Science

	Autumn	Spring	Summer
EYFS	In the EYFS the children are encouraged to use their natural curiosity to explore the world around them. They are provided with an enhanced continuous provision to begin to spark their scientific enquiry skills. The children are encouraged to use all their senses in hands-on exploration of natural materials, explore collections of materials with similar and/or different properties and talk about what they see, using a wide vocabulary. During the Spring and Summer months the children plant seeds and care for growing plants. They also have the opportunity to see the life cycle of animals first-hand with nursery watching the transformation of caterpillar – butterfly and Reception caring for baby chicks. Through every day and planned experiences, the children are taught to understand the need to respect and care for the natural environment and all living things, describe what they see, hear and feel whilst outside and to understand the effect of changing seasons on the natural world around them. By the end of Reception, it is expected that children will be able to: • Explore the natural world around them, making observations and drawing pictures of animals and plants. • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter		
Key Stage 1 The principal focus of science teaching in key stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly-constructed world around them. They should be encouraged to be curious and ask questions about what they notice. They should be helped to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information. They should begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways. Most of the learning about science should be done through the use of first-hand practical experiences, but there should also be some use of appropriate secondary sources, such as books, photographs and videos. 'Working scientifically' is described separately in the programme of study, but must always be taught through and clearly related to the teaching of substantive science content in the programme of study. Throughout the notes and guidance, examples show how scientific methods and skills might be linked to specific elements of the content. Pupils should read and spell scientific vocabulary at a level consistent with their increasing word reading and spelling knowledge at key stage 1.						
Year 1	**Everyday Materials** 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. Describe the simple physical properties of a variety of everyday materials. Compare and group together a variety of everyday materials on	**Seasonal Changes Part 1 – Autumn/Winter** Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies. **Key concept/Skill:** Seasonal Changes **Know how to:** To Observe and describe some of the seasonal changes across the four seasons **Key questions:** Can I name and order the four seasons? Can I describe the general weather within each season and discuss the changes in the length of a day. Key vocabulary:	**Animals inc. humans** 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. **Key concept/Skill:** Animals Including Humans **Know how to:** Explore my ideas and discuss these with a group to find an answer. **Key questions:** Can I identify the needs of a pet?	**Seasonal Changes Part 2 – Spring** Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies. **Key concept/Skill:** Seasonal Changes **Know how to:** To Observe and describe some of the seasonal changes across the four seasons **Key questions:** Can I name and order the four seasons? Can I describe the general weather within each season and discuss the	**Plants** 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. **Key concept/Skill:** Plants **Know how to:** Observe and describe the basic structure of flowering plants and trees. Name and identify some common plants and trees. **Key questions:** **Can I describe the basic parts of a plant and a tree?**	**Seasonal Changes Part 3 – Summer** Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies. **Key concept/Skill:** Seasonal Changes **Know how to:** To Observe and describe some of the seasonal changes across the four seasons **Key questions:** Can I name and order the four seasons? Can I describe the general weather within each season and discuss the changes in the length of a day.

	the basis of their simple physical properties.	Season, spring, summer, autumn, winter. Weather, rain, snow, wind, sun, hot, cold **Links to Prior Learning:** Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes.	Can I identify the difference between pets and wild animals? Can I explain the difference between herbivores, carnivores and omnivores? Can I identify the senses and talk about how humans use them? Can I identify the main parts of the human body? **Key vocabulary:** Pets, wild, animal, tame, food, water, hear, touch, smell, sight, taste, arm, leg, hand, head, neck, foot. **Cross curricular links:** Computing (Drawing images of pets using paint) **PE:** Using our bodies to move safely within space and to throw and catch a ball. **Links to Prior Learning:** ELG:Explore the natural world around them, making observations and drawing pictures of animals and plants.	changes in the length of a day. Key vocabulary**:** Season, spring, summer, autumn, winter. Weather, rain, snow, wind, sun, hot, cold **Links to Prior Learning:** Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes.	**Can I name some common plants and trees?** **Key vocabulary:** Plant, tree, seed, flower, stem, trunk, leaves, petal. **Links to Prior Learning:** Children know about similarities and differences in relation to places, objects, materials and living things. They talk aboutthe features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes.	Key vocabulary**:** Season, spring, summer, autumn, winter. Weather, rain, snow, wind, sun, hot, cold **Links to Prior Learning:** Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes.
Year 2	**<u>Uses of Everyday Materials</u>** **Key concept/Skill:** Uses of Everyday Materials. **Know how to:** Identify and compare the suitability of a variety of everyday materials. Find out how the shapes of solid objects made from some materials can changed. **Key questions: Can I…?** Can I recognise and name the materials that everyday objects are made from? Can I name the properties of everyday materials?		**<u>Plants</u>** **Key concept/Skill:** Plants **Know how to:** Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. **Key questions: Can I…?** Can I understand what plants need to grow and stay healthy?		**<u>Animals Including Humans</u>** **Key concept/Skill:** Animals including humans **Know how to:** Notice that animals, including humans, have offspring which grow into adults. Find out about and describe the basic needs of animals, including	**<u>Living Things and their Habitats</u>** **Key concept/Skill:** Living things and their habitats **Know how to:** Explore and compare the differences between things that are living, dead, and things that have never been alive.

