











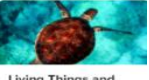










EYFS (Biology)

	<p>EYFS </p>
Animals, including humans	<div data-bbox="965 355 1123 478"><p>Our body</p></div> <div data-bbox="1256 344 1396 462"><p>Why don't snakes have legs?</p></div> <div data-bbox="1493 355 1625 484"><p>Can I have a dog?</p></div> <ul style="list-style-type: none">• Learn nursery rhymes to include parts of the body, e.g. head, shoulders, knees and toes• Learn about pets at home and observe what they eat• Learn about a variety of animals
Plants	<div data-bbox="1210 958 1355 1102"><p>Why do leaves go crispy?</p></div> <ul style="list-style-type: none">• Grow plants from seeds• Observe plants and learn names such as leaf, flower, petal, etc.• Walk in a woodland area or notice trees in Forest School





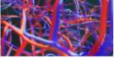

Key stage 1 (Biology)

 Science	Year 1	Year 2	
Animals, including humans	 <p>Animals Including Humans - About Me</p>	  <p>Animals Including Humans - Diet and Health</p> <p>Animals Including Humans - Growth</p>	
	<ul style="list-style-type: none"> In EYFS children will have been taught nursery rhymes to include parts of the body, e.g. head, shoulders, knees and toes 	<ul style="list-style-type: none"> Know the name of parts of the human body that can be seen Know about the five senses and link them with parts of the body 	<ul style="list-style-type: none"> In PE children will know the importance of exercise on a healthy body They may also have made a healthy sandwich in food technology
Animals, including humans (Year 1) Living things and their Habitats (from Year 2 onwards)	 <p>Animals Including Humans - About Animals</p>	  <p>Living Things and Their Habitats</p> <p>Living Things and Their Habitats - Habitats Around the World</p>	
	<ul style="list-style-type: none"> They may have pets at home and will have observed what they eat They will have come across a variety of animals but may not have classified them as in Year 1 	<ul style="list-style-type: none"> Know and name a variety of common wild and garden plants Know and classify animals by what they eat (carnivore, herbivore and omnivore) Know how to sort by living and non-living things Know how to classify a range of animals by amphibian, reptile, mammal, fish and bird 	<ul style="list-style-type: none"> Most will be able to say what type of habitat their pets enjoy They will have noticed that squirrels spend a lot of time in trees and that other animals such as earthworms live in the ground They will know what type of food certain animals eat
Plants	 <p>Introduction to Plants</p>	 <p>Plants - Growth and Care</p>	
	<ul style="list-style-type: none"> In EYFS children will have grown plants from seeds They will have observed plants and will know names such as leaf, flower, petal, etc. They may have walked in a woodland area or noticed trees in Forest School 	<ul style="list-style-type: none"> Know and name the petals, stem, leaves and root of a plant Know and name the roots, trunk, branches and leaves of a tree 	<ul style="list-style-type: none"> Children will have recognised the importance of watering their plants and may have noticed the need for plants to have light and warmth



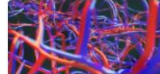

Lower key stage 2 (Biology)

	Year 3			
	Year 4			
Animals, including humans	 <p style="text-align: center;">Animals Including Humans - What Makes Us</p>		 <p style="text-align: center;">Animals Including Humans - Food and Digestion</p>	
	<ul style="list-style-type: none"> • Picking up from eating a balanced diet to keep the body healthy, pupils will by now know that it is not sensible to eat too much of certain foods, e.g. chips • They will know that certain parts of their bodies bend before finding out why 	<ul style="list-style-type: none"> • Know about the importance of a nutritious, balanced diet • Know how nutrients, water and oxygen are transported within animals and humans • Know about the skeletal and muscular system of a human and some other animals • Know that humans and some other animals have skeletons and muscles for support, protection and movement 	<ul style="list-style-type: none"> • Pupils have learned what makes up a nutritious, balanced diet and the role of the skeleton and muscles • They learned about the importance of exercise and hygiene • Almost all pupils will know approximately where their stomachs are and will have some knowledge of what happens to the food we digest 	<ul style="list-style-type: none"> • Identify and name the parts of the human digestive system • Know the functions of the organs in the human digestive system • Identify and know the different types of human teeth • Know the functions of different human teeth
All living things and their habitats	 <p style="text-align: center;">Living Things and their Habitats - Nature and the Environment</p>			
	<ul style="list-style-type: none"> • This needs to be linked with the classification learning pupils did in Year 1 • In addition, pupils need to link with the Year 2 unit on habitats which was about looking at animals having suitable habitats for basic needs 	<ul style="list-style-type: none"> • Use classification keys to group, identify and name living things • Know how changes to an environment could endanger living things • Use and construct food chains to identify producers, predators and prey 		
Plants	 <p style="text-align: center;">Plants - Life cycles</p>		 <p style="text-align: center;">Exploring the World of Plants</p>	
	<ul style="list-style-type: none"> • Pupils should know the names of parts of plants • Know how seeds and bulbs grow and know what a plant needs to be healthy 	<ul style="list-style-type: none"> • Know the function of different parts of flowering plants and trees • Know how water is transported within plants • Know the plant life cycle, especially the importance of flowers 		

Upper key stage 2 (Biology)

	Year 5			
Year 6				
Animals, including humans	 <p>Animals Including Humans - The Human Life Cycle</p>	 <p>Studying Living Things</p>	 <p>Animals Including Humans - Blood and Transportation</p>	 <p>Animals Including Humans - The Heart and Health</p>
	<ul style="list-style-type: none"> Most pupils will have grandparents and even great grandparents and will have noticed their movements are slower and they may be susceptible to more illnesses than themselves They may also have regular contacts with young babies and will have noticed what they can and cannot do Pupils learned about basic stages of life cycles in Year 2 	<ul style="list-style-type: none"> Know the life cycle of different living things e.g. mammal, amphibian, insect and bird Create a timeline to indicate stages of growth in humans Know the differences between different life cycles Know the process of reproduction in animals 	<ul style="list-style-type: none"> Having found out about what happens to our food in Year 4 and how we move in Year 3, this helps to link to the work of our heart and the circulatory system within this unit Pupils will know about the colour of our blood and about the approximate position of our hearts in the body Links to PE and DT will support pupils deeper understanding of the main issues in this unit 	<ul style="list-style-type: none"> Identify and name the main parts of the human circulatory system Know the function of the heart, blood vessels and blood Know the impact of diet, exercise, drugs and lifestyle on health Know the ways in which nutrients and water are transported in animals, including humans
All living things and their habitats, Plants	 <p>Living Things and their Habitats</p>			
	<ul style="list-style-type: none"> Pupils need to recall knowledge on classifying animals from Years 1 and 4 It is very important that the link is made otherwise this unit can be challenging for many pupils Pupils will need to retrieve information on plant life cycles and the function of different parts of plants from Year 3 to help them in this unit 	<ul style="list-style-type: none"> Classify living things into broad groups according to observable characteristics and based on similarities and differences Know how living things have been classified Give reasons for classifying plants and animals in a specific way Know the process of reproduction in plants 		




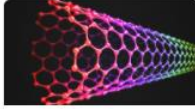
Upper key stage 2 (Biology)

	Year 5	
	Year 6	
Animals, including humans	 	
	<p>Animals Including Humans - Blood and Transportation</p> <ul style="list-style-type: none"> Having found out about what happens to our food in Year 4 and how we move in Year 3, this helps to link to the work of our heart and the circulatory system within this unit Pupils will know about the colour of our blood and about the approximate position of our hearts in the body Links to PE and DT will support pupils deeper understanding of the main issues in this unit 	<p>Animals Including Humans - The Heart and Health</p> <ul style="list-style-type: none"> Identify and name the main parts of the human circulatory system Know the function of the heart, blood vessels and blood Know the impact of diet, exercise, drugs and lifestyle on health Know the ways in which nutrients and water are transported in animals, including humans
Evolution and inheritance		
	<p>Evolution and Inheritance</p> <ul style="list-style-type: none"> Many pupils will be able to talk about people in their families that look alike There are also links to the Year 5 unit on how the body changes from birth to death Many pupils may have discussed the possibility that humans may have evolved from primates 	<ul style="list-style-type: none"> Know how the Earth and living things have changed over time Know how fossils can be used to find out about the past Know about reproduction and offspring (recognising that offspring normally vary and are not identical to their parents) Know how animals and plants are adapted to suit their environment Link adaptation over time to evolution Know about evolution and can explain what it is



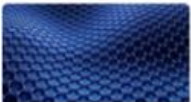


Note: This section has been repeated here so it easier to see the links with the evolution and inheritance unit below.




