

<b>Knowledge Area</b> (Taken from the National Curriculum)	<b>EYFS</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
<b>Animals Including Humans</b>	<p>Know and talk about the different factors that support their overall wellbeing: regular activity, healthy eating, tooth brushing, screen time, having a good sleep routine.</p> <p>Make healthy choices about food, drink, activities and tooth brushing.</p> <p>Understanding the key features of a life cycle of plants and animals.</p> <p>Manage their own basic hygiene and personal needs, including dressing, going to the toilet, and understanding the important of healthy food choices.</p> <p>Begin to make sense of their own life story and family history.</p>	<p>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</p>	<p>Notice that animals have offspring which grow into adults.</p> <p>Find out about and describe the basic needs of animals for survival (water, food and air).</p> <p>Find out about and describe the basic needs of humans, for survival (water, food and air).</p> <p>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>	<p>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.</p> <p>An adequate and varied diet is beneficial to health (along with a good supply of air and clean water).</p> <p>Regular and varied exercise from a variety of different activities is beneficial to health</p> <p>Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p> <p>Identify animals (vertebrates) which have a skeleton which supports their body, aids movement &amp; protects vital</p>	<p>Describe the simple functions of the basic parts of the digestive system in humans.</p> <p>Identify the different types of teeth in humans and their simple functions.</p>	<p>Describe the changes as humans develop to old age.</p>	<p>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.</p> <p>Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function (in the long term and short term).</p> <p>Describe the ways in which nutrients and water are transported within animals, including humans.</p>

				organs (e.g. name and locate skull, backbone, ribs, bones for movement/limbs, pelvis and be able to name some of the vital organs protected).			
<p><b>Animals including Humans Scientific Skills</b></p> <p>(Taken from Lancashire CC Progression of Scientific Skills)</p>	<p>To begin to look / observe closely and communicate changes over time.</p> <p>To begin to look / observe closely and communicate the features or properties of things in the real world.</p> <p>Observe closely using their senses</p> <p>Name basic features of objects, materials and living things.</p> <p>To begin to say how things are similar or different.</p> <p>To begin to ask simple questions about what they notice about the world around them.</p> <p>To look at simple primary and secondary sources (such as objects, books and photographs) to find things out.</p>	<p>Observe closely using their senses</p> <p>Ask simple questions about what they notice about the world around them.</p> <p>Use simple primary and secondary sources (such as objects, books and photographs) to find things out.</p>	<p>Observe and describe simple processes / cycles / changes with several steps (e.g. growth cycle, simple food chain, saying how living things depend on one another).</p> <p>Observe closely and communicate with increasing accuracy the features or properties of things in the real world.</p> <p>Raise their own logical questions based on or linked to things they have observed.</p> <p>Use simple and appropriate secondary sources (such as books, photographs, videos and other technology) to find things out / find answers.</p> <p>Record simple data with some accuracy to help in answering questions;</p>	<p>Observe and record relationships between structure and function (linked to Y3 PoS).</p> <p>Decide ways and give reasons for sorting, grouping, classifying, identifying things / objects, living things, processes or events based on specific characteristics.</p> <p>Compare and contrast and begin to consider the relationships between different things</p>	<p>Observe and record changes / stages over time</p> <p>Begin to give reasons for these similarities and differences they've observed</p> <p>Choose / select a relevant question that can be answered</p> <p>Make decisions about which information to use from a wide range of sources</p> <p>Make a visual representation or a model of something to represent something they have seen or a process that is difficult to see.</p> <p>Carry out simple fair tests with increasing confidence investigating the effect of something on something else (linked to Y4 PoS).</p> <p>Start to make their own decisions about the most appropriate type</p>	<p>Observe (including changes over time) and suggest a reason for what they notice.</p> <p>Evaluate their observations and suggest a further test, offer another question or make a prediction.</p> <p>Suggest reasons for similarities and differences.