	Can I investigate how the shape of a material can be changed through twisting, bending, squashing and stretching? Can I research people who have developed new materials? Can I investigate which materials are waterproof and which materials are absorbent? Can I group materials into man-made and natural? **Key vocabulary:** Materials, suitability, uses, properties, squashing, bending, twisting, stretching, natural, man-made, Charles McIntosh, waterproof, absorbent **Cross curricular links:** **Links to Prior Learning:** 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 describe the simple physical properties of a variety of everyday materials compare and group together a variety of everyday materials on the basis of their simple physical properties.	Can I observe a plant over time? Can I plant a bulb? Can I name the parts of a plant? **Key vocabulary:** Plant, water, seeds, bulbs, grow, light, temperature, soil, healthy, observation, environment **Cross curricular links:** **Links to Prior Learning:** 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.	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. **Key questions: Can I…?** Can I understand that animals have offspring which grow into animals? Can I describe the basic needs of a human? Can I explain the importance of exercise? Can I explain the importance of eating the right amount of foods? **Key vocabulary:** Humans, animals, offspring, adults, water, food, air, shelter, oxygen, survival, exercise, food, hygiene. **Cross curricular links:** **Links to Prior Learning:** 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.	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 micro-habitats. 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 foods. **Key questions: Can I…?** Can I compare the differences between things that are living, dead and things that have never been alive? Can I explain that most living things live in a habitat? Can I describe how different habitats provide basic needs for different animals? Can I identify a variety of plants and animals in their habitats? Can I describe how animals obtain their food from plants and animals? Can I use a simple food chain? **Key vocabulary:** Living, dead, habitats, basic needs, survival,

				animals, plants, micro-habitat, food chain, food sources. **Cross curricular links:** **Links to Prior Learning:** Identify and name a variety of common animals that are carnivores, herbivores and omnivores.

Lower Key Stage 2

The principal focus of science teaching in lower key stage 2 is to enable pupils to broaden their scientific view of the world around them. They should do this through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. They should 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, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using secondary sources of information. They should draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out. 'Working scientifically' is described separately at the beginning of the programme of study, but must always be taught through and clearly related to substantive science content in the programme of study. Throughout the notes and guidance, examples show how scientific methods and skills might be linked to specific elements of the content. Pupils should read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge.

Upper Key Stage 2

The principal focus of science teaching in upper key stage 2 is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. They should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. At upper key stage 2, they should encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They should also begin to recognise that scientific ideas change and develop over time. They should select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information. Pupils should draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings. 'Working and thinking scientifically' is described separately at the beginning of the programme of study, but must always be taught through and clearly related to substantive science content in the programme of study. Throughout the notes and guidance, examples show how scientific methods and skills might be linked to specific elements of the content. Pupils should read, spell and pronounce scientific vocabulary correctly.

Year 3	**Key concept/Skill:** Light **Know how to:** Physics • 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.	**Key concept/Skill:** Rocks **Know how to:** Chemistry • 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	**Key concept/Skill:** Rocks **Know how to:** Chemistry • 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	**Key concept/Skill:** Forces and Magnets **Know how to:** Physics • Compare how things move on different surfaces. • Notice that some forces need contact between two objects, but magnetic forces can act at a distance.	**Key concept/Skill:** Plants **Know how to:** Biology • 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,	**Key concept/Skill:** Animals inc. Humans **Know how to:** Biology • 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.