EYFS (Chemistry)

 A circular icon with a blue background, featuring various scientific symbols like a globe, a DNA helix, a beaker, and a microscope. The word "Science" is written in white across the center.	<p data-bbox="1294 237 1403 279">EYFS</p>  A simple, colorful rainbow arching across the top right of the header cell.
<p data-bbox="479 479 517 1003">Materials and their properties</p>	<div data-bbox="1210 401 1378 568">A photograph of a large, circular, yellowish-brown tunnel opening, possibly made of wood or metal, with a small blue "World" label in the top left corner.<p data-bbox="1230 544 1358 561">Can we explore it?</p></div> <div data-bbox="1465 408 1658 561">A 3D visualization of a material's atomic structure, showing a grid of colorful spheres (red, blue, green) connected by lines, forming a cone-like shape.<p data-bbox="1480 525 1556 542">Materials</p></div> <ul data-bbox="728 608 1951 729" style="list-style-type: none">• Explore a variety of resources that are made of different materials• Become familiar with the name of the material, i.e. wood, glass, metal, etc.




Key stage 1 (Chemistry)

	Year 1	Year 2	
Materials and their properties	 <p>Everyday Materials</p>	 <p>Exploring Everyday Materials</p>	
	<ul style="list-style-type: none"> • Pupils in EYFS will have explored a variety of resources that are made of different materials • Most will be familiar with the name of the material, i.e. wood, glass, metal, etc. 	<ul style="list-style-type: none"> • Know the name of the materials an object is made from • Know about the properties of everyday materials 	<ul style="list-style-type: none"> • Pupils will be familiar with windows being made of glass and many doors being made of wood. This unit helps them to consolidate much of the knowledge they carry around with them and helps them to consider why the materials they learned the names and properties of in Year 1 are being used




Lower key stage 2 (Chemistry)

	Year 3	
	Year 4	
Materials and their properties	 Rocks	
	<ul style="list-style-type: none"> • Most pupils will have handled a variety of rocks at different stages of their lives to date. • They may have started to recognise the difference between the rounded pebbles found on beaches and the sharper rocks found inland • In Years 1 and 2, rocks or stone will have been amongst the materials they will have looked at • In addition, pupils will know about soil because most will have made mud pies or cakes at some stage, or grown plants 	<ul style="list-style-type: none"> • Compare and group rocks based on their appearance and physical properties, giving reasons • Know how soil is made and how fossils are formed • Know about and explain the difference between sedimentary, metamorphic and igneous rock
Chemical and physical changes	 States of Matter	
	<ul style="list-style-type: none"> • Most pupils will have seen the steam coming from a kettle that's boiling. • Most will know that water turns to ice when we put it into the freezer. • Most will have seen windows steam up and droplets of water run down those windows. • Link with water cycle in geography. 	<ul style="list-style-type: none"> • Group materials based on their state of matter (solid, liquid, gas) • Know the temperature at which materials change state • Know about and explore how some materials can change state • Know the part played by evaporation and condensation in the water cycle


Upper key stage 2 (Chemistry)

