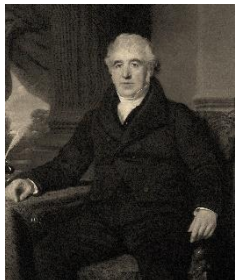















Year		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
KS1	Africa	My town. My school. My road.	United Kingdom	Toys	Paws, Claws and Whiskers	Kenya	Seaside Holidays!
		Everyday Materials	Seasonal Changes	Everyday Materials	Animals including humans	Animals including humans	Plants
	Y1	National Curriculum					
		<ul style="list-style-type: none"> Distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. 	<ul style="list-style-type: none"> Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies 	<ul style="list-style-type: none"> Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials based on their simple physical properties. 	<ul style="list-style-type: none"> Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals Identify and name a variety of common animals that are carnivores, herbivores and omnivores Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense 	<ul style="list-style-type: none"> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees Identify and describe the basic structure of a variety of common flowering plants, including trees. 	
	Scientist	<p>Charles Mcintosh (1766-1843)</p>  <p>Scottish chemist and Inventor of waterproof fabric. The mackintosh raincoat is named after him.</p>	<p>Christopher Wren (1632-1723)</p>  <p>Inventor of the rain gauge.</p>	<p>Ole Kirk Christiansen</p>  <p>Inventor of Lego</p>	<p>Dr Sandeun Lek Chailert</p>  <p>Creator of the Elephant nature foundation protecting elephants.</p>	<p>Joan Procter (1897 - 1931)</p>  <p>Zoologist and curator of reptiles</p>	<p>Wangari Maathai (1940-2011)</p>  <p>Wangari Maathai was a Kenyan environmentalist who began a movement to plant trees and re-forest her country. She was the first African woman to win a Nobel Peace Prize.</p>
	Enquiries	<ul style="list-style-type: none"> Pattern seeking? Is there a pattern in the materials used for objects in school? Observation over time: What happens to materials over time if we bury them in the ground? Comparative Test: Which materials are most suitable for a house? Identify and Classify: What group (material) does each object belong to? 	<ul style="list-style-type: none"> Observation over time: How does an oak tree change over the year? Comparative and Fair Test: Which trees have the biggest leaves? Identify and Classify: How would you group these based on the time of year you see/use them? Pattern seeking? Do trees with bigger leaves lose their leaves first in Autumn? Research: 	<ul style="list-style-type: none"> Observation over time: How do some materials change when they are in water? FLOATING/SINKING Comparative and Fair Test: Which material is most suitable for an umbrella? WATERPROOF Identify and Classify: Which materials are flexible? Which are not? Which are absorbent? Research: Which materials can be recycled? 	<ul style="list-style-type: none"> Observation over time: How does my height change over the year? Comparative and Fair Test: Is our sense of hearing better when we cannot see? Identify and Classify: What are the names for all the parts of our bodies? Pattern seeking? Do taller children have bigger feet? 	<ul style="list-style-type: none"> Observation over time: How does a caterpillar / tadpole change over time? Comparative and Fair Test: Do amphibians have more in common with reptiles or fish? Identify and Classify: How can we group these zoo animals? Pattern seeking? Do you get better at smelling, as you get older? 	<ul style="list-style-type: none"> Observation over time: How does my sunflower change each week? Comparative and Fair Test: Which type of compost grows the best sunflower? Identify and Classify: Which plants are wild? Which are garden? Pattern seeking? Do bigger seeds grow in to bigger plants? Research:



		Do all countries in the world have four seasons?		<ul style="list-style-type: none"> Research: How do you look after a ? 	<ul style="list-style-type: none"> Research: How do animals differ in Kenya to ones in UK? 	Are there plants in flower every season? What are they?
Cross-curricular links	<p>DT: Creating a house collage – choosing suitable materials for each element</p> <p>English: Comparing objects with ‘er’ suffix based on material properties</p>	<p>Geography: Name weather types in the UK; Identify daily changes in weather; Identify seasonal changes across a year; Recognise weather symbols.</p>	<p>History: comparing toys of the past compared to now, link to materials</p> <p>Trip – Toy Museum Tatton Park</p> <p>DT: designing and making toys, choose appropriate materials for purpose</p>	<p>Stunning start: Animal Takeover workshop (selection of animals brought in to hold and discuss)</p> <p>English: Informative writing on how to look after a guinea pig (diet, habitat, care)</p>		<p>English – writing on science investigation</p>
End Point Assessment						
	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can describe the properties of different materials Knows that all objects are made of one or more materials. Some objects can be made from different materials e.g. plastic, metal or wooden spoons. Materials can be described by their properties e.g. shiny, stretchy, rough etc. Some materials e.g. plastic can be in different forms with very different properties. <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can sort objects and materials using a range of properties Can choose an appropriate method for testing an object for a particular property 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can name the four seasons and identify when in the year they occur. Can observe and describe weather in different seasons over a year. Can observe and describe days as being longer (in time) in the summer and shorter in the winter. <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Describe the general types of weather and changes in day length over the seasons. Describe some other features of their surroundings, themselves, animals, plants that change over the seasons Can collect information to classify weather and day length in different seasons and present the information in tables or charts to compare the seasons. 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can label a picture or diagram of an object made from different materials <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can use their test evidence to answer the questions about properties e.g. Which material is most suitable for an umbrella? WATERPROOF Can explain: Which materials are flexible? Which are not? Which are absorbent? 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can name a range of animals which includes animals from each of the vertebrate groups, e.g. name specific birds and fish. Can describe the key features of these named animals Can label key features on a picture/diagram Can write descriptively about an animal Can describe what a range of animals eat <p><i>The children do not need to use the words carnivore, herbivore and omnivore. If they do, ensure that they understand that carnivores eat other animals not just meat.</i></p> <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can sort and group animals using similarities and differences Can use simple charts etc. to identify unknown animals Can create a drawing of an imaginary animal labelling its key features Can use secondary resources to find out what animals eat, including talking to experts e.g. pet owners, zoo keepers etc. 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can name trees and other plants that they see regularly Can point out trees which lost their leaves and trees that kept them all year – SEASONAL CHANGES link Can name parts of a plant, recognising that they are not always the same e.g. leaves and stems might not be green <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can sort and group parts of plants using similarities and differences Can collect information on features that change over time 	