	• 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. **Key questions:** Can I explain what a light source is? Can I explain what a shadow is? **Key vocabulary:** Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous **Cross curricular links:** Maths **Links to Prior Learning:** • Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. (Y1 - Animals, including humans) • Describe the simple physical properties of a variety of everyday materials. (Y1 – Materials)	lived are trapped within rock. • Recognise that soils are made from rocks and organic matter. **Key questions:** Can I name the 3 different of rocks? Can I explain how fossils are formed? Can I explain how soil is formed? **Key vocabulary:** Rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb water, soil, fossil, marble, chalk, granite, sandstone, slate, soil, peat, sandy/chalk/clay soil **Cross curricular links:** History **Links to Prior Learning:** • Distinguish between an object and the material from which it is made. (Y1 - Everyday materials) • Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. (Y1 - Everyday materials) • Describe the simple physical properties of a variety of everyday materials. (Y1 - Everyday materials) • Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Y1 - Everyday materials) • Identify and compare the suitability of a variety of everyday materials, including wood, metal,	lived are trapped within rock. • Recognise that soils are made from rocks and organic matter. **Key questions:** Can I name the 3 different groups of rocks? Can I explain how fossils are formed? Can I explain how soil is formed? **Key vocabulary:** Rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb water, soil, fossil, marble, chalk, granite, sandstone, slate, soil, peat, sandy/chalk/clay soil **Cross curricular links:** History **Links to Prior Learning:** • Distinguish between an object and the material from which it is made. (Y1 - Everyday materials) • Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. (Y1 - Everyday materials) • Describe the simple physical properties of a variety of everyday materials. (Y1 - Everyday materials) • Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Y1 - Everyday materials) • Identify and compare the suitability of a variety of everyday materials, including wood, metal,	• 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 two poles. • Predict whether two magnets will attract or repel each other, depending on which poles are facing. **Key questions:** Can I explain what is a magnet? Can I identify magnetic materials? **Key vocabulary:** Force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole **Cross curricular links:** Maths **Links to Prior Learning:** • Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. (Y2 - Uses of everyday materials)	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. **Key questions:** Can I name the different parts of a flowering plant? Can I identify what plants need to grow well? **Key vocabulary:** Photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal (wind dispersal, animal dispersal, water dispersal) **Cross curricular links:** Geography **Links to Prior Learning:** • Observe and describe how seeds and bulbs grow into mature plants. (Y2 - Plants) • Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. (Y2 - Plants)	• Identify that humans and some other animals have skeletons and muscles for support, protection and movement. **Key questions:** Can I identify the different food groups to make a balanced plate? Can I name the main bones in a human skeleton? **Key vocabulary:** Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, joints, support, protect, move, skull, ribs, spine **Cross curricular links:** DT **Links to Prior Learning:** • Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. (Y1 - Animals, including humans) • Identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Y1 - Animals, including humans) • Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). (Y1 - Animals, including humans) • Find out about and describe the basic needs of animals, including humans, for survival (water, food