 Science	Year 5	
	Year 6	
Materials and their properties	 Properties of Materials	
	<ul style="list-style-type: none"> • Pupils will have carried out some comparisons of the properties of materials already in key stage 1 and Year 3. This needs to be retrieved before moving on to this unit • In EYFS pupils may have experienced filtering and sieving sand • Food technology may have introduced pupils to sieving • The disappearance of puddles on the playground may well be something that is worth retrieving before this units begins 	<ul style="list-style-type: none"> • Compare and group materials based on their properties, e.g. hardness, solubility transparency, conductivity, [electrical & thermal], and response to magnets • Know and demonstrate how some materials can be separated, e.g. through filtering, sieving and evaporating
Chemical and physical changes	 Changes of Materials	
	<ul style="list-style-type: none"> • Most pupils will have eaten or even made toast. They will be aware that the toast cannot be a piece of bread once again • They will also have seen eggs being transformed from within their shell to the fried egg or scrambled egg that ends up on our plates • Burning paper is another example that pupils will be familiar with. They know that once burned the material will not be paper again 	<ul style="list-style-type: none"> • Know and explain how a material dissolves to form a solution • Know and show how to recover a substance from a solution • Know and demonstrate that some changes are reversible and some are not • Know how some changes result in the formation of a new material and that this is usually irreversible




EYFS (physics)

 <p>Science</p>	<p>EYFS </p>
<p>Seasonal changes</p>	 <p>Weather and seasons</p> <ul style="list-style-type: none">• Name the four seasons at some stage• Build knowledge of months of the year linked to their birthdays• Know that summer is a hot period and winter is generally cold




Key stage 1 (physics)

	Year 1
	Year 2
Seasonal changes	 <p>Seasonal Changes</p>
	<ul style="list-style-type: none">• In EYFS, it is very likely that pupils will have named the four seasons at some stage• They may have knowledge of months of the year linked to their birthdays• They will almost certainly know that summer is a hot period and winter is generally cold <ul style="list-style-type: none">• Name the seasons and know about the type of weather in each season• Observe and describe how day length varies across the seasons• Observe changes in the seasons




Lower key stage 2 (physics)

	Year 3	
	Year 4	
Forces	 <p>Forces and Magnets</p>	
	<ul style="list-style-type: none"> • Pupils will almost certainly have experienced moving different objects over different surfaces. This is likely to have happened from EYFS onwards • They may well have met magnets before, but may not have understood why objects move towards them 	<ul style="list-style-type: none"> • Know about and describe how objects move on different surfaces • Know how a simple pulley works and use to on to lift an object • 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 • Know about and explain how magnets attract and repel • Predict whether magnets will attract or repel and give a reason
Light	 <p>Light</p>	
	<ul style="list-style-type: none"> • All pupils will have experience of dark, light and shadows • Most will have been aware that the sun plays an important role in all of these aspects • Most will know about the need to put sun-cream on when their bodies are exposed to sunshine and most will have at some stage worn sunglasses • Many will have noticed that the moon is not always the same shape in the sky 	<ul style="list-style-type: none"> • Know that dark is the absence of light • Know that light is needed in order to see and is reflected from a surface • Know and demonstrate how a shadow is formed and explain how a shadow changes shape • Know about the danger of direct sunlight and describe how to keep protected




Lower key stage 2 (physics)

	Year 3	
	Year 4	
Electricity	 <p>Electricity</p>	
	<ul style="list-style-type: none"> Although this is the first time that pupils will formally have met electricity in the science curriculum, pupils will have knowledge of electricity through their daily life. For example, most will have used a switch to light up a room, will know what a plug looks like and will have toys and gadgets operated by battery Some may have experimented with lighting up a small electric bulb (using a simple circuit) 	<ul style="list-style-type: none"> Identify and name appliances that require electricity to function Construct a series circuit Identify and name the components in a series circuit (including cells, wires, bulbs, switches and buzzers) Predict and test whether a lamp will light within a circuit Know the function of a switch Know the difference between a conductor and an insulator; giving examples of each
Sound	 <p>Sound</p>	
	<ul style="list-style-type: none"> Although this is the only time we meet sound in the primary science curriculum, pupils will have come across sound as part of their music lessons The vast majority will know from the work on senses in Year 1 that our ears are linked to sound Most will have experienced using a sound system for music at home and at school 	<ul style="list-style-type: none"> Know how sound is made, associating some of them with vibrating Know how sound travels from a source to our ears Know the correlation between pitch and the object producing a sound Know the correlation between the volume of a sound and the strength of the vibrations that produced it Know what happens to a sound as it travels away from its source



Upper key stage 2 (physics)

