space	Working Scientifically	Properties and Changes of Materials	Living Things and Their Habitats
<b>Year 6</b>	Electricity	Light	Living Things and Their Habitats	Working Scientifically	Evolution and Inheritance	Animals, Including Humans

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Everyday Materials	Seasonal Changes	Animals, Including Humans	Working Scientifically	Plants	Investigating Forces
Year 2	Everyday Materials	Animals, Including Humans	Living Things and Their Habitats	Working Scientifically	Plants	Biodiversity
Year 3	Forces and Magnets	Rocks	Animals, Including Humans	Working Scientifically	Plants	Light
Year 4	Sound	Electricity	Living Things and Their Habitats	Working Scientifically	Biodiversity	States of Matter
Year 5	Forces	Animals, Including Humans	Earth and Space	Working Scientifically	Properties and Changes of Materials	Living Things and Their Habitats
Year 6	Electricity	Light	Living Things and Their Habitats	Working Scientifically	Evolution and Inheritance	Animals, Including Humans

Area of science covered.

## Progression Documents

Plants						
Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p>L1) I can devise a simple test to see if a vegetable seed grows the same in two carefully selected locations. 1a) I know that vegetable seeds may grow better indoors at first.</p> <p>L2) I can identify the different reasons why people grow plants. 2a) I know that plants provide us with a number of different benefits.</p> <p>L3) I can describe the basic structure of a tree.</p>	<p>L1) I can carry out a fair test, explaining how I have controlled my variables. 1a) I know that to make my test fair I will only change one variable.</p> <p>L2) I can find out and describe how plants need water to grow and stay healthy. 2a) I know that plants need water, light and a suitable temperature to grow and stay healthy.</p> <p>L3) I can find out and describe how plants need light to grow and stay healthy.</p>	<p>L1) I can explore the requirements of plants for life and growth. 1a) I know that plants have certain requirements.</p> <p>L2) I can identify and describe the functions of different parts of flowering plants. 2a) I know that the roots, stem, leaves and flowers all have a specific function.</p> <p>L3) I can label the parts of a flower in more detail. 3a) I know that plants have male and female parts.</p>			

	<p>3a) I know that most trees have a trunk, leaves, roots, bark, branches and flowers.</p> <p>L4) I can identify the difference between deciduous and evergreen trees.</p> <p>4a) I know that evergreen trees keep their leaves through all of the seasons.</p> <p>L5) I can identify a number of different trees.</p> <p>5a) I know that trees can be identified by their leaves, shape, fruit and seeds.</p> <p>L6) I can use my observations and data to conclude the answer to a question.</p> <p>6a) I know that my conclusion needs to refer to the data I have gathered.</p>	<p>3a) I know that roots tend to grow down and the shoot grows upwards.</p> <p>L4) I can explain how seed dispersal can happen by wind.</p> <p>4a) I know that seed dispersal allows plants to be more successful in growing new plants.</p> <p>L5) I can explain the process of germination.</p> <p>5a) I know that seeds produce a root and a shoot when germinating.</p> <p>L6) I can write a simple conclusion, referring to the data we have gathered.</p> <p>6a) I know that a conclusion can refer to data and observations.</p>	<p>L4) I can investigate the way in which water is transported in plants.</p> <p>4a) I know that water is transported up the stem and carries nutrients.</p> <p>L5) I can explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p> <p>5a) I know that animals can play a key part in pollination and dispersal.</p> <p>L6) I can use the data gathered in an investigation to write a conclusion.</p> <p>6a) I know that flowers require a suitable amount of water in order to grow.</p>			
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## Animals, Including Humans

Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p>L1) I can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. 1a) I know that animals can be grouped based on some observable features.</p> <p>L2) I can describe and compare the structure of a variety of common animals. 2a) I know that animals can be classified based on some observable (and internal) features and characteristics.</p>	<p>L1) I can explore the basic needs of animals, including humans, for survival. 1a) I know that some human needs are more essential than others.</p> <p>L2) I can describe the importance for humans of exercise. 2a) I know that exercise can have an impact on my body.</p> <p>L3) I can devise an investigation into human heart rates. 3a) I know that our heart rate can be measured in</p>	<p>L1) I can identify that animals (including humans) receive nutrition from the food they eat. 1a) I know that eating too much sugar and salt can be bad for humans.</p> <p>L2) I can identify that animals (including humans) need the right types and amounts of nutrition. 2a) I know that a balanced diet can include plenty of fruit, vegetables and carbohydrates.</p> <p>L3) I can construct and interpret food chains, identifying producers, predators and prey.</p>		<p>L1) I can describe the changes that develop through a human lifetime. 1a) I know that humans develop the most in the first part of their lives, but that changes continue to occur throughout a lifetime. L2) I can identify the changes experienced in puberty. 2a) I know that puberty occurs to enable humans to reproduce. L3) I can research and analyse the gestation periods of a range of mammals, including humans. 3a) I know that some mammals have a much longer</p>	<p>L1) I can identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. 1a) I know that our heart pumps oxygenated blood around the body.</p> <p>L2) I can describe the functions of blood and blood vessels. 2a) I know that human blood mainly comprises of plasma, red blood cells and white blood cells.</p> <p>L3) I can recognise the impact that exercise has on my body.</p>