</p> <p>Decide which sources of information (and / or equipment and / or test) to help identify and classify.</p> <p>Independently ask their own scientific questions taking some ownership for finding out the answers.</p> <p>Articulate and explain findings from their research using scientific knowledge and understanding.</p> <p>Present and explain their findings through talk, in written forms or</p>	<p>Compare and contrast things beyond their locality and discuss advantages / disadvantages, pros / cons of the similarities and differences.</p> <p>Research how scientific ideas have developed over time and had an impact on our lives.</p> <p>Make / perform and use their own versions of simple models to describe and explain scientific ideas (e.g. circulatory system drama, periscopes to explain how light travels, burglar alarm to explain components in a circuit).</p>

					<p>of science enquiry they might use to answer scientific questions</p> <p>Make some of the planning decisions about what to change and measure / observe.</p> <p>Record findings using relevant scientific language and vocabulary (from Y4 PoS),</p> <p>Use relevant scientific language and vocabulary (from Y4 PoS)</p> <p>Use results to suggest improvements, new questions and / or predictions for setting up further tests.</p>	<p>in other ways (e.g. using technology) for a range of audiences / purposes.</p>	
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<b>Knowledge Area</b> (Taken from the National Curriculum)	<b>EYFS</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>
<b>Animals – Other Animals, Living things and their Habitats</b>	<p>Understand key features of the life cycle of plants and animals.</p> <p>Begin to understand the need to respect and care for the natural environment and all living things.</p> <p>Explore the natural world around them.</p> <p>Recognise that some environments are different to the one they live in.</p> <p>Explore the natural world around them.</p>	<p>Identify and name a variety of common animals including some fish, some amphibians, some reptiles, some birds and some mammals.</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores (i.e. according to what they eat).</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, and including pets).</p> <p>Group together animals according to their different features.</p> <p>Recognise similarities between animals: Structure: head, body, way of moving, senses, body covering, tail.</p>	<p>Explore and compare the differences between things that are living, dead, and things that have never been alive.</p> <p>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.</p> <p>Identify and name a variety of plants and animals in their habitats, including micro-habitats.</p> <p>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>Observe living things in their habitats during different seasonal changes.</p>	<p>Recognise that living things can be grouped in a variety of ways.</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey</p>	<p>Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>Describe the life process of reproduction in some plants and animals.</p> <p>Name, locate and describe the functions of the main parts of reproductive system of plants</p>	<p>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.</p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p>

<p><b>Animals – Other Animals, Living things and their Habitats</b></p> <p>(Taken from Lancashire CC Progression of Scientific Skills)</p>	<p>Begin to use simple scientific language to talk about or record what they have noticed.</p> <p>To begin to look / observe closely and communicate changes over time.</p> <p>To begin to look / observe closely and communicate the features or properties of things in the real world.</p> <p>Observe closely using their senses</p> <p>To begin to compare and simple observable features / characteristics of objects, materials and living things.</p> <p>To begin to ask simple questions about what they notice about the world around them.</p> <p>To look at simple primary and secondary sources (such as objects, books and photographs) to find things out.</p>	<p>Observe closely using their senses</p> <p>Name basic features of objects, materials and living things.</p> <p>Say how things are similar or different.</p> <p>Compare and contrast simple observable features / characteristics of objects, materials and living things.</p> <p>Ask simple questions about what they notice about the world around them.</p> <p>Use simple primary and secondary sources (such as objects, books and photographs) to find things out.</p>	<p>Observe closely and communicate with increasing accuracy the features or properties of things in the real world.</p> <p>Raise their own logical questions based on or linked to things they have observed.</p> <p>Use simple and appropriate secondary sources (such as books, photographs, videos and other technology) to find things out / find answers.</p>	<p>Make a simple guide to local living things.