		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		
UK, Australasia and Oceania	Y2	Fighting Fit!	Around the World	Fire, Fire!	Land Ahoy!	Nightingale and Seacole	Go Wild!		
		Animals Including Humans	Animals Including Humans	Everyday Materials	Everyday Materials	Living things and their habitats	Living things and their habitats/Plants		
		Plants all year							
		National Curriculum							
		<ul style="list-style-type: none"> notice that animals, including humans, have offspring which grow into adults find out about and describe the basic needs of animals, including humans, for survival (water, food and air) describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene 	<ul style="list-style-type: none"> identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching 	<ul style="list-style-type: none"> explore and compare the differences between things that are living, dead, and things that have never been alive 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 identify and name a variety of plants and animals in their habitats, including microhabitats 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 					
Scientists	<p>Dr Ernest Madu (born 1960)</p>  <p>Dr Ernest Madu is a cardiologist. His work focuses on providing affordable healthcare in low-resource nations.</p>	<p>Louis Pasteur (1822-1895)</p>  <p>French chemist and microbiologist; develop the first vaccine.</p>	<p>John Loudon McAdam (1756-1836)</p>  <p>John Loudon McAdam was a Scottish engineer who modernised the way we build roads. He was the inventor of tarmacadamed road surfacing – commonly called tarmac.</p>	<p>Julie and Scott Brusaw</p>  <p>Julie and Scott are one of the inventors of Solar Roadways. Solar roadways use solar powered road panels to form a smart roadway.</p>	<p>Dr Alexandra Harmon Threat</p>  <p>Entomologist and bee expert. Assistant Professor of Entomology at the University of Illinois, Urbana-Champaign. She focuses on identifying local and landscape features that contribute to pollinator diversity and restoration.</p>	<p>David Douglas (1799-1834)</p>  <p>David Douglas was a Scottish botanist, best known as the namesake of the Douglas-fir. He worked as a gardener, and explored the Scottish Highlands, North America, and Hawaii.</p>			
Enquiries	<ul style="list-style-type: none"> Observation Over Time: Do you eat a balanced and healthy diet in a week? Identifying & Classifying What makes a balanced diet? Identifying and Research: What food do you need in a healthy diet and why? 	<ul style="list-style-type: none"> Observation Over Time: How does a tadpole/baby change over time? Classifying: Which offspring belongs to each animal? Comparative Testing: Does soap really keep the germs away? Research: 	<ul style="list-style-type: none"> Observation Over Time: Would a paper boat float forever? WATERPROOF Comparative Testing: Which materials would be best for a new house? (Links to new London) Identify and Classify: Which materials did you see on our material hunt? Research: 	<ul style="list-style-type: none"> Comparative Testing: Which materials would be the best for a pirate's outfit? Test the properties of materials for particular uses e.g. compare the stretchiness of fabrics to select the most appropriate for the outfit. Identify and Classify: 	<ul style="list-style-type: none"> Identify and Classify: How would you group these animals based on what habitat you would find them in? Identify and Classify: Are the objects we found alive or dead? Research: How do animals adapt to suit their environment? 	<ul style="list-style-type: none"> Comparative testing: Which habitat do worms prefer to live in and why? (What does it provide?) Identify and Classifying: How would you group these things to show whether they are living, dead or never been alive? Research: Design your own creature that has adapted to its habitat. 			





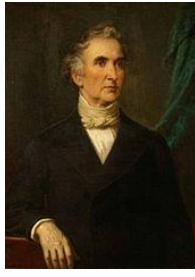



	<ul style="list-style-type: none"> Pattern Seeking: Do longer legs make you a faster runner? 	What do animals and humans need to survive?	How have materials changed over time? (houses/roads – link with the scientists)	Which materials are transparent, translucent, and opaque?	<ul style="list-style-type: none"> Pattern Seeking: What animals can you find in different microhabitats? 	Do animals need each other to survive? (Food chains) <ul style="list-style-type: none"> Comparative Testing: Do reptiles have more in common with amphibians or fish?
	<ul style="list-style-type: none"> Observation over time: What happens to my bulb when I have planted it? Identify & Classify: How could you group these bulbs and seeds? 	<ul style="list-style-type: none"> Observation over time: What happens to my bean after I have planted it? Research: How does a cactus survive in a desert with no water? Pattern Seeking: Do all flowers have the same number of petals? 	<ul style="list-style-type: none"> Comparative: What conditions will help me grow the healthiest plant? Identify and Classify: What plants did you see on our hunt? 			
Cross-curricular links	<p>D&T: Making healthy pizzas</p> <p>P.E.: Linked to pattern seeking enquiry running races</p>	<p>Computing: safe searching & refined searching</p> <p>Reading: research our key scientist relating to Animals including Humans</p>	<p>History: Linked to Great Fire of London, comparing the materials used in houses then v now</p> <p>Children to design their own new house for modern London</p> <p>Maths: Tally chart for petals investigation</p>	<p>D&T: Children to build a boat structure that can float, stay waterproof & move</p>	<p>Educational Visit: Burwardsley</p> <p>Computing: Presenting ideas (how they present their newly created creature)</p> <p>Maths: Pictogram for what plants did you see on our hunt?</p>	<p>English: linked to Literacy writing unit science investigation</p> <p>Educational Visit: Pond/Park</p> <p>SDG's: Life on Land</p> <p>Maths: Bar chart for Minbeast investigation</p>

End Point Assessment

	<p>Shows understanding of a concept using scientific vocabulary correctly</p>	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can name an object, say what material it is made from, identify its properties and make a link between the properties and this particular use. For a given object can identify what properties a suitable material needs to have Whilst changing the shape of an object can describe the actions used. Can use the words flexible and/or stretchy to describe materials that can be changed in shape and stiff and/or rigid for those that cannot. <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Explain why a material is suitable or unsuitable for a particular purpose Carry out simple tests to determine the properties of materials Identify, with reasons, possible uses for a given material Recognize that a material may come in different forms which have different properties. 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can find a range of items outside that are living, dead and never lived Can name a range of animals and plants that live in a habitat and micro-habitats that they have studied Can talk about how the features of these animals and plants make them suitable to the habitat Can talk about what the animals eat in a habitat and how the plants provide shelter for them Can construct a food chain that starts with a plant and has the arrows pointing in the correct direction <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can sort into living, dead and never lived Can give key features that mean the animal or plant is suited to its micro-habitat Using a food chain can explain what animals eat Can explain in simple terms why an animal or plant is suited to a habitat e.g. the caterpillar cannot live under the soil like a worm as it needs fresh leaves to eat; the seaweed we found on the beach cannot live in our pond because it is not salty
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		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
LKS2	Europe	Tribal Tales		Mountains, Volcanoes and Natural Disasters	Plants of the World	Espana	Gods and Mortals
		Animals Including Humans	Forces and magnets	Rocks	Plants	Light	
		National Curriculum					
		<ul style="list-style-type: none"> 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 identify that humans and some other animals have skeletons and muscles for support, protection and movement 	<ul style="list-style-type: none"> compare how things move on different surfaces notice that some forces need contact between 2 objects, but magnetic forces can act at a distance observe how magnets attract or repel each other and attract some materials and not others 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 describe magnets as having 2 poles predict whether 2 magnets will attract or repel each other, depending on which poles are facing 	<ul style="list-style-type: none"> compare and group together different kinds of rocks on the basis of their appearance and simple physical properties describe in simple terms how fossils are formed when things that have lived are trapped within rock recognise that soils are made from rocks and organic matter 	<ul style="list-style-type: none"> identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers 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 investigate the way in which water is transported within plants explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal 	<ul style="list-style-type: none"> recognise that they need light in order to see things and that dark is the absence of light notice that light is reflected from surfaces recognise that light from the sun can be dangerous and that there are ways to protect their eyes recognise that shadows are formed when the light from a light source is blocked by an opaque object find patterns in the way that the size of shadows change 	
Scientist	<p>Wilhelm Conrad Rontgen (1845-1923)</p>  <p>Wilhelm Rontgen was a German physicist who</p>	<p>Michael Faraday (1791-1867)</p> 	<p>Mary Anning (1799-1847)</p>  <p>Mary Anning was an English palaeontologist and fossil collector.</p>	<p>Professor Monique Simmonds</p>  <p>Monique Simmonds is the deputy director of science at</p>	<p>Justus von Liebig (1803-1873)</p>  <p>Justus von Liebig was a German chemist. In 1835 he developed</p>	<p>Nicky Fox</p> 	

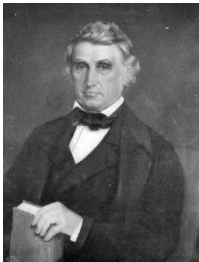
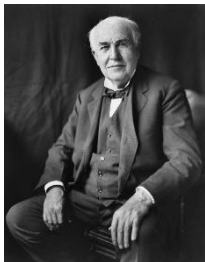