	Year 5	
	Year 6	
Forces	 <p style="text-align: center;">Forces</p>	
	<ul style="list-style-type: none"> • There are links to the forces learning in Year 3 but there are likely to be more appropriate links with experimenting with parachutes using a small pieces of cloth linked to heavy weight at home • Most will have seen huge cranes lift up heavy objects, especially if they live close to a building site 	<ul style="list-style-type: none"> • Know what gravity is and its impact on our lives • Identify and know the effect of air and water resistance • Identify and know the effect of friction • Explain how levers, pulleys and gears allow a smaller force to have a greater effect
Light	 <p style="text-align: center;">Light</p>	
	<ul style="list-style-type: none"> • Although there are several links to the light and dark unit in Year 3, most will be familiar with torches and will be aware of changes in shadows during the day • They will know that dark is the absence of light and that it is dangerous to look directly at the sun • Many will be aware that spectacles help people see better because of magnification, etc. • Many will have used binoculars at some stage 	<ul style="list-style-type: none"> • Know how light travels • Know and demonstrate how we see objects • Know why shadows have the same shape as the object that casts them • Know how simple optical instruments work e.g. periscope, telescope, binoculars, mirror, magnifying glass etc.


Upper key stage 2 (physics)

 Science	Year 5	
	Year 6	
Earth and space	 Earth and Space	
	<ul style="list-style-type: none"> • In key stage 1, pupils will often have touched on space and used books like 'The Man in the Moon' to stimulate further interest • In Year 3, the unit on light and dark considers the moon's relationship with the Sun and the Earth • In addition, pupils will know that the amount of the moon we see changes • Retrieve the information from the Y3 science unit on light and dark, in the first instance 	<ul style="list-style-type: none"> • Know about and explain the movement of the Earth and other planets relative to the Sun • Know about and explain the movement of the Moon relative to the Earth • Know and demonstrate how night and day are created • Describe the Sun, Earth and Moon (using the term spherical)
Electricity	 Electricity	
	<ul style="list-style-type: none"> • There are links with the Year 4 unit on electricity to explore in the first instance • Most pupils will know of the dangers associated with electricity • They will also be aware of sustainable power and may have come across wind turbines across our landscapes • Many will have changed batteries in their toys and may have some awareness of positive and negative terminals 	<ul style="list-style-type: none"> • Compare and give reasons for why components work and do not work in a circuit • Draw circuit diagrams using correct symbols • Know how the number and voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer


EYFS (working scientifically)

 Science	EYFS 
Scientific attitudes	<ul style="list-style-type: none">• Encourage children to show good levels of curiosity about day to day issues related to science. For example, movement of the sun in the sky
Planning	<ul style="list-style-type: none">• Encourage children to ask questions and to find out information
Observing and measuring	<ul style="list-style-type: none">• Introduced children to magnifiers and other simple scientific instruments.• Start the process of identifying, sorting and classifying
Analysis	<ul style="list-style-type: none">• Be able to explain why things are as they are, e.g. it is hot because the sky is blue and no clouds are seen


Key stage 1 (working scientifically)

	Year 1	
	Year 2	
Scientific attitudes	<ul style="list-style-type: none"> In EYFS, some children will have shown good levels of curiosity about day to day issues related to science. For example, movement of the sun in the sky 	<ul style="list-style-type: none"> Encourage to be curious and ask questions about what they notice Begin to use simple scientific language to talk about what they have found out and communicate their ideas Read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at key stage1
Planning	<ul style="list-style-type: none"> From EYFS, pupils are encouraged to ask questions and to find out information 	<ul style="list-style-type: none"> Ask simple questions and recognise that they can be answered in different ways
Observing and measuring	<ul style="list-style-type: none"> Pupils in EYFS will have been introduced to magnifiers and other simple scientific instruments. They also will have started the process of identifying, sorting and classifying 	<ul style="list-style-type: none"> Observe closely, using simple equipment safely Perform simple tests Gather and record data to help in answering questions Identify and classify findings
Analysis	<ul style="list-style-type: none"> Some will be able to explain why things are as they are, e.g. it is hot because the sky is blue and no clouds are seen 	<ul style="list-style-type: none"> Use their observations and ideas to suggest answers to questions