</p> <p>Use guides or simple keys to classify / identify [animals, flowering plants and non-flowering plants].</p> <p>Begin to give reasons for these similarities and differences they've observed</p> <p>Make decisions about which information to use from a wide range of sources and make decisions about how to present their research.</p> <p>Notice / find patterns in their observations and data. (Describe the effect of something on something else).</p>	<p>Observe (including changes over time) and suggest a reason for what they notice.</p> <p>Evaluate their observations and suggest a further test, offer another question or make a prediction.</p> <p>Suggest reasons for similarities and differences.</p> <p>Decide which sources of information (and / or equipment and / or test) to help identify and classify.</p> <p>Independently ask their own scientific questions taking some ownership for finding out the answers.</p> <p>Articulate and explain findings from their research using scientific knowledge and understanding.</p> <p>Present and explain their findings through talk, in written forms or in other ways (e.g. using technology) for a range of audiences / purposes.</p>	<p>Construct a classification key / branching database using more than two items.</p> <p>Compare and contrast things beyond their locality and discuss advantages / disadvantages, pros / cons of the similarities and differences.</p> <p>Research how scientific ideas have developed over time and had an impact on our lives.</p>
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<b>Knowledge Area</b> (Taken from the National Curriculum)	<b>EYFS</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
<b>Materials</b>	<p>Use all their senses in hands- on experience of natural materials.</p> <p>Explore materials with similar and/or different properties.</p>	<p>Distinguish between an object and the material from which it is made.</p> <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, rock, brick, paper and cardboard.</p> <p>Describe the simple physical properties of a variety of everyday materials.</p> <p>Compare and group together a variety of everyday materials on the basis of their simple physical properties.</p>	<p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, water, rock, paper and cardboard for particular uses.</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching (applying a force).</p>	<p><b>Rocks</b></p> <p>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.</p> <p>Describe in simple terms how fossils are formed</p> <p>Recognise that soils are made from rocks and organic matter</p>	<p><b>States of Matter</b></p> <p>Compare and group materials together, according to whether they are solids, liquids or gases.</p> <p>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).</p> <p>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>	<p>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.</p> <p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic (advantages and disadvantages).</p> <p>Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.</p> <p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes.</p> <p>Recognise that dissolving is a reversible change and recognise everyday situations where dissolving occurs.</p>

						Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible,
<p><b>Materials</b></p> <p><b>Scientific Skills</b></p> <p>(Taken from Lancashire CC Progression of Scientific Skills)</p>	<p>To begin to look / observe closely and communicate changes over time.</p> <p>Name basic features of objects, materials and living things.</p> <p>To begin to say how things are similar or different.</p> <p>To begin to compare and simple observable features / characteristics of objects, materials and living things.</p> <p>To begin to measure using non-standard units e.g. how many lolly sticks / cubes / handfuls, etc.</p> <p>To begin to use some simple scientific language.</p> <p>To begin to record simple visual representations of observations made.</p>	<p>Name basic features of objects, materials and living things.</p> <p>Say how things are similar or different.</p> <p>Compare and contrast simple observable features / characteristics of objects, materials and living things.</p> <p>With help, carry out a simple test / comparative test.</p> <p>Talk about ways of setting up a test</p> <p>Measure using non-standard units e.g. how many lolly sticks / cubes / handfuls, etc.</p> <p>Use recordings to talk about and describe what happened.</p> <p>Begin to use simple scientific language (from Y1 PoS) to talk about what they have found out or why something happened.</p>	<p>Observe closely and communicate with increasing accuracy the features or properties of things in the real world.</p> <p>Raise their own logical questions based on or linked to things they have observed.</p> <p>Carry out simple comparative tests as part of a group, following a method with some independence.</p> <p>With support, make suggestions on a method for setting up a simple comparative test.