	<p>L3) I can identify and name common animals that are carnivores, herbivores and omnivores. 3a) I know that some animals eat only meat, some animals eat only plants, and some animals eat both.</p> <p>L4) I can identify, name, draw and label the basic parts of the human body. 4a) I know that the human body has bones and organs inside it.</p> <p>L5) I can identify which part of the human body is associated with each sense. 5a) I know that different parts of the human body are associated with each sense.</p>	<p>different parts of our body. L4) I can write a conclusion using the evidence that I have gathered. 4a) I know that we can get more accurate data with a wider pool of information.</p> <p>L5) I can describe the importance of eating the right amounts of different types of food. 5a) I know that a balanced diet involves different food groups.</p> <p>L6) I can notice that animals, including humans, have offspring which grow into adults. 6a) I know that all types of animals reproduce.</p>	<p>3a) I know that a food chain shows us how energy and nutrients move through an ecosystem.</p> <p>L4) can identify that humans and some other animals have skeletons and muscles for a purpose. 4a) I know that our skeleton and muscles offer us support, protection and movement.</p> <p>L5) I can report on the findings from an enquiry, referring to the evidence I have gathered. 5a) I know that an investigation must be conducted fairly.</p>		<p>gestation period than others and can research why this might be. L4) I can identify the different types of teeth in humans and their simple functions. 4a) I know that humans have different types of teeth that serve different purposes. L5) I can describe the simple functions of the basic parts of the digestive system in humans. 5a) I know that there are a number of mechanical and chemical steps that the body takes to break down and distribute our food. L6) I can devise and carry out an investigation into the rate of human digestion. 6a) I know that different foods are digested at different rates.</p>	<p>3a) I know that exercise increases the size of the heart's chambers, allowing it to pump more efficiently, allowing blood vessels to expand, and lowering blood pressure.</p> <p>L4) I can recognise the impact that smoking can have on humans. 4a) I know that smoking can damage the organs in my body.</p> <p>L5) I can describe the way in which water and nutrients are transported in humans. 5a) I know that water and nutrients are transported in our blood.</p>
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## Living Things And Their Habitats

Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		<p>L1) I can explore and compare the differences between things that are living, dead, and things that have never been alive. 1a) I know that there are some simple things that living things do (or have done).</p> <p>L2) I can identify and name a variety of animals in their habitats, including microhabitats. 2a) I know that a habitat is the natural home or environment (area) of a plant, animal, or other organism.</p> <p>L3) I can identify that most living things live in habitats to which they are suited.</p>		<p>L1) I can identify and name a variety of living things in the local and wider environment. 1a) I know that there are many species of animal living on our school site. L2) I can recognise that living things can be grouped in a variety of ways. 2a) I know that animals can be grouped together because they have the same characteristics. L3) I can explore and use classification keys. 3a) I know that a classification key can be used to identify and group living things.</p>	<p>L1) I can describe and compare the life cycles of other mammals with humans. 1a) I know that humans are mammals and have similar life cycles to many mammals. L2) I can describe the similarities and differences between the life cycles of a mammal, an insect, a bird and an amphibian. 2a) I know that we can classify living things based upon criteria including their life cycles. L3) I can describe the life process of reproduction in some plants.</p>	<p>L1) I can classify some trees based on the observable features of their leaves. 1a) I know that the leaves of plants can have several different functions. L2) I can use the (observable) features of animals to group and classify them. 2a) I know that animals are classified based on external and internal features. L3) I can create a classification key based on an animal's characteristics. 3a) I know that closed questions will be required in order to separate</p>

		<p>3a) I know that most living things live where they do for very good reasons.</p> <p>L4) I can describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.</p> <p>4a) I know that living things depend on each other in their habitat.</p> <p>L5) I can 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.</p> <p>5a) I know that a food chain shows which animal eats which other animal or plant.</p>		<p>L4) I can create my own simple classification key.</p> <p>4a) I know that my classification key must include closed questions with 'yes'/'no' answers.</p> <p>L5) I can recognise that environments can change and pose dangers to living things.</p> <p>5a) I know that environmental changes are having an impact on animals' habitats.</p>	<p>3a) I know that plant reproduction can involve germination, pollination, fertilisation and dispersal.</p> <p>L4) I can research the life and work of David Attenborough.</p> <p>4a) I know that David Attenborough is a naturalist, writer and broadcaster.</p> <p>L5) I can write a biography of the life and work of David Attenborough.</p> <p>5a) I know that David Attenborough has raised awareness on the impact of human behaviour on our planet.</p>	<p>the animals I carefully select.</p> <p>L4) I can write a detailed non-chronological report about an animal.</p> <p>4a) I know that an animal's characteristics and behaviours can be analysed in my report.</p> <p>L5) I can research the work of the scientist Carl Linnaeus.</p> <p>5a) I know that Carl Linnaeus developed a new classification system.</p>
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## Biodiversity

Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		<p>L1) I can ask simple questions and recognise that they can be answered in different ways. 1a) I know that insects are very important to our planet.</p> <p>L2) I can explain how different habitats can provide different benefits to different animals. 2a) I know that a habitat is a place where an animal or plant normally lives.</p> <p>L3) I can identify a range of different birds in and around our school site.</p>		<p>L1) can research the needs of vegetables that we are planting. 1a) I know that several factors impact how well a vegetable might grow.</p> <p>L2) I can write a non-chronological report about hedgehogs, explaining how people can help to maintain their numbers. 2a) I know that human behaviour is having an impact on hedgehog numbers.</p> <p>L3) I can explain why bees are so important as pollinators. 3a) I know that animals play an</p>		

		<p>3a) I know that birds play a very important role within their habitat.</p> <p>L4) I can observe closely and answer questions to explain why bees are so important for our ecosystems.</p> <p>4a) I know that bees are very important as pollinators.</p> <p>L5) I can use my observations to scientifically analyse a proposal.</p> <p>5a) I know that building new buildings and roads can have an impact on animals and plants.</p>		<p>important role in pollination.</p> <p>L4) I can explore and create simple classification diagrams.</p> <p>4a) I know that classification diagrams allow scientists to organise and better understand similarities and differences among organisms.</p> <p>L5) I can explain what an ecosystem is.</p> <p>5a) I know that organisms within an ecosystem rely upon each other.</p> <p>L6) I can explain the impact that an invasive species can have on an ecosystem.</p> <p>6a) I know that some animals can have a negative impact when introduced to a new habitat.</p>		
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## Evolution And Inheritance

Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
						<p>L1) I can recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.</p> <p>1a) I know that fossils tend to be found in sedimentary rocks.</p> <p>L2) I can examine evidence of Darwin's theories of evolution, adaptation and natural selection.</p> <p>2a) I know that Darwin gathered evidence for his theories on a long voyage to South America.</p> <p>L3) I can recognise that living things</p>

						<p>produce offspring of the same kind.</p> <p>3a) I know that normally offspring vary and are not identical to their parents.</p> <p>L4) I can compare different species of penguin, identifying and explaining their environmental adaptations.</p> <p>4a) I know that there are many different species of penguin.</p> <p>L5) I can explain the adaptations made by camels to suit the environment that they live in.</p> <p>5a) I know that camels have made very specific adaptations to help them to thrive.</p>
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## Seasonal Changes

Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p>L1) I can create equipment to measure the weather with. 1a) I know that my equipment will need to be strong as it will be outside.</p> <p>L2) I can gather and record data about the weather. 2a) I know that my measurements need to be accurate.</p> <p>L3) I can observe and describe weather associated with the seasons. 3a) I know that in one season the weather might differ from one day to another.</p>					

	<p>L4) I can understand how day length varies across seasons. 4a) I know that it is light for more hours in a day in the summer.</p> <p>L5) I can observe changes across the four seasons. 5a) I know that the weather in the United Kingdom can be different in the summer, autumn, winter and spring.</p> <p>L6) I can use my observation skills in order to answer a question. 6a) I know that it rains more on some days than on others.</p>					
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## Forces

Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p>L1) I can investigate the force of gravity. 1a) I know that gravity is an invisible force that pulls objects down to the floor.</p> <p>L2) I can write a simple conclusion to an investigation that we have devised. 2a) I know that the movement of a car can be slowed down by other forces.</p> <p>L3) I can devise a fair investigation into pushing (by kicking a ball). 3a) I know that air resistance and friction are forces.</p>		<p>L1) I can identify whether a material is magnetic or not. 1a) I know that magnetic forces can act at a distance.</p> <p>L2) I can observe how magnets attract or repel each other. 2a) I know that bar magnets have a north-seeking pole and a south-seeking pole.</p> <p>L3) I can devise an investigation into the strength of magnets. 3a) I know that in a fair test I will be changing one (independent) variable.</p>		<p>L1) I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. 1a) I know that gravity enables the Earth to orbit the Sun, whilst the Earth's gravity pulls objects towards its core.</p> <p>L2) I can identify the effects of air resistance on a moving object. 2a) I know that air resistance is a type of friction between air and another material which opposes an object's motion.</p> <p>L3) I can devise and carry out an investigation into friction. 3a) I know that friction is a force that</p>	

	<p>L4) I can devise a fair investigation into pulling. 4a) I know that air resistance and friction are forces.</p> <p>L5) I can think of a question to investigate about floating and sinking. 5a) I know that gravity causes some items to sink in water.</p>		<p>L4) I can carry out a fair test into the strength of magnets. 4a) I know that some magnets can be stronger than others.</p> <p>L5) I can devise an investigation into how well a magnet works on different surfaces. 5a) I know that other forces can oppose the impact of a magnet on an object.</p> <p>L6) I can devise my own investigation into the impact of wrapping a magnet in different materials. 6a) I know that wrapping a magnet in a material will impact its effectiveness.</p>		<p>resists the movement of a moving object.</p> <p>L4) I can plan an enquiry to answer a question, including recognising and controlling variables where necessary. 4a) I know that water resistance is a type of friction between water and another material which opposes an object's motion.</p> <p>L5) I can research the role Sir Isaac Newton played in developing the theory of gravitation. 5a) I know that he showed us that the force that holds us on the ground (gravity) is the same as the force that keeps the moon and planets in their orbits.</p> <p>L6) I can prove that a smaller force can have a greater effect if a pulley is used. 6a) I know that pulleys allow a smaller force to have a greater effect.</p>	
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## Light

Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			<p>L1) I can identify natural and manmade sources of light. 1a) I know that some things naturally produce light, whereas other sources of light are created by humans.</p> <p>L2) I can recognise that we need light in order to see things and that dark is the absence of light. 2a) I know that without a source of light everyday objects cannot be seen.</p> <p>L3) I can notice that light is reflected from surfaces. 3a) I know that light travels in straight lines and reflects off surfaces.</p>			<p>L1) I can recognise that light appears to travel in straight lines. 1a) I know that light travels in straight lines.</p> <p>L2) I can plan a scientific investigation, enabling me to answer a question. 2a) I know that shadow sizes can vary depending upon a variety of factors.</p> <p>L3) I can take measurements using a range of scientific equipment, including a light meter/data logger. 3a) I know that translucent materials enable some light to pass through.</p>

			<p>L4) I can recognise that shadows are formed when the light from a light source is blocked by an opaque object. 4a) I know that an opaque object is required for a solid shadow to be formed.</p> <p>L5) I can find patterns in the way that the size of shadows change. 5a) I know that shadows become larger when you move an opaque object closer to a light source.</p> <p>L6) I can recognise that light from the sun can be dangerous and that there are ways to protect my eyes. 6a) I know that it is not safe to look directly at the sun, even when wearing dark glasses.</p>			<p>L4) I can explain how we see things when light travels in straight lines, reflecting off these objects. 4a) I know that light can be reflected at an angle to enable us to see around corners.</p> <p>L5) I can explain how the human eye works. 5a) I know that light travels from a light source, to an object, to the human eye, before the image is interpreted by the brain.</p>
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## Electricity

Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				<p>L1) I can identify common appliances that run on electricity. 1a) I know that many appliances around my home and school run on electricity.</p> <p>L2) I can construct and explain a simple series electrical circuit. 2a) I know that different components need to be wired together to create a simple circuit.</p> <p>L3) I can recognise that a switch opens and closes a circuit. 3a) I know that closing the switch can 'complete' the circuit.</p>		<p>L1) I can use recognised symbols when representing a simple circuit in a diagram. 1a) I know that the symbols in a circuit diagram represent different components in an electrical circuit.</p> <p>L2) I can explain how voltage can affect a circuit. 2a) I know that voltage will have an impact on the component it is powering.</p> <p>L3) I can plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. 3a) I know that I will need to be clear</p>

				<p>L4) I can identify and fix faults in a circuit. 4a) I know that each component needs to work for a circuit to be complete.</p> <p>L5) I can recognise some common conductors and insulators. 5a) I know that some materials conduct electricity and others are insulators.</p> <p>L6) I can devise my own enquiry into a question I have about electrical circuits. 6a) I know that only one variable should be changed in order to conduct a fair test.</p>		<p>about my controlled variables.</p> <p>L4) I can write a conclusion to an investigation. 4a) I know that voltage will have an impact on power output.</p> <p>L5 ) I can write a conclusion to analyse my findings. 5a) I know that a current runs through electrical wires.</p> <p>L6) I can explain how electricity can be very dangerous. 6a) I know that electricity can be very dangerous.</p>
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## Sound

Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				<p>L1) I can identify how sounds are made, associating some of them with something vibrating.</p> <p>1a) I know that sounds are caused by vibrations in the air.</p> <p>L2) I can recognise that vibrations from sounds travel through a medium to the ear.</p> <p>2a) I know that sound waves travel through a medium (e.g. air, water).</p> <p>L3) I can find patterns between the volume of a sound and the</p>		

				<p>strength of the vibrations that produced it.</p> <p>3a) I know that large amplitude sound waves are louder.</p> <p>L4) I can set up a simple practical enquiry to investigate the relationship between volume and the distance from the source of a sound.</p> <p>4a) I know that sounds get fainter as the distance from the sound source increases.</p> <p>L5) I can find patterns between the pitch of a sound and features of the object that produced it.</p> <p>5a) I know that there are low and high pitched sounds.</p>		
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## Earth And Space

Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					<p>L1) I can describe the Sun, Earth and Moon as approximately spherical bodies.                      1a) I know that the Earth has been proven to be a sphere.</p> <p>L2) I can describe the movement of the Earth and other planets relative to the Sun.                      2a) I know that the Earth spins on its own axis and orbits the Sun (the heliocentric model).</p> <p>L3) I can describe the movement of</p>	

					<p>the Moon relative to the Earth.</p> <p>3a) I know that the Moon orbits the Earth (as the Earth orbits the Sun).</p> <p>L4) I can use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky.</p> <p>4a) I know that the Earth spins on its own axis every 24 hours causing night and day.</p> <p>L5) I can explain the time zones of the Earth in relation to its rotation.</p> <p>5a) I know that time zones are a necessity for a number of reasons.</p>	
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## Materials

Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p>L1) I can identify and name a variety of everyday materials. 1a) I know that common materials include wood, plastic, glass, metal, water and rock.</p> <p>L2) I can identify and classify objects made from a single material. 2a) I know that a material is a different thing to an object.</p> <p>L3) I can describe the simple physical properties of a variety of everyday materials. 3a) I know that different materials might have different properties.</p>	<p>L1) I can find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. 1a) I know that some materials can be changed by squashing, bending, twisting and stretching.</p> <p>L2) I can identify and compare the suitability of the materials used to make different spoons. 2a) I know that a spoon is an object, whilst plastic, wood, metal and glass are materials.</p> <p>L3) I can compare the suitability of different materials</p>			<p>L1) I can compare and group together everyday materials on the basis of their properties. 1a) I know that key properties of materials can include their hardness, magnetism, conductivity, transparency and permeability.</p> <p>L2) I can give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials. 2a) I know that good insulators keep hot things hot and cold things cold.</p> <p>L3) I can investigate which materials dissolve to form a solution. 3a) I know that some materials will</p>	

	<p>L4) I can distinguish between an object and the material from which it is made.</p> <p>4a) I know that an object can be made of more than one material.</p> <p>L5) I can design a simple test in order to choose the best material for an object.</p> <p>5a) I know that different materials have different purposes and benefits.</p> <p>L6) I can perform a simple test in order to choose the best material for an object.</p> <p>6a) I know that a number of criteria are considered when choosing the materials to make something from.</p>	<p>for constructing a house.</p> <p>3a) I know that my chosen material will need to have multiple benefits.</p> <p>L4) I can compare and justify the suitability of different materials for a dog's winter coat.</p> <p>4a) I know that comfort and practicality will need to be considered.</p> <p>L5) I can investigate the flammability of different materials.</p> <p>5a) I know that fire spreads in the existence of the fire triangle.</p> <p>L6) I can find out about the inventor John Dunlop.</p> <p>6a) I know that he was the inventor of the pneumatic tyre.</p>			<p>dissolve in liquid to form a solution.</p> <p>L4) I can use my knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.</p> <p>4a) I know that different materials will require separating in different ways.</p> <p>L5) I can demonstrate that some changes can be reversible by changing their state.</p> <p>5a) I know that changing the temperature of a material can lead to a change of state.</p> <p>L6) I can explain that some changes are irreversible.</p> <p>6a) I know that some changes result in the formation of new materials, and that this kind of change is not usually reversible.</p>	
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## States Of Matter

Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				<p>L1) I can compare and group materials together, according to whether they are solids, liquids or gases.</p> <p>1a) I know that particles behave differently in solids, liquids and gases.</p> <p>L2) I can set up a fair test into evaporation.</p> <p>2a) I know that evaporation involves a liquid changing state into a gas.</p> <p>L3) I can observe that some materials change</p>		

				<p>state when they are heated or cooled.</p> <p>3a) I know that temperature can change the state of some materials.</p> <p>L4) I can research the melting point of different materials.</p> <p>4a) I know that different materials have different melting points.</p> <p>L5) I can set up a practical enquiry to investigate the melting point of different materials.</p> <p>5a) I know that different materials have different melting points.</p>		
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## Rocks

Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			<p>L1) I can compare and group together different types of rocks. 1a) I know that there are three basic types of rock.</p> <p>L2) I can make careful, systematic observations of rocks during an investigation. 2a) I know that we can test the durability, permeability and density of rocks.</p> <p>L3) I can make observations during an investigation. 3a) I know that rocks can be</p>			

			<p>eroded and transported.</p> <p>L4) I can recognise that soils are made from weathered rocks and organic matter.</p> <p>4a) I know that soil consists of a variety of things.</p> <p>L5) I can conduct a fair test into the permeability of different soils.</p> <p>5a) I know that different soils can have different levels of permeability.</p> <p>L6) I can describe how fossils are formed.</p> <p>6a) I know that fossils tend to be formed in sedimentary rocks.</p>			
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## Scientific Enquiry (Term 4)

Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p>L1) I can take part in a fair test, gathering data as a class.</p> <p>L2) I can write a simple conclusion to a class investigation.</p> <p>L3) I can devise a question to investigate as part of a team.</p> <p>L4) I can observe closely whilst performing a simple test/investigation, using equipment to help me to gather data.</p> <p>L5) I can record my data clearly,</p>	<p>L1) I can take part in a fair test, gathering data in a group.</p> <p>L2) I can write a conclusion to an investigation, referring to the data gathered.</p> <p>L3) I can devise and justify a question to investigate as part of a team.</p> <p>L4) I can perform a fair investigation, making reference to my variables, using scientific equipment to help me to gather</p>	<p>L1) I can explain what a fair test is and take part in one.</p> <p>L2) I can write a conclusion to an investigation, referring to the data gathered and stating what this proves.</p> <p>L3) I can devise a question to investigate, justifying its scientific merit, making predictions based on previous experience and scientific knowledge.</p> <p>L4) I can perform a fair investigation,</p>	<p>L1) I can gather, record and present data using tables, bar charts, line graphs or Venn diagrams (as appropriate).</p> <p>L2) I can write a conclusion to an investigation, referring to the data gathered, stating what this proves, and addressing any anomalies.</p> <p>L3) I can devise potential questions to investigate, justifying the scientific merit of my chosen investigation.</p>	<p>L1) I can take precise measurements, including repeat readings when it is deemed appropriate.</p> <p>L2) I can write a conclusion to an investigation, referring to the data gathered, stating what this proves, and addressing any anomalies.</p> <p>L3) I can collaborate with a team to devise purposeful questions to investigate, justifying the scientific merit of my chosen investigation.</p>	<p>L1) I can select an appropriate means by which to measure a gas, recording my measurement in more than one way.</p> <p>L2) I can write a conclusion, analysing data gathered, addressing any anomalies and justifying adjustments for follow-up experiments.</p> <p>L3) I can collaborate with a team in selecting potential questions to investigate, justifying the scientific merit of my chosen investigation.</p>