		plastic, glass, brick, rock, paper and cardboard for particular uses. (Y2 - Uses of everyday materials)	plastic, glass, brick, rock, paper and cardboard for particular uses. (Y2 - Uses			and air). (Y2 - Animals, including humans) • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. (Y2 - Animals, including humans)
Year 4	**Key concept/Skill:** States of matter **Know how to:** 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. **Key questions: Can I…?** Can I identify and compare solids, liquids and gases based on their properties? - Can I describe how particles behave in solids, liquids and gases? - What happens to the states of matter when they are heated or cooled? - Can a state of matter change into a different one? - What scientific process did the Ancient Greeks use to get/make salt? (changing	**Key concept/Skill:** Sound **Know how to:** 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. **Key questions: Can I…?** Can I explain how sounds are made? Can I explain how sounds travel? Can I explain the link between the sound source and the pitch/volume of the sound? What is pitch? What is volume? Will the pitch/volume of a sound	**Key concept/Skill:** Animals, Including Humans **Know how to:** Construct and interpret a variety of food chains, identifying producers, predators and prey. 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. **Key questions: Can I…?** Can I name the four types of human teeth? Can I describe their function? Can I explain what some of the layers of our teeth are and what they do? Can I name the key organs in the human digestive system and explain what they do? Can I describe what a food chain shows? Can I label a food chain to show predators, prey, consumers and producers? **Key vocabulary:**	**Key concept/Skill:** Living Things and Their Habitats **Know how to:** 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. **Key questions: Can I…?** Can I group living things according to certain criteria? Can I describe how scientists start to group living things? Can I read and interpret a classification key? Can I create a simple classification key? Can I come up with appropriate questions/criteria to group living things? Can I investigate whether some habitats have changed over time? Can I describe	**Key concept/Skill:** Electricity **Know how to:** 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. **Key questions: Can I…?** What is electricity? Can I name some appliances which use electricity? Can I identify some of the risks associated with using electricity? What can we do to keep safe using electricity? Can I name materials which would be good conductors/insulators? Can I identify what a circuit is? Can I identify when a circuit is open and closed (working/not working)? Can I build my own working circuit? Can I include a switch in my circuit? **Key vocabulary:** Circuit, conductor, insulator, appliance, loop, switch, resistance. **Cross Curricular Links:**	

	states) - What is the water cycle? Where does the water we drink come from? Where does rain/snow/hail come from? **Key vocabulary:** Particle, volume, solid, liquid, gas, melting, freezing, evaporation, water cycle, condensation, dissolving, temperature, precipitation **Cross Curricular Links:** Geography – water cycle **Links to Prior Learning:** Y3 – rocks, states of matter	change if the features of the source change? Will a sound change if it is blocked? Will a sound change if it's source moves? **Key vocabulary:** Sound, source, vibration, pitch, volume **Cross Curricular Links:** **Links to Prior Learning:**	Incisor, Canine, Pre-molar, Molar, Enamel, Dentin, Gums, Pulp, Predator, Prey, Producer, Oesophagus, Stomach, Large intestine, Small intestine, Rectum, Faeces **Cross Curricular Links:** PE – knowledge of body/nutrition **Links to Prior Learning:** Y3 – nutrition, skeleton, muscles	some of the reasons which have caused habitats to change over time? **Key vocabulary:** Habitat, Alive, Dead, Micro-habitat, Classification, Wildlife, Vertebrate, Invertebrate, Environment, Observation, Change, Species **Cross Curricular Links:** Geography – habitats and climate **Links to Prior Learning:**	**Links to Prior Learning:** Y3 – states of matter, forces	
Year 5	**Forces** **Key concept/Skill:** Forces **Know how to:** 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	**Animals including humans** **Key concept/Skill:** Animals including humans **Know how to:** Describe the changes as humans develop to old age. **Key questions:** Can I define gestation and	**Earth and Space** **Key concept/Skill:** Earth and Space. **Know how to:** 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	**Living things and their habitats** **Key concept/Skill:** Living things and their habitats **Know how to:** 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. **Key questions:** Can I describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird? Can I describe the life process of reproduction in some plants and animals?		**Properties and changes in materials** **Key concept/Skill:** Properties and changes in materials **Know how to:** Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency,

	act between moving surfaces. Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. **Key questions:** How does an object's mass affect its gravitational pull? How does surface area affect resistance? Can I investigate water resistance? **Key Vocabulary:** Push, Pull, Resistance, Gravity, Friction, Forcemeter, Mass, Weight. **Cross Curricular Links:** Maths – interpreting data **Links to Prior Learning:** Forces and Magnets (year 3)	investigate the gestation period of mammals? Can I investigate the changes occur to a human during their life cycle? Can I describe the changes that occur in late adulthood? **Key Vocabulary:** Puberty, adolescent, gestation, childhood, hormone, reproduce **Cross Curricular Links:** PSHCE Links. **Links to Prior Learning:** Animals including humans (year 1 to 4)	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. **Key questions:** Can I describe how the Earth moves in relation to the other planets and the sun? Can I explain why day and night occur on Earth? Can I describe the movement of the moon relative to the Earth? **Key vocabulary:** Sun, Earth, Moon, Orbit, Solar System, Gravity, Core, Crust, Eclipse, Rotation. **Cross curricular links:** Space texts utilised in shared reading and English. **Links to Prior Learning:** Links to forces and rocks in year 3.	**Key vocabulary:** Asexual reproduction, pollination, seed dispersal, metamorphosis, life cycle, Mammal, Reptile, Amphibian, Bird, Insect **Cross curricular links:** Links to British values and respecting the environment. **Links to Prior Learning:** Year 3 Plants. Year 3 Animals including humans	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. **Key questions:** Can I group items based on their properties? Can I demonstrate and define reversible reactions? Can I separate mixtures using knowledge of solids, liquids and gases?