</p> <p>Measure using non-standard and simple standard measures (e.g. cm, time) with increasing accuracy.</p> <p>Record simple data with some accuracy to help in answering questions;</p> <p>With support or using frameworks, make decisions about how to complete a variety of tables/charts</p> <p>With guidance, begin to notice patterns in their data e.g. order their findings, sequence best to worst, say what happened over time, etc.</p>	<p>Observe and record relationships between structure and function (linked to Y3 PoS).</p> <p>Decide ways and give reasons for sorting, grouping, classifying, identifying things / objects, living things, processes or events based on specific characteristics.</p> <p>Compare and contrast and begin to consider the relationships between different things</p> <p>Help to decide about how to set up a simple fair test and begin to recognise when a test is not fair.</p> <p>Collect data from their own observations and measurements using notes / simple tables / standard units</p> <p>Make simple accurate measurements using whole number standard units, using a range of equipment.</p> <p>Use equipment accurately to improve the detail of their measurements / observations (e.g. microscopes, measuring syringes, measuring cylinders, hand lenses).</p>	<p>Observe and record relationships between structure and function or between different parts of a processes</p> <p>Observe and record changes / stages over time</p> <p>Begin to give reasons for these similarities and differences they've observed</p> <p>Choose / select a relevant question that can be answered [by research or experiment / test].</p> <p>Make decisions about which information to use from a wide range of sources and make decisions about how to present their research.</p> <p>Carry out simple fair tests with increasing confidence investigating the effect of something on something else (linked to Y4 PoS).</p> <p>Start to make their own decisions about the most appropriate type of science enquiry they might use to answer scientific questions</p>	<p>Observe (including changes over time) and suggest a reason for what they notice.</p> <p>Evaluate their observations and suggest a further test, offer another question or make a prediction.</p> <p>Independently ask their own scientific questions taking some ownership for finding out the answers.</p> <p>Make decisions about which variables to change, measure and keep the same (linked to the appropriate units in the Y5 PoS).</p> <p>Make their own decisions about what observations to make or measurements to use and how long to take them for (recognising the need for repeat readings on some occasions).</p> <p>Present and explain their findings through talk, in written forms or in other ways (e.g. using technology) for a range of audiences / purposes.</p> <p>Record data and results of increasing complexity using different formats e.g. tables, annotated scientific diagrams, classification keys, graphs and models.</p>

			<p>Use their recordings to talk about and describe what has happened.</p> <p>Begin to discuss if the test was unfair.</p>	<p>Record and present findings using simple scientific language and vocabulary from the Y3 PoS, .</p> <p>With scaffold / support record, and present data in a variety of ways to help in answering questions.</p> <p>Use their results to consider whether they met their predictions</p> <p>Use their experience and some evidence or results to draw a simple conclusion to answer their original question.</p> <p>Begin to recognise when a test is not fair and suggest improvements.</p>	<p>Make some of the planning decisions about what to change and measure / observe.</p> <p>Learn how to use new equipment, such as data loggers and measure temperature in degrees Celsius (°C) using a thermometer.</p> <p>Collect data from their own observations and measurements, using notes / simple tables / standard units.</p> <p>Make accurate measurements using standard units [and more complex units and parts of units]</p> <p>Record findings using relevant scientific language and vocabulary (from Y4 PoS),</p> <p>Begin to select the most useful ways to collect, record, classify and present data from a range of choices.</p> <p>Use relevant scientific language and vocabulary (from Y4 PoS) to begin to say / explain why something happened.</p> <p>Use results to suggest improvements, new questions and / or</p>	<p>Describe straightforward patterns in results linking cause and effect e.g. using er or the word 'more'</p> <p>Comment on the results and whether they support the initial prediction.</p> <p>Draw a valid conclusion (explain why it happened) based on their data and observations (from Y5 PoS).</p> <p>Begin to recognise how repeated readings improve the reliability of results</p> <p>Compare results with others and comment on how reliable they are.</p>
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					predictions for setting up further tests.	