	<p>then share my findings in a simple conclusion. L6) I can produce a poster and share my findings with the class in a group presentation.</p>	<p>useful data, before recording this in accurate tables, graphs and charts. L5) I can write a conclusion to my investigation, making specific reference to the data we have gathered and what this proves. L6) I can produce and share a poster detailing how our investigation was conducted fairly and accurately.</p>	<p>making reference to specific variables, using scientific equipment to help me to gather useful data, before recording this in accurate tables, graphs and charts. L5) I can write a conclusion evaluating my investigation, explaining improvements we would make in a follow-up investigation. L6) I can present my findings in the form of a poster, offering clear verbal and visual feedback to my class, fielding any questions that arise.</p>	<p>L4) I can devise a fair test to answer my question, detailing the variables involved and why they are of scientific importance, and making predictions based on previous experience and scientific knowledge. L5) I can evaluate our findings, explaining errors and anomalies, and identifying improvements we would make in a follow-up investigation L6) I can present my findings to my class, ensuring that I explain and expand upon my poster, answering questions posed by my audience.</p>	<p>L4) I can devise a fair test to answer my question, detailing the variables involved and why they are of scientific importance, and making predictions based on previous experience and scientific knowledge. L5) I can report and present my findings verbally and in writing, explaining the degree of trust I have in my results as part of my conclusion, addressing any errors and anomalies. L6) I can reflect upon my results, answering questions from my classmates, and suggesting and justifying comparative follow-up tests.</p>	<p>L4) I can write a prediction for my investigation, justifying my ideas with existing scientific knowledge and relevant information available to me, and making reference to previous experiences. L5) I can report and present my findings in a written conclusion, making clear reference to data gathered, addressing any errors and anomalies, and explaining the amendments I would make in a follow-up investigation. L6) I can speak confidently and clearly as part of a presentation about my investigation, answering questions from my classmates.</p>
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## Termly Scientific Skills

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
<b>Y E A R  1</b>	<p>1b) I know how to observe materials closely.</p> <p>2b) I know how to identify and classify different materials.</p> <p>3b) I know how to perform a simple test on a material.</p> <p>4b) I know how to use my observations and ideas to suggest answers to questions.</p> <p>5b) I know how to ask simple questions and recognise that they can be answered in different ways.</p> <p>6b) I know how to perform a fair test.</p>	<p>1b) I know how to make a piece of equipment that will provide me with a measurement.</p> <p>2b) I know how to create a pictogram of my data.</p> <p>3b) I know how to explain how the weather affects people.</p> <p>4b) I know how to record the amount of daylight in a chart.</p> <p>5b) I know how to use the correct vocabulary to describe the weather.</p> <p>6b) I know how to compare the weather on two different days.</p>	<p>1b) I know how to closely observe animals, justifying the way I group them.</p> <p>2b) I know how to collect and record data to help me to answer questions.</p> <p>3b) I know how to use a table and a Venn diagram to classify animals.</p> <p>4b) I know how to use observations and my general knowledge to annotate the parts of the human body.</p> <p>5b) I know how to perform a simple test into the use of our senses.</p>		<p>1b) I know how to perform a simple test (fairly).</p> <p>2b) I know how to use my observations and ideas to suggest answers to questions.</p> <p>3b) I know how to observe a tree closely, identifying the key features in a labelled diagram.</p> <p>4b) I know how to identify and classify trees.</p> <p>5b) I know how to observe the features of trees closely, enabling me to identify them.</p> <p>6b) I know how to measure the height of a plant and record it (to the nearest cm) in a bar chart.</p>	<p>1b) I know how to perform a simple investigation into gravity.</p> <p>2b) I know how to write a simple conclusion based upon my data.</p> <p>3b) I know how to write a simple prediction for my investigation.</p> <p>4b) I know how to devise a fair investigation into pulling.</p> <p>5b) I know how to write a simple conclusion based upon my investigation.</p>

## Termly Scientific Skills

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
<b>Y E A R  2</b>	<p>1b) I know how to perform a simple test, then explain what I have discovered.</p> <p>2b) I know how to use my observations and ideas to suggest answers to questions.</p> <p>3b) I know how to perform simple tests in order to select the best material.</p> <p>4b) I know how to use my observations and ideas to justify my answers to a question.</p> <p>5b) I know how to write a conclusion based on evidence gathered.</p> <p>6b) I know how to use my ideas and research to explain why one material was a significant improvement on previous options.</p>	<p>1b) I know how to order and justify the basic needs of animals, including humans.</p> <p>2b) I know how to describe how exercise makes us feel.</p> <p>3b) I know how to perform a fair test to gather data.</p> <p>4b) I know how to record accurate data and discuss our results.</p> <p>5b) I know how to analyse two different meals.</p> <p>6b) I know how to draw a diagram of an animal's life cycle.</p>	<p>1b) I know how to use simple questions and observations to identify and classify.</p> <p>2b) I know how to gather and record data in a simple chart.</p> <p>3b) I know how to observe closely to identify why an animal may live where it does.</p> <p>4b) I know how to use my observations and ideas to suggest answers to questions.</p> <p>5b) I know how to draw a simple food chain, putting the arrows in the correct direction.</p>		<p>1b) I know how to conduct a fair test.</p> <p>2b) I know how to ask simple questions, devising an experiment to determine the answer.</p> <p>3b) I can use observations to explain whether seeds and seedlings grow towards the sun.</p> <p>4b) I know how to use observations and ideas to suggest answers to questions.</p> <p>5b) I know how to observe closely, using diagrams to support my explanation.</p> <p>6b) I know how to gather and record data in the form of a bar chart.</p>	<p>1b) I know how to gather and record data using a tally chart and a graph.</p> <p>2b) I know how to use my observations and ideas to suggest answers to questions.</p> <p>3b) I know how to gather and record data to help in answering questions.</p> <p>4b) I know how to draw a labelled diagram of a bee.</p> <p>5b) I know how to use my observations and ideas to suggest answers to questions.</p>

## Termly Scientific Skills

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
<b>Y E A R  3</b>	<p>1b) I know how to make careful observations.</p> <p>2b) I know how to predict whether two bar magnets will attract or repel each other.</p> <p>3b) I know how to plan for a fair test, giving consideration to my controlled variables.</p> <p>4b) I know how to record my findings accurately using a bar chart.</p> <p>5b) I know how to report on my findings in the form of a written conclusion.</p> <p>6b) I know how to write a prediction based upon my previous experiences.</p>	<p>1b) I know how to classify rocks into different groups.</p> <p>2b) I know how to sort rocks based on their properties.</p> <p>3b) I know how to investigate erosion and transportation and report my observations.</p> <p>4b) I know how to draw a cross-section diagram and a pie chart.</p> <p>5b) I know how to conduct a fair test, referring to the term 'variables'.</p> <p>6b) I know how to use scientific evidence to work out some facts about dinosaurs based on fossils of their footprints.</p>	<p>1b) I know how to analyse food labels using a colour code to classify their nutritional value.</p> <p>2b) I know how to classify different foods into their food groups.</p> <p>3b) I know how to draw a food chain using arrows and specific vocabulary.</p> <p>4b) I know how to identify and classify animals based on their skeletons.</p> <p>5b) I know how to take accurate measurements using standard units.</p>		<p>1b) I know how to set up a comparative fair test.</p> <p>2b) I know how to record my findings using a labelled diagram, complimented by a written explanation.</p> <p>3b) I know how to dissect a plant to allow me to identify specific parts.</p> <p>4b) I know how to set up simple practical enquiries and make careful observations.</p> <p>5b) I know how to record my findings using labelled diagrams.</p> <p>6b) I know how to measure accurately to the nearest millimetre.</p>	<p>1b) I know how to ask relevant questions to identify different sources of light.</p> <p>2b) I know how to record the path that light takes (to enable us to see everyday objects) using labelled diagrams.</p> <p>3b) I know how to set up a simple practical enquiry to test the angle that light reflects at.</p> <p>4b) I know how to use labelled diagrams (with arrows) to show the path that light has taken.</p> <p>5b) I know how to use straightforward scientific evidence to answer questions about the size of shadows.</p> <p>6b) I know how to use a light meter to measure how much light has passed through a material.</p>

## Termly Scientific Skills

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Y E A R  4	<p>1b) I know how to make systematic and careful observations when conducting a scientific enquiry.</p> <p>2b) I know how to record my findings by drawing and labelling a detailed diagram.</p> <p>3b) I know how to take accurate measurements of sound using a data logger.</p> <p>4b) I know how to use the results of an investigation to write simple conclusions and raise further questions.</p> <p>5b) I know how to ask relevant questions and use different types of scientific enquiries to answer them.</p>	<p>1b) I know how to identify whether an appliance runs on mains power, is battery powered, or can be both.</p> <p>2b) I know how to draw a simple circuit diagram using wires, a bulb and a battery.</p> <p>3b) I know how to create my own switch using everyday items.</p> <p>4b) I know how to identify potential reasons why a circuit may not be working.</p> <p>5b) I know how to devise and conduct a fair test into conductors and insulators.</p> <p>6b) I know how to write a prediction for my enquiry using scientific vocabulary.</p>	<p>1b) I know how to gather, record and present data in a bar chart.</p> <p>characteristics.</p> <p>2b) I know how to record my findings using simple scientific language.</p> <p>3b) I know how to use a classification key.</p> <p>4b) I know how to construct a simple classification key, working backwards.</p> <p>5b) I know how to use some scientific evidence to answer questions about the impact of environmental change.</p>		<p>1b) I know how to record my findings using scientific language and labelled diagrams.</p> <p>2b) I know how to use straightforward scientific evidence to answer questions.</p> <p>3b) I know how to use straightforward scientific evidence to answer questions.</p> <p>4b) I know how to create a simple classification diagram based on the characteristics of some animals.</p> <p>5b) I know how to use straightforward scientific evidence to answer questions.</p> <p>6b) I know how to use straightforward scientific evidence to answer questions.</p>	<p>1b) I know how to record my findings using labelled diagrams.</p> <p>2b) I know how to write a prediction for an investigation, drawing on previous experiences.</p> <p>3b) I know how to report on my findings, offering a written explanation.</p> <p>4b) I know how to create an accurate bar chart to compare melting points.</p> <p>5b) I know how to take accurate measurements using a thermometer.</p>