	discovered X-rays in 1895. He was awarded many honours and won the Nobel Prize for physics in 1901.	Michael Faraday was an English scientist. In 1831, he discovered electromagnetic induction. This was a very important discovery for the future of science and technology	She became known around the world for important finds she made in Jurassic fossil beds in Dorset.	the Royal Botanic Gardens, Kew. She researches traditional and commercial uses of plants and fungi. Her work involves her promoting plant and fungal based solutions to global challenges.	a process for applying a thin layer of metallic silver to one side of a pane of clear glass. This technique was soon adapted and improved, allowing for the mass production of mirrors.	Nasa scientist who studies the sun.
Enquiries	<p>Comparative and fair testing: Compare, contrast and classify skeletons of different animals</p> <p>Identifying and Classifying: How would you organise these foods into the different nutrient types?</p> <p>Pattern seeking: Do male humans have larger skulls than females?</p> <p>Link to comparative testing</p> <p>Research: Why do vitamins keep us healthy and which foods can we find them in?</p>	<p>Comparative and fair testing: Which surface is best to stop you slipping?</p> <p>Identifying and Classifying: Which materials are magnetic?</p> <p>Pattern seeking: Does the size and shape of a magnet affect how strong it is?</p> <p>Research: How does a compass work?</p>	<p>Identifying and Classifying: How can I group these rocks based on their physical appearance and physical properties?</p> <p>Observation over time: What happens to soil when water is added to it?</p> <p>Research: How are fossils formed?</p> <p>Pattern Seeking: Is there a pattern where we find volcanoes?</p>	<p>Comparative and fair testing: How does the length of the carnation stem affect how long it takes for the food colouring to dye the petals?</p> <p>Identifying and Classifying: How many ways can you group our seed collection?</p> <p>Observation over time: What happens to celery when it is left in a glass of coloured water?</p> <p>Pattern seeking: What colour flowers do pollinating insects prefer?</p> <p>Research: What are all the different ways that seeds disperse?</p>	<p>Comparative and fair testing: How does the distance between the shadow puppet and the screen affect the size of the shadow?</p> <p>Identifying and Classifying: How would you organise these light sources into natural and artificial sources?</p> <p>Observation over time: Is the Sun the same brightness all day?</p> <p>Pattern seeking: Are you more likely to wear glasses if you are older</p> <p>Patterns in visibility of different objects in different lighting conditions and predict which will be more or less visible as conditions change.</p> <p>Research: How does the Sun make light?</p>	
Cross-curricular links	<p>Art – Draw a skeleton.</p> <p>PSHE – healthy eating.</p> <p>Reading – research enquiry – posters: Why do vitamins keep us healthy and which foods can we find them in?</p> <p>Maths: Use tape measures to measure circumference of heads</p>	<p>Reading and computing – research how a compass works.</p>	<p>Maths – graph to show results of pattern seeking.</p> <p>Reading – how a fossil is formed.</p> <p>Art/DT – make a fossil</p>	<p>Art – draw and label inside of a flower.</p> <p>Computing/Reading – research seed dispersal</p> <p>Drama- Video about seed dispersal methods and process of pollination.</p> <p>English – science investigation unit.</p>	<p>Maths – pattern seeking enquiry.</p> <p>Reading – research enquiry.</p> <p>Art – design own pair of sunglasses.</p>	
End Point Assessment						
	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can name the nutrients found in food Can state that to be healthy we need to eat the right types of food to give us the correct 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can give examples of forces in everyday life Can give examples of objects moving differently on different surfaces 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can name some types of rock and give physical features of each Can explain how a fossil is formed 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can explain the function of the parts of a flowering plant Can describe the life cycle of flowering plants, including pollination, seed 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can describe how we see objects in light and can describe dark as the absence of light. Can state that it is dangerous to view the sun directly and state precautions used to view the sun, for example in eclipses. Can define transparent, translucent and opaque. Can describe how shadows are formed by objects blocking light. 	



	<p>amount of these nutrients</p> <ul style="list-style-type: none"> Can name some bones that make up their skeleton giving examples that support, help them move or provide protection Can describe how muscles and joints help them to move <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can classify food into those that are high or low in particular nutrients Use their data to look for patterns (or lack of) when answering their enquiry question Can give similarities e.g. they all have joints to help the animal move, and differences between skeletons Plan a daily diet contain a good balance of nutrients 	<ul style="list-style-type: none"> Can name a range of types of magnets and show how the poles attract and repel Can draw diagrams using arrows to show the attraction and repulsion between the poles of magnets <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can use their results to describe how objects move on different surfaces Can use their results to make predictions for further tests Can use classification evidence to identify that some metals but not all are magnetic Through their exploration they can show how like poles repel and unlike poles attract and name unmarked poles Can use test data to rank magnets 	<ul style="list-style-type: none"> Can explain that soils are made from rocks and also contain living/dead matter <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can classify rocks in a range of different ways using appropriate vocabulary Can link rocks changing over time with their properties e.g. soft rocks get worn away more easily Can present in different ways their understanding of how fossils are formed e.g. in role play, comic strip, chronological report, stop-go animation etc. Can identify plant/animal matter and rocks in samples of soil Can devise a test to explore the water retention of soils 	<p>formation, seed dispersal, and germination</p> <ul style="list-style-type: none"> Can give different methods of pollination and seed dispersal, including examples <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can explain observations made during investigations Can look at the features of seeds to decide on their method of dispersal Can draw and label a diagram of their created flowering plant to show its parts, their role and the method of pollination and seed dispersal 	<p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can describe patterns in visibility of different objects in different lighting conditions and predict which will be more or less visible as conditions change. Therefore can clearly explain that objects are not visible in complete darkness. Can describe patterns in how shadows vary due to blocking of light and predict what will happen as light source or object are moved.
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		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y4	Asia	Tomb Raiders	Electricity	Water World	Romans	India	The Sound of Music
		Animals Including Humans	Electricity	State of matter	Living Things and their Habitats		Sound
		National Curriculum					
		<ul style="list-style-type: none"> describe the simple functions of the basic parts of the digestive system in humans identify the different types of teeth in humans and their simple functions construct and interpret a variety of food chains, identifying producers, predators and prey 	<ul style="list-style-type: none"> identify common appliances that run on electricity construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers 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 recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit recognise some common conductors and insulators, and associate metals with being good conductors 	<ul style="list-style-type: none"> compare and group materials together, according to whether they are solids, liquids or gases 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) identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature 	<ul style="list-style-type: none"> recognise that living things can be grouped in a variety of ways explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment recognise that environments can change and that this can sometimes pose dangers to living things 	<ul style="list-style-type: none"> identify how sounds are made, associating some of them with something vibrating recognise that vibrations from sounds travel through a medium to the ear find patterns between the pitch of a sound and features of the object that produced it find patterns between the volume of a sound and the strength of the vibrations that produced it recognise that sounds get fainter as the distance from the sound source increases 	
Scientist	<p>William Beaumont (1785-1853)</p>  <p>William Beaumont was a surgeon in the U.S. Army. He carried out lots of experiments and research on human digestion. He provided the world with new information about the digestive process in living human beings</p>	<p>Thomas Edison (1847-1931)</p>  <p>Thomas Edison was an American inventor. He is sometimes described as America's greatest inventor. He invented the first practical incandescent light bulb.</p>	<p>Bernard Palissy (1510-1590)</p>  <p>Bernard Palissy was a French potter and scientist. He is often credited as the man who 'discovered' the modern theory of the water cycle. He asserted that rainfall alone was sufficient for the maintenance of rivers.</p>	<p>Jane Goodall (Born 1934)</p>  <p>Jane Goodall is an expert on wild chimpanzees. She is known for her ground breaking discoveries about their behaviour. She has shown us the urgent need to protect chimpanzees from extinction.</p>	<p>Seirian Sumner</p>  <p>Dr Seirian Sumner is an evolutionary biologist and behavioural ecologist. She specialises in social evolution and behaviour in insects (bees, wasps and ants).</p>	<p>Christian Doppler (1803-1853)</p>  <p>Christian Doppler was an Austrian mathematician and physicist. He is celebrated for his principle known as the Doppler effect. This describes how noises sound different as you move toward or away from a noisy object.</p>	