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<b>Knowledge Area</b> (Taken from the National Curriculum)	<b>EYFS</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<b>Plants</b>	<p>Explore the natural world around them, making observations and drawings of plants and animals.</p> <p>Plant seeds and care for growing plants.</p> <p>Understand the key features of the life cycle of a plant and an animal.</p>	<p>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees (at least: flower, leaf, root, stem, trunk, seed, branch and petal).</p>	<p>Observe and describe how seeds and bulbs grow into mature plants.</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy (and how changing these affects the plant).</p>	<p>Identify, locate and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</p> <p>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.</p> <p>Investigate the way in which water is transported within plants.</p> <p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>
<b>Scientific Skills</b>  (Taken from Lancashire CC Progression of Scientific Skills)	<p>To begin to look / observe closely and communicate changes over time.</p> <p>To begin to look / observe closely and communicate the features or properties of things in the real world.</p> <p>Observe closely using their senses</p> <p>Name basic features of objects, materials and living things.</p> <p>To begin to compare and simple observable features / characteristics of objects, materials and living things.</p>	<p>Look / observe closely and communicate changes over time.</p> <p>Look / observe closely and communicate the features or properties of things in the real world.</p> <p>Observe closely using their senses</p> <p>Compare and contrast simple observable features / characteristics of objects, materials and living things.</p> <p>Ask simple questions about what they notice about the world around them.</p>	<p>Observe and describe simple processes / cycles / changes with several steps (e.g. growth cycle, simple food chain, saying how living things depend on one another).</p> <p>Observe closely and communicate with increasing accuracy the features or properties of things in the real world.</p> <p>Observe closely and communicate with increasing accuracy the features or properties of things in the real world.</p> <p>Raise their own logical questions based on or linked to things they have observed.</p>	<p>Observe and record relationships between structure and function (linked to Y3 PoS).</p> <p>Decide ways and give reasons for sorting, grouping, classifying, identifying things / objects, living things, processes or events based on specific characteristics.</p> <p>Compare and contrast and begin to consider the relationships between different things</p> <p>Within a group suggest relevant questions about what they observe and about the world around them.</p>

	<p>To begin to ask simple questions about what they notice about the world around them.</p> <p>To begin to demonstrate curiosity by the questions they ask.</p> <p>To begin to record simple visual representations of observations made.</p> <p>To talk about changes they have seen.</p>	<p>Observe closely, using simple equipment (e.g. hand lenses, egg timers).</p> <p>Add annotations to drawings or photographs.</p> <p>Record simple visual representations of observations made.</p>	<p>Carry out simple comparative tests as part of a group, following a method with some independence.</p> <p>With support, make suggestions on a method for setting up a simple comparative test.</p> <p>Measure using non-standard and simple standard measures (e.g. cm, time) with increasing accuracy.</p> <p>Record simple data with some accuracy to help in answering questions;</p> <p>With support or using frameworks, make decisions about how to complete a variety of tables/charts</p> <p>With guidance, begin to notice patterns in their data e.g. order their findings, sequence best to worst, say what happened over time, etc.</p> <p>Use their recordings to talk about and describe what has happened.</p> <p>Begin to discuss if the test was unfair.</p>	
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Knowledge Area (Taken from the National Curriculum)	EYFS	Year 1	Year 3	Year 5	Year 6
<b>Light and Astronomy</b>	Understand the effect of changing seasons on the natural world around them.	<p>Observe and describe changes across the four seasons.</p> <p>Observe and describe weather associated with the seasons</p>	<p>Recognise that they need light in order to see things and that dark is the absence of light.</p> <p>Notice that light is reflected from surfaces.</p>	Describe the movement of the Earth, and other planets, relative to the Sun and each other in the solar system. Describe the movement of the Moon relative to the Earth.	<p>Recognise that light appears to travel in straight lines.</p> <p>Use the idea that light travels in straight lines to explain that objects are seen because they</p>

		<p>and how day length and temperature varies.</p>	<p>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</p> <p>Recognise that shadows are formed when the light from a light source is blocked by a solid object.</p> <p>Find patterns in the way that the size of shadows can change.</p>	<p>Use the idea of the Earth's rotation to explain day and night.</p> <p>Use the Earth's movement in space to explain the apparent movement of the sun across the sky.</p>	<p>give out or reflect light into the eye.</p> <p>Explain that we see things because the light that travels from light sources to our eyes or from light sources to objects and then to our eyes (and represent this in simple diagrammatic form).</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>