						Key vocabulary: Filtering, Soluble, Conductor, Insulator, Transparent, Translucent, Opaque, Dissolving, Reversible, irreversible **Cross curricular links:** Materials utilised in art sculptures. **Links to Prior Learning:** Materials year 2. States of Matter year 4.
Year 6	**Evolution and Inheritance** (Use of text: Moth by Isabel Thomas) **Key concept:** Living things have evolved over time. **Key questions:** How have living things changed over time? Do living things produce offspring of the same kind? How are animals adapted to suit their environment? Does adaptation lead to evolution? **Key vocabulary:** evolution , natural selection, survival, reproduction, offspring, variation, environment. **Cross curricular links:** English - <u>Catch up unit: Magazine Article Dinosaur Lady</u> by Linda Skeers **Links to Prior Learning:**	**Living Things and Their Habitats** **Key concept:** Describe how and give reasons for living things being classified. **Key questions:** How do we classify living things? How does classification help us to order, compare and analyse living things? Can I make observations to help me to use a classification system? How does the 5 Kingdoms help us to analyse specific organisms? **Key vocabulary:** vertebrate, invertebrate, classification, monera, Protista, fungi. **Links to Prior Learning:** Y5 – Lifecycles Y5 – Living Things and Their Habitats – reproduction in plants and animals.	**Animals including humans** **Y5 covid catch up and Y6** **Key concept/Skill:** Animals including humans **Know how to:** Describe the changes as humans develop to old age. **Key questions:** Can I define gestation and investigate the gestation period of mammals? Can I investigate the changes occur to a human during their life cycle? Can I describe the changes that occur in late adulthood? What is the heart's role within the circulatory system? What is blood? How does exercise, nutrients and water benefit our body? Drugs: friend or foe?	**Earth and Space** **Key concept/Skill:** Earth and Space. **Know how to:** 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. **Key questions:** Can I describe how the Earth moves in relation to the other planets and the sun? Can I explain why day and night occur on Earth? Can I describe the	**Light** **Key concept:** Light travels in straight lines. **Key questions:** How does light travel? What colours is light made up from? How do we see? What is refraction? What is reflection? **Key vocabulary:** reflect, refract, source, disperse **Cross curricular links:** DT – building a lighthouse **Links to Prior Learning:** Y3 Light and Shadows	**Electricity** **Key concept:** Electricity **Key questions:** What is electricity? How is static electricity created? What are the components needed for an electrical circuit? What are the similarities and differences between series and parallel circuits? **Key vocabulary:** circuit, component, cell, conductor, insulator, voltage. **Cross curricular links:** DT – building a lighthouse **Links to Prior Learning:** Y4 Electricity

	Y5 – Living Things and Their Habitats – reproduction in plants and animals. Y4 – Living Things and Their Habitats – recognise that environments can change due to dangers. Y3 – Rocks - fossils	Y4 – Living Things and Their Habitats – recognise that environments can change due to dangers. Y4 – Living Things and Their Habitats – food chains	**Key Vocabulary:** Puberty, adolescent, gestation, childhood, hormone, reproduce Artery, vein, circulatory, oxygenated, chambers, valve **Cross Curricular Links:** PSHCE Links. **Links to Prior Learning:** Animals including humans (year 1 to 4)	movement of the moon relative to the Earth? **Key vocabulary:** Sun, Earth, Moon, Orbit, Solar System, Gravity, Core, Crust, Eclipse, Rotation. **Cross curricular links:** Space texts utilised in shared reading and English. **Links to Prior Learning:** Links to forces and rocks in year 3.		