## Termly Scientific Skills

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
<b>Y E A R  5</b>	<p>1b) I know how to take measurements with a range of scientific equipment, including a Newton Meter, taking repeat readings when appropriate.</p> <p>2b) I know how to take measurements with increasing accuracy and precision.</p> <p>3b) I know how to plan a scientific enquiry to answer a question, including recognising and controlling variables where necessary.</p> <p>4b) I can report and present findings from an enquiry in a written conclusion, identifying causal relationships.</p> <p>5b) I know how to identify scientific evidence that has been used to support ideas.</p> <p>6b) I know how to use a Newton Meter, taking repeat readings when appropriate, to prove a theory.</p>	<p>1b) I know how to create a timeline of human development.</p> <p>2b) I know how to use a Venn diagram to compare two sets of information.</p> <p>3b) I know how to create an accurate bar chart to compare gestation periods.</p> <p>4b) I know how to compare human teeth with those of some other animals.</p> <p>5b) I know how to record a flow diagram to map out the journey of food in my digestive system.</p> <p>6b) I know how to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p>	<p>1b) I know how to justify the argument that the Earth is a sphere.</p> <p>2b) I know how to produce scientific diagrams and labels to evidence and explain a concept.</p> <p>3b) I know how to identify and test out scientific evidence and ideas to prove this.</p> <p>4b) I know how to plan an enquiry to prove a theory.</p> <p>5b) I know how to simulate the necessity for different time zones.</p>		<p>1b) I know how to record data and results using a table.</p> <p>2b) I know how to plan out a scientific enquiry into the properties of everyday materials, including recognising and controlling variables where necessary.</p> <p>3b) I know how to recover a substance from a solution.</p> <p>4b) I know how to plan out a scientific enquiry in order to separate materials.</p> <p>5b) I know how to report and present the findings of my enquiry.</p> <p>6b) I know how to report and present the findings of my enquiry.</p>	<p>1b) I know how to analyse the different levels of development in thinking between humans and other mammals.</p> <p>2b) I know how to create a scientific diagram to represent the life cycle of a butterfly.</p> <p>3b) I know how to create a scientific diagram to represent the life cycle of a plant.</p> <p>4b) I know how to collate scientific evidence that a naturalist has gathered to develop a theory.</p> <p>5b) I know how to collate scientific evidence that a naturalist has gathered to develop a theory.</p>

## Termly Scientific Skills

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
<b>Y E A R  6</b>	<p>1b) I know how to draw an accurate circuit diagram with the correct symbols.</p> <p>2b) I know how to take measurements, using a range of scientific equipment, including a sound meter/data logger.</p> <p>3b) I know how to plan a fair test to provide me with valid data to analyse.</p> <p>4b) I know how to write a conclusion that refers to the relative progression of my own data, and that of others.</p> <p>5b) I know how to write a conclusion that refers to data gathered, points out any anomalies that may have occurred, and analyses the implications of my results.</p> <p>6b) I know how to explain the dangers of electricity.</p>	<p>1b) I know how to incorporate scientific diagrams to support my point.</p> <p>2b) I know how to write an evidence-based conclusion.</p> <p>3b) I know how to spot and address anomalies in the data I gather.</p> <p>4b) I know how to incorporate scientific diagrams to support a point.</p> <p>5b) I know how to write an explanation as to how humans see things.</p>	<p>1b) I know how to create my own classification key based on the observable features of leaves.</p> <p>2b) I know how to group and classify animals according to those features.</p> <p>3b) I know how to record and organise data of increasing complexity through my own classification key.</p> <p>4b) I know how to identify scientific evidence that has been used to support ideas linking climate change to animal habitats and behaviours.</p> <p>5b) I know how to identify scientific evidence that has been used to support or refute his ideas.</p>		<p>1b) I know how to identify scientific evidence that has been used to support or refute ideas about evolution and adaptation.</p> <p>2b) I know how to identify scientific evidence that has been used to support or refute ideas about evolution and adaptation.</p> <p>3b) I know how to identify and describe the traits that an animal has inherited, justifying my ideas.</p> <p>4b) I know how to identify scientific evidence that has been used to support or refute ideas about evolution and adaptation.</p> <p>5b) I know how to identify scientific evidence that has been used to support or refute ideas about evolution and adaptation.</p>	<p>1b) I know how to draw an accurate, labelled diagram of the human heart.</p> <p>2b) I know how to use scientific diagrams and accurately drawn pie charts to support my findings.</p> <p>3b) I know how to record data accurately using a line graph with multiple lines of data.</p> <p>4b) I know how to identify scientific evidence that has been used to support ideas or arguments.</p> <p>5b) I know how to create a clear, labelled scientific diagram.</p>