<p><b>Light &amp; Astronomy</b></p> <p>(Taken from Lancashire CC Progression of Scientific Skills)</p>	<p>To begin to look / observe closely and communicate the features or properties of things in the real world.</p> <p>Observe closely using their senses</p> <p>To begin to say how things are similar or different.</p> <p>To begin to ask simple questions about what they notice about the world around them.</p> <p>To begin to record simple visual representations of observations made.</p> <p>To talk about changes they have seen.</p>	<p>Look / observe closely and communicate changes over time.</p> <p>Look / observe closely and communicate the features or properties of things in the real world.</p> <p>Ask simple questions about what they notice about the world around them.</p> <p>Observe closely, using simple equipment (e.g. hand lenses, egg timers).</p> <p>Add annotations to drawings or photographs.</p> <p>Record simple visual representations of observations made.</p>	<p>Observe and record relationships between structure and function (linked to Y3 PoS).</p> <p>Collect data from their own observations and measurements using notes / simple tables / standard units.</p> <p>Use their results to consider whether they met their predictions</p>	<p>Suggest reasons for similarities and differences.</p> <p>Decide which sources of information (and / or equipment and / or test) to help identify and classify.</p> <p>Independently ask their own scientific questions taking some ownership for finding out the answers.</p> <p>Articulate and explain findings from their research using scientific knowledge and understanding.</p> <p>Perform / create simple models to exemplify scientific ideas using scientific terminology where appropriate (e.g. spheres to represent movements of the Sun and Earth, solar system models, shadow clocks, a simple lever or mechanism).</p>	<p>Refine a scientific question to make it testable</p> <p>Independently ask a variety of scientific questions and decide the type of enquiry needed to answer them.</p> <p>Make / perform and use their own versions of simple models to describe and explain scientific ideas (e.g. circulatory system drama, periscopes to explain how light travels, burglar alarm to explain components in a circuit).</p> <p>Identify variables to change, measure and keep the same in order for a test to be fair.</p> <p>Decide whether to repeat any readings and justify the reason for doing so.</p> <p>Make their own decisions about what measurements to take (and begin to identify the ranges used).</p>

					<p>Use equipment fit for purpose to take measurements which are increasingly accurate and precise.</p> <p>Identify patterns in results collected and describe them using the change and measure variables (causal relationships) (e.g. as we increased the number of batteries the brightness the bulb increased.</p> <p>Independently form a conclusion which draws on the evidence from the test (linked to Y6 PoS).</p> <p>Describe how to improve planning to produce more reliable results.</p>
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Knowledge Area (Taken from the National Curriculum)	EYFS	Year 3	Year 4	Year 5
<b>Forces/ Magnets</b>  <b>Sound</b>	<p>Explore and talk about different forces they can feel.</p>	<p>Notice that some forces need contact between two objects but magnetic forces can act at a distance.</p> <p>Observe how magnets attract or repel each other and attract some materials and not others.</p> <p>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.</p> <p>Describe magnets as having two poles (like and unlike poles).</p>	<p style="text-align: center;"><b>Sound</b></p> <p>Identify how sounds are made, associating some of them with something vibrating.</p> <p>Recognise that vibrations from sounds travel through a medium to the ear.</p> <p>Find patterns between the volume of a sound and the strength of the vibrations that produced it.</p> <p>Recognise that sounds get fainter as the distance from the sound source increases.</p>	<p>Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.</p> <p>Identify the effects of air resistance, water resistance and friction that act between moving surfaces (causing things to slow down)</p> <p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p> <p>There are different types of forces (push, pull, friction, air resistance, water</p>

		<p>Predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>	<p>Find patterns between the pitch of a sound and features of the object that produced it.</p>	<p>resistance, magnetic forces, gravity) which have different effects on objects</p> <p>Gravity can act without direct contact between the Earth and an object.</p>
<p><b>Forces/ Magnets</b></p> <p><b>Sound</b></p> <p>(Taken from Lancashire CC Progression of Scientific Skills)</p>	<p>Begin to use simple scientific language to talk about or record what they have noticed.</p> <p>Observe closely using their senses</p> <p>To begin to say how things are similar or different.</p> <p>To begin to ask simple questions about what they notice about the world around them.</p> <p>To begin to use some simple scientific language.</p> <p>To talk about changes they have seen.</p> <p>To begin to talk about why they think something has happened.</p>	<p>Observe and record relationships between structure and function (linked to Y3 PoS).</p> <p>Help to decide about how to set up a simple fair test and begin to recognise when a test is not fair.</p> <p>Collect data from their own observations and measurements using notes / simple tables / standard unit</p> <p>Make simple accurate measurements using whole number standard units, using a range of equipment.</p> <p>Use equipment accurately to improve the detail of their measurements / observations (e.g. microscopes, measuring syringes, measuring cylinders, hand lenses).</p> <p>Record and present findings using simple scientific language and vocabulary from the Y3 PoS,</p> <p>With scaffold / support record, and present data in a variety of ways to help in answering questions.</p> <p>Use their results to consider whether they met their predictions</p> <p>Use their experience and some evidence or results to draw a simple conclusion to answer their original question.</p> <p>Begin to recognise when a test is not fair and suggest improvements.</p>	<p>Choose / select a relevant question that can be answered [by research or experiment / test].</p> <p>Carry out simple fair tests with increasing confidence investigating the effect of something on something else (linked to Y4 PoS).</p> <p>Start to make their own decisions about the most appropriate type of science enquiry they might use to answer scientific questions (is a fair test the best way to investigate their question?)</p> <p>Make some of the planning decisions about what to change and measure / observe.</p> <p>Record findings using relevant scientific language and vocabulary (from Y4 PoS),</p> <p>Notice / find patterns in their observations and data. (Describe the effect of something on something else).</p> <p>Use relevant scientific language and vocabulary (from Y4 PoS) to begin to say / explain why something happened.</p> <ul style="list-style-type: none"> <li>• Use results to suggest improvements, new questions and / or predictions for setting up further tests.</li> </ul>	<p>Evaluate their observations and suggest a further test, offer another question or make a prediction.</p> <p>Make decisions about which variables to change, measure and keep the same (linked to the appropriate units in the Y5 PoS).</p> <p>Make their own decisions about what observations to make or measurements to use and how long to take them for (recognising the need for repeat readings on some occasions).</p> <p>Present and explain their findings through talk, in written forms or in other ways (e.g. using technology) for a range of audiences / purposes.</p> <p>Record data and results of increasing complexity using different formats e.g. tables, annotated scientific diagrams, classification keys, graphs and models.</p> <p>Describe straightforward patterns in results linking cause and effect e.g. using er or the word 'more'</p> <p>Comment on the results and whether they support the initial prediction.</p> <p>Draw a valid conclusion (explain why it happened) based on their data and observations (from Y5 PoS).</p> <p>Begin to recognise how repeated readings improve the reliability of results</p> <p>Compare results with others and comment on how reliable they are.</p>

<b>Knowledge Area</b> (Taken from the National Curriculum)	<b>Year 4</b>	<b>Year 6</b>
<b>Electricity</b>	<p>Identify common appliances that run on electricity.</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</p> <p>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.</p> <p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</p> <p>Recognise some common conductors and insulators, and associate metals with being good conductors.</p>	<p>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.</p> <p>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.</p> <p>Use recognised symbols (at least: cells, wires, switches, bulbs, buzzers and motors) when representing a simple circuit in a diagram.</p> <p>Use/interpret circuit diagrams</p>
<b>Scientific Skills</b>  (Taken from Lancashire CC Progression of Scientific Skills)	<p>Observe and record relationships between structure and function or between different parts of a processes</p> <p>Notice / find patterns in their observations and data. (Describe the effect of something on something else).</p>	<p>Refine a scientific question to make it testable</p> <p>Independently ask a variety of scientific questions and decide the type of enquiry needed to answer them.</p> <p>Make / perform and use their own versions of simple models to describe and explain scientific ideas (e.g. circulatory system drama, periscopes to explain how light travels, burglar alarm to explain components in a circuit).</p> <p>Identify variables to change, measure and keep the same in order for a test to be fair.</p> <p>Identify patterns in results collected and describe them using the change and measure variables (causal relationships)(e.g. as we increased the number of batteries the brightness the bulb increased.</p>

<b>Knowledge Area</b> (Taken from the National Curriculum)	<b>Year 6</b>
<b>Evolution &amp; Inheritance</b>	<p>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>Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</p> <p>Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p>
<b>Scientific Skills</b>  (Taken from Lancashire CC Progression of Scientific Skills)	<p>Identify changes that have occurred over a very long period of time (evolution) and discuss how changes have impacted the world.</p> <p>Construct a classification key / branching database using more than two items.</p> <p>Compare and contrast things beyond their locality and discuss advantages / disadvantages, pros / cons of the similarities and differences.</p> <p>Research how scientific ideas have developed over time and had an impact on our lives.</p>