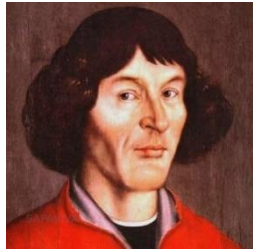


	Enquiries	<p>Comparative testing: How does smell affect the taste of a food?</p> <p>Identifying, grouping and classifying: How can we group our teeth into different types?</p> <p>Research: How are teeth damaged by sugar?</p> <p>Pattern seeking: What features do all producers, predators and prey have in common?</p>	<p>Comparative testing: Which materials conduct and which insulate?</p> <p>Research: What are the danger of working with electricity and what precautions should we take? <i>(In addition to sessions)</i></p> <p>Observation over time: How does the brightness of a solar-powered lightbulb change over time?</p> <p>Pattern-seeking reflection after data is collected: What days was the bulb brightest? Why?</p>	<p>Identifying, grouping and classifying: How can we group these materials into states of matter?</p> <p>Comparative testing: What is the effect of temperature on the drying of different materials?</p> <p>Pattern seeking:: How does the mixture of a solution affect its properties?</p> <p>Observation over time: How does the temperature of molten wax change over time?</p>	<p>Research: What creatures can be found in certain habitats?</p> <p>Identifying, grouping and classifying: How can we organise animals into different classification groups? (Repeated focus of unit --> vertebrate vs invertebrate / cold-blooded vs warm-blooded / mammals, birds, amphibians and reptiles).</p> <p>Pattern seeking: What group of animals is most common in our local environment?</p>	<p>Research: What is an environmental disaster caused by humans?</p> <p>Comparative testing: Will the level of air pollution change depending on the location in the school?</p> <p>Observation over time: How do the effects of air pollution change over time?</p>	<p>Comparative testing: How does the loudness of a sound change as the distance from the sources increases?</p> <p>Research: What are the speeds of sound and light?</p> <p>Pattern seeking: Does the pitch of a sound correlate to the material making it?</p>
	Cross-curricular links	<p>DT: Creating digestive systems out of recycled materials</p> <p>English/Drama: Performing short plays based on the food chain.</p>	<p>DT: Creating Nativity decorations with built-in circuits.</p> <p>Maths: Handling decimals and comparing large numbers with voltage/wattages etc</p> <p>Computing: Voltage of computer hardware and devices.</p>	<p>Geography: The Water Cycle (main topic link)</p> <p>DT: Evaluating use of materials considering their properties</p> <p>Maths: Handling temperatures and displaying results.</p>	<p>Geography: Physical features of environments</p> <p>Geography: Fieldwork</p> <p>Art: Scientific drawing</p>	<p>Geography: Physical features of environments/biomes</p> <p>Geography: Fieldwork</p> <p>English:</p>	<p>DT: Selecting materials to create different pitches in their musical instruments.</p> <p>Music: Exploring pitch in both a scientific context and a musical one.</p>
End Point Assessment							
	End Point Assessment	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can sequence the main parts of the digestive system Can draw the main parts of the digestive system onto a human outline Can describe what happens in each part of the digestive system Can point to the three different types of teeth in their mouth and talk about their shape and what they are used for. <p>Applying knowledge in familiar related contexts,</p>	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can name the components in a circuit Can make electric circuits Can control a circuit using a switch Can name some metals that are conductors Can name materials that are insulators <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can communicate structures of circuits using drawings which show how the components are connected 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can name properties of solids, liquids and gases Can give everyday examples of melting and freezing Can give everyday examples of evaporation and condensation Can describe the water cycle <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can give reasons to justify why something is a solid liquid or gas Can give examples of things that melt/freeze and how their melting points vary 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can name living things living in a range of habitats, giving the key features that helped them to identify them <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can keep a careful record of living things found in different habitats throughout the year (diagrams, tally charts etc.) 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can give examples of how an environment may change both naturally and due to human impact <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can present their learning about changes to the environment in different ways e.g. campaign video, persuasive letter 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can describe different types of objects producing different sounds and that the sound is produced by vibration in the object. Can describe sounds travelling through different mediums such as air, water, metal. Can find patterns between the pitch and volume of a sound and the features of the object that produced it. Can recognise that sounds get fainter as the distance from the sound source increases.



		<p>including a range of enquiries</p> <ul style="list-style-type: none"> • Can use the model to describe the journey of food through the body explaining what happens in each part. • Can record the teeth in their mouth (make a dental record) • Can explain how the teeth in animal skulls show they are carnivores, herbivores or omnivores. 	<ul style="list-style-type: none"> • Use classification evidence to identify that metals are good conductors and non-metals are insulators • Can incorporate a switch into a circuit to turn it on and off • Can connect a range of different switches identifying the parts that are insulators and conductors • Can add a circuit with a switch to a DT project and can demonstrate how it works 	<ul style="list-style-type: none"> • From their observations, can give the melting points of some materials • Using their data, can explain what affects how quickly a solid melts • Can measure temperatures using a thermometer • Can explain why there is condensation on the inside the hot water cup but on the outside of the icy water cup • Can present their learning about the water cycle in a range of ways e.g. diagrams, explanation text, story of a water droplet 	<ul style="list-style-type: none"> • Can use classification keys to identify unknown plants and animals 	<ul style="list-style-type: none"> • Use secondary sources to find out about how environments may naturally change • Use secondary sources to find out about human impact, both positive and negative, on environments 	<p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> • Can explain what happens when you strike a drum or pluck a string and use a diagram to show how sounds travel from an object to the ear. • Can demonstrate how to increase or decrease pitch and volume using musical instruments or other objects. • Can explain how loudness can be reduced by moving further from the sound source or by using a sound insulating medium.
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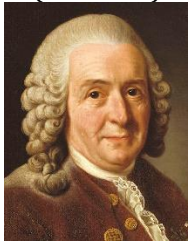




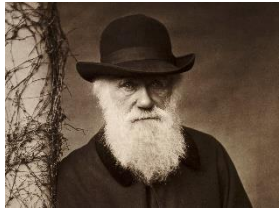


		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2				
		Anglo-Saxons	Vikings	Extreme Environments	The Ancient Maya	Natural Resources	Star Gazers				
		Properties and changes of materials		Living Things and their Habitats	Animals Including Humans	Forces	Earth and Space				
		National Curriculum									
UKS2	Y5 North America	<ul style="list-style-type: none"> Compare and group together everyday materials based on their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Demonstrate that dissolving, mixing and changes of state are reversible changes Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda 		<ul style="list-style-type: none"> Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Describe the life process of reproduction in some plants and animals. 		<ul style="list-style-type: none"> Describe the changes as humans develop to old age. 		<ul style="list-style-type: none"> explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object identify the effects of air resistance, water resistance and friction, that act between moving surfaces recognise that some Mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. 		<ul style="list-style-type: none"> describe the movement of the Earth, and other planets, relative to the Sun in the solar system describe the movement of the Moon relative to the Earth describe the Sun, Earth and Moon as approximately spherical bodies use the idea of the Earth's Rotation to explain day and night and the apparent movement of the sun across the sky. 	
	Scientist	<p>Stefanie Kwolek</p>  <p>An American chemist and engineer widely regarded as a pioneer of polymer chemistry.</p>	<p>Walter Lincoln Hawkins (1911-1992)</p> 	<p>David Attenborough (born 1926)</p>  <p>Sir David is an English broadcaster and naturalist. He has made many famous wildlife programmes. He was knighted in 1985.</p>		<p>Galileo Galilei (1564-1642)</p>  <p>He was an Italian scientist. He discovered that if two objects of similar shape and size were dropped, they would fall at the same rate.</p>	<p>Nicolas Copernicus (1473-1543)</p>  <p>Nicolaus was a Polish astronomer and mathematician who formulated the heliocentric model of the solar system that placed the Sun rather than the Earth at the centre of the universe.</p>				
Enquiries	<ul style="list-style-type: none"> Comparative test: Which type of material is best for keeping tea warm? Comparative test: Which kitchen towel is most absorbent? Identifying and classifying: 	<ul style="list-style-type: none"> Ideas over time: What did Stephanie Kwolek discover and why was it important? Observation over time How does a sugar cube change when in water? Research 	<ul style="list-style-type: none"> Identifying and classifying: Compare the life cycles of animals (similarities and differences) Pattern seeking: Is there a relationship between a mammal's size and its gestation period? 	<ul style="list-style-type: none"> Identifying and classifying: Can you identify all the stages in the human life cycle? Pattern seeking; 	<ul style="list-style-type: none"> Comparative: Which shape parachute takes the longest time to fall? Identifying and classifying: Can you label and name all the forces acting on the 	<ul style="list-style-type: none"> Pattern seeking: Is there a pattern between the size of a planet and the time it takes to travel around the sun? Ideas over time: How have our ideas about the solar system changed over time? 					



	<p>Can you group these materials based on whether they are transparent or not?</p> <ul style="list-style-type: none"> What are micro plastics and how are they impacting our world? <p>Identifying and classifying: Which materials dissolve and which do not? Observation over time: How can we use evaporation to separate salt from water?</p>	<ul style="list-style-type: none"> Observation over time: How do brine shrimp change over their lifetime? Research: What is the difference between the life cycle of an insect and a mammal? 	<p>Are the oldest children in our school the tallest?</p> <ul style="list-style-type: none"> Research: Why has life expectancy changed since the Middle Ages? 	<p>objects in each of these situations?</p> <ul style="list-style-type: none"> Ideas over time: How have our ideas about gravity changed over time? 	<ul style="list-style-type: none"> Identifying and classifying: How could you organise all the objects in the solar system into groups? Research: What unusual objects did Jocelyn Bell Burnell discover?
Cross –	<p>Maths: Measuring - temperature and time English: Writing and reading opportunities (note making, comprehension, research)</p>	<p>Maths – Data handling Geography – exploring the habitats of animals and their physical properties (extreme environments)</p>	<p>Maths: Creating charts and graphs English – speaking and listening (drama) acting out life cycles</p>	<p>DT: Materials and building parachutes History: Discussing past ideas and people’s views on the world English – writing activities linked to science focus</p>	<p>English – research and sharing findings through speeches / Drama Educational visit: to Jodrell bank DT – creating models of the solar system</p>
End Point Assessment	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can use understanding of properties to explain everyday uses of materials. For example, how bricks, wood, glass and metals are used in buildings Can explain what dissolving means, giving examples Can name equipment used for filtering and sieving Can use knowledge of liquids, gases and solids to suggest how materials can be recovered from solutions or mixtures by evaporation, filtering or sieving Can describe some simple reversible and non-reversible changes to materials, giving examples <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can create a chart or table grouping/comparing everyday materials by different properties Can use test evidence gathered about different properties to suggest an appropriate material for a particular purpose Can group solids based on their observations when mixing them with water Can give reasons for choice of equipment and methods to separate a given solution or mixture such as salt or sand in water Can explain the results from their investigations involving dissolving and non-reversible change 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can draw the life cycle of a range of animals identifying similarities and differences between the life cycles Can explain the difference between sexual and asexual reproduction and give examples of how plants reproduce in both ways <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can present their understanding of the life cycle of a range of animals in different ways e.g. drama, pictorially, chronological reports, creating a game Can identify patterns in life cycles Can compare two or more animal life cycles studied Can explain how a range of plants reproduce asexually 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can explain the changes that takes place in boys and girls during puberty Can explain how a baby changes physically as it grows and also what it is able to do <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <p><i>This unit is likely to be taught through direct instruction due to its sensitive nature</i></p>	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can demonstrate the effect of gravity acting on an unsupported object Can give examples of friction, water resistance and air resistance Can give examples of when it is beneficial to have high or low friction, water resistance and air resistance Can demonstrate how pulleys, levers and gears work <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can explain the results of their investigations in terms of the force, showing a good understanding that as the object tries to move through the water or air or across the surface, the particles in the water, air or on the surface slow it down Can demonstrate clearly the effects of using levers, pulleys and gears 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can show using diagrams the movement of the Earth and Moon Can explain the movement of the Earth and Moon Can show using diagrams the rotation of the Earth and how this causes day and night Can explain what causes day and night <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can use the model to explain how the Earth moves in relation to the Sun and the moon moves in relation to the Earth Can demonstrate and explain verbally how day and night occur Can explain how a sundial works Can explain verbally using a model why we have time zones Can describe the arguments and evidence used by scientists in the past



		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Y	Life in Tudor Times	Heart Beaters	Brazil, Biomes and Urbanisation	Crime and Punishment		Global Trade
		Living Things and their Habitats	Animals Including Humans	Electricity	Light		Evolution and Inheritance
		National Curriculum					
		<ul style="list-style-type: none"> Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. Give reasons for classifying plants and animals. 	<ul style="list-style-type: none"> Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Recognise the impact of diet, exercise, drugs and lifestyle on the way the body functions Knows and can describe the way in which nutrients and water are transported within animals, including humans 	<ul style="list-style-type: none"> Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position Use recognised symbols when representing a simple circuit in a diagram 	<ul style="list-style-type: none"> Recognise that light appear to travel in straight lines Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye Explain that we see things because light travels from light source to our eyes or from light source to objects then to our eyes Use the idea that light travels in straight lines to explain why shadows have the same shape as the object that cast them 	<ul style="list-style-type: none"> Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. 	
Scientist	<p>Carl Linnaeus (1707-1778)</p>  <p>Carl Linnaeus was a Swedish scientist who developed the modern system of classifying and naming organisms. Before this the names of living things were often very long. He gave them a two-part name.</p>	<p>William Harvey (1578-1657)</p>  <p>William Harvey was an English physician and the first person to correctly describe blood's circulation in the body. He showed that arteries and veins form a complete circuit.</p>	<p>Nicholas Tesla (1856-1943)</p>  <p>Nicholas Tesla was a Serbian American engineer and physicist. He invented the first alternating current (AC) motor and developed AC generation and transmission technology.</p>	<p>Abu Ali al-Hasan (Alhazen) (965-1040)</p>  <p>Alhazen was an Iranian mathematician, astronomer and physicist. He was the pioneer of modern optics. He carried out experiments with pinhole cameras and candles and explained how the image is formed by rays of light travelling in straight lines.</p>	<p>Dr Patricia Bath</p>  <p>Laser cataract surgery. She discovered and invented a new device and technique for cataract surgery known as laserphaco.</p>	<p>Charles Darwin (1809-1882)</p>  <p>Charles Robert Darwin was born in Shrewsbury and was an English naturalist and biologist. His scientific theory of evolution by natural selection became the foundation of modern evolutionary studies.</p>	



	Enquiries	<p>Identify and Classify – How would you make a classification key for vertebras, invertebrates or micro-organisms? Observation over time – What happens to a piece of bread if you leave it on the windowsill for two weeks? Research – What do different types of micro-organism do? Are they always harmful?</p>	<p>Comparative/Fair Test – How does the length of time we exercise for affect our heart rate? Identify and Classify – Which organs of the body make up the circulatory system and where are they found? Research – How have our ideas about medicine and disease changed over time?</p>	<p>Comparative/Fair Test – Static properties of materials Identify and Classify – Conductors and Insulators Research - William Gilbert (Tudors) Pattern Seeking and Relationship – Electricity over time</p>	<p>Comparative/Fair Test – Which material is most reflective? Observation over time – How does my shadow change over the day? Research – How do our eyes adapt to different conditions?</p>	<p>Comparative/Fair Test – What is the most common eye colour in our class? Identify and Classify – Compare the skeletons of apes, humans, and Neanderthals – how are they similar and different? Pattern Seeking – Is there a pattern between the size and shape of a bird's beak and the food it will eat? Observation over time - How has the skeleton of the horse changed over time?</p>
	Cross-curricular links	<p>Writing/Reading: Research an animal – own choice Art – create microbes using playdough Reading – Giraffes text with focus questions History: Conditions on board Tudor explorer ships were harsh. Sailors could not carry much fresh food, so they ate salted fish and meat, and ship's biscuits. Lots of sailors developed scurvy and some even died from it. What can we find out about scurvy and about what causes it? Why did the Tudor sailors suffer from it? What advice would you give them?</p>	<p>English Writing: Anti-smoking poster Art: Draw and label a heart Maths: Line Graph, bar chart - amount of sugar in drinks; pulse during exercise PSHE: Healthy Eating History: Henry VIII was born in 1491 and lived to be 55. As a young man he was fit and healthy but as he got older he became very overweight and not very healthy. He enjoyed great feasts. Can we find out what Henry VIII might have eaten at a feast? How could he have changed his diet to eat healthier? <u>Can we plan a healthy Tudor feast for Henry VIII?</u></p>	<p>History: Research William Gilbert, timeline card with electrical inventions English Writing: Report on importance of generating a light source in different situations Reading: Comprehension – Biography of M. Faraday and B. Franklin</p>	<p>English Writing Explanation: Explain how a periscope work D.T: Build periscopes Art: Draw and label an eye Maths: Reading: Comprehension: History: Light Through time, The Eye – Information Text</p>	<p>English Writing: Biography –Charles Darwin Art: Sketch and make fossils using different materials Reading: Comprehension: Information text - Evolution, Diary of Darwin</p>
End Point Assessment						
	End Point Assessment	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can give examples of animals in the five vertebrate groups and some of the invertebrate groups Can give the key characteristics of the five vertebrate groups and some invertebrate groups Can compare the characteristics of animals in different groups 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can draw a diagram of the circulatory system and label the parts and annotate it to show what the parts do Produces a piece of writing that demonstrates the key knowledge e.g. explanation text, job description of the heart <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can use subject knowledge about the heart whilst 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can make electric circuits and demonstrate how variation in the working of particular components, such as the brightness of bulbs can be changed by increasing or decreasing the number of cells or using cells of different voltages Can draw circuit diagrams of a range of simple series circuits using recognised symbols <p>Applying knowledge in familiar related contexts, including a range of enquiries</p>	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can describe with diagrams, as appropriate, how light travels in straight lines either from sources or reflected from other objects into our eyes. Can describe with diagrams, as appropriate, how light travels in straight lines past translucent or opaque objects to form a shadow of the same shape. <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> Can predict and explain with diagrams or models, as appropriate, how the path of light rays can be directed by reflection to be seen, for example, reflection in car rear view mirrors or in a periscope. 	<p>Shows understanding of a concept using scientific vocabulary correctly</p> <ul style="list-style-type: none"> Can explain the process of evolution Can give examples of how plants and animals are suited to an environment Can give examples of how an animal or plant has evolved over time e.g. penguin, peppered moth Give examples of living things that lived millions of years ago and the fossil evidence we have to support this Can give examples of fossil evidence that can be used to



		<ul style="list-style-type: none"> • Can give examples of flowering and non-flowering plants <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> • Can use classification materials to identify unknown plants and animals • Can create classification keys for plants and animals • Can give a number of characteristics that explain why an animal belongs to a particular group 	<p>writing conclusions for investigations</p> <ul style="list-style-type: none"> • Can explain both the positive and negative effects of diet, exercise, drugs and lifestyle on the body • Present information e.g. in a health leaflet describing impact of drugs and lifestyle on the body 	<ul style="list-style-type: none"> • Can incorporate a switch into a circuit to turn it on and off • Can change cells and components in a circuit to achieve a specific effect • Can communicate structures of circuits using circuit diagrams with recognised symbols • Can devise ways to measure brightness of bulbs, speed of motors, volume of a buzzer during a fair test • Can predict results and answer questions by drawing on evidence gathered 	<ul style="list-style-type: none"> • Can predict and explain with diagrams or models, as appropriate, how the shape and size of shadows can be varied. • Predict and explain some uses or behaviours of light, reflection and shadows such as periscope design, shadow puppets, bending of light in water. 	<p>support the theory of evolution</p> <p>Applying knowledge in familiar related contexts, including a range of enquiries</p> <ul style="list-style-type: none"> • Can identify characteristics that will make a plant or animal suited or not suited to a particular habitat • Can explain why the dominant colour of the peppered moth changed over a very short period of time • Identify features in animals and plants that are passed on to offspring • Use models to demonstrate evolution e.g. Darwin's finches bird beak activity
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