Lower key stage 2 (working scientifically)

	Year 3	
	Year 4	
Scientific attitudes	<ul style="list-style-type: none"> • From key stage 1, pupils are used to asking questions and also to finding out answers by using books and asking the right people • Pupils will have started to explain their reasoning to others in their class or to adults who work with them • They will have a growing awareness of scientific words and will be starting to use them with confidence 	<ul style="list-style-type: none"> • Ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them • Draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out • Read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge
Planning	<ul style="list-style-type: none"> • Pupils in key stage 1 will have been encouraged to set up their own enquiries and often do so working in a small group • Pupils will be familiar with the concept of a fair test and many will know how to isolate variables 	<ul style="list-style-type: none"> • Ask relevant questions and use different types of scientific enquiries to answer them • Set up simple practical enquiries, comparative and fair tests
Observing and measuring	<ul style="list-style-type: none"> • Pupils will be familiar with measuring, with this being linked to their learning in mathematics • Pupils will have some experiences of gathering information and collating it 	<ul style="list-style-type: none"> • Make systematic and careful observations and, where appropriate, take accurate measurements, using a range of equipment safely, including thermometers and data loggers • Gather, record, classify and present data in a variety of ways to help in answering questions


Lower key stage 2 (working scientifically)

 Science	Year 3	
	Year 4	
Analysis	<ul style="list-style-type: none"> In key stage 1, many pupils will have started the process of labelling diagrams and using simple graphs (after collecting their own information). This may sometimes be in the form of a tally chart They will have learned about block diagrams and simple tables in Year 2 mathematics They will have started the process of analysing their own information and present their findings to the rest of the class 	<ul style="list-style-type: none"> Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions Use results to draw simple conclusions and make predictions for new values Identify differences, similarities or changes related to simple scientific ideas and processes Use straightforward scientific evidence to answer questions or to support findings
Evaluating	<ul style="list-style-type: none"> Some pupils will be at the stage of drawing conclusions from the way they worked and be able to suggest how they would improve if they did the experiment again 	<ul style="list-style-type: none"> Use results to suggest improvements and raise further questions
Measurements		<ul style="list-style-type: none"> Use standard units

Upper key stage 2 (working scientifically)

	Year 5	
	Year 6	
Scientific attitudes	<ul style="list-style-type: none"> • Many pupils will have already experienced setting out their findings in a range of different ways • Many will be familiar with using diagrams to support their findings • Most will recognise the need to support their findings or their enquiries by reading or using the internet 	<ul style="list-style-type: none"> • Identify scientific evidence that has been used to support or refute ideas or arguments • Select the most appropriate ways to answer science questions using different types of scientific enquiry • Read, spell and pronounce scientific vocabulary correctly
Planning	<ul style="list-style-type: none"> • Some pupils will have been leaders in a group task and may well be familiar with asking questions related to their investigations • Some may already be able to identify variables when setting up a fair test. 	<ul style="list-style-type: none"> • Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
Observing and measuring	<ul style="list-style-type: none"> • Most pupils will be able to link their measurement learning in mathematics to the measurements required in their science investigations • Many pupils will have found effective ways of recording their findings 	<ul style="list-style-type: none"> • Take measurements, using a range of scientific equipment safely, with increasing accuracy and precision, taking repeat readings • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables when appropriate

Upper key stage 2 (working scientifically)

	Year 5	
	Year 6	
Analysis	<ul style="list-style-type: none"> Pupils may well be able to present their findings in graphic formats according to what they have covered in their mathematical learning Most pupils will be able to set out their findings in writing using appropriate genre of writing as already covered in their English learning 	<ul style="list-style-type: none"> Present data using a variety of scatter graphs, bar and line graphs Report and present findings from enquiries, including conclusions, causal relationships and explanations in oral and written forms such as displays and other presentations
Evaluating	<ul style="list-style-type: none"> Most pupils will be familiar with drawing conclusions from their investigations 	<ul style="list-style-type: none"> Use test results to make predictions to set up further comparative and fair tests Discuss the degree of trust in results
Measurements	<ul style="list-style-type: none"> Use standard units 	