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	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
End point	Children explore the world around them using a range of difference sense. They can describe what they notice and name different parts of their body.	Children at SF are curious about the animals and habitats in their locality. They use scientific vocabulary to name, describe, classify and group common animals. Children show all animals respect and care and explain ways we do this. Children recognise that animals reproduce and describe the difference between the young and adult. They confidently explain why senses are important and how they help us. The children at SF begin to independently make healthy choices and explain why diet and exercise is important and demonstrate a high level of hygiene.		In KS2 children explore diet and healthy lifestyles at a greater depth by giving examples and explaining the roles of the main food groups to stay healthy. Children compare common vertebrates and invertebrates whilst explaining the different ways the skeleton and muscles are important for humans. Children describe the digestive system making comparisons between animals, including human teeth and how to look after them. Children use scientific vocabulary to give examples, illustrate and make comparisons between a range of food chain		Children at SF demonstrate a deeper knowledge of the stages within human growth and development. Children recognise and discuss the changes experienced in puberty. They extend their understanding of the internal body parts and process by examining and explaining how the circulatory system enables the body to function. Through discussing and questioning, children examine and explain the relationship between diet, exercise, drugs, lifestyle and health and the harmful impact they can have. They develop their analytical skills to explore scientific research.	
Animals Including Humans	**EYFS** Children can: Identify the names of basic body parts. Use the five senses to explore. -Observe, comment on and make recordings of a lifecycle which can be seen first hand use key vocabulary *head, body,neck, arms, legs, knees, face, ears, eyes, hair, mouth, hand fingers, shoulder, toes,* *sight, hearing, touch, tast, smell,*	**KS1 Science National Curriculum** Children can: identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals; • describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets); • identify and name a variety of common animals that are carnivores, herbivores and omnivores; •identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense use key vocabulary *Amphibian, bird, fish mammal, reptile Carnivore , Herbivore Omnivore,* *head, body,neck, arms, wrist, ankle, elbows, legs,knees, face, ears, eyes, skin,tongue,shoulder hair, mouth, teeth, nose,* *sight, hearing, touch, tast, smell,Wing, claw,fin, tail,fur,scales, feathers, fur, beak, paws, hooves, cold/warm blooded*	**KS1 Science National Curriculum** Children can: • 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. use key vocabulary: *Offspring, adult survival,* Growth, food/diet, air,*egg, chick, chicken; egg, caterpillar, pupa, butterfly; spawn, tadpole, frog; lamb, sheep. baby, toddler, child, teenager, adult.hygiene nutrition_exercise Heartbeat, Pulse, Breathing, , Germs, Disease, Nutrition, Food types (examples – meat, fish, vegetables, bread, rice, pasta)*	**KS2 Science National Curriculum** Children can: • 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. use key vocabulary: *Nutrition, balanced diet* *nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, support, protect, skull, ribs, spine, muscles, joints* *vertebrates, invertebrates*	**KS2 Science National Curriculum** Children can: • 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. use key vocabulary: *Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, **Consumer** predator, prey, food chain*	**KS2 Science National Curriculum** Children can: • describe the changes as humans develop to old age. use key vocabulary: Puberty, adolescence, periods, menstruation,Infant Gestation	**KS2 Science National Curriculum** Children can: • 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 their bodies function; • describe the ways in which nutrients and water are transported within animals, including humans. use key vocabulary: *Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen,* carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs and lifestyle, Veins, Arteries, Plasma

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	EYFS	Year 1	Year 2	Year 3
End point	Children in the EYFS spend time exploring and discovering the world around them. They discuss the different plants they like and how they are the same and different. They show care for the living things around them.	Children at SF continue to develop their knowledge of the local environment from the Early years to make detailed observations about the variety of flowers and vegetables including ones they have planted. Children can identify a range of local plants and compare how the parts vary in appearance. Children at SF explain give examples of how the weather affects plants.. With some accuracy children observe and record the growth of a variety of plants as they change over time. Note: Seeds and bulbs need water to grow but most do not need light; seeds and bulbs have a store of food inside them.		Children at SF accurately explain and give examples of the functions of parts of common plants and the roles they play in keeping the plant healthy (roots and stem in nutrition and support, leaves for nutrition and flowers for reproduction). They investigate and explain how water is transported in plants. Building on the knowledge of KS1 children observe and describe the stages of a plant life cycle and begin to explain the process of pollination, seed formation and seed dispersal. They investigate, explain and give examples of how the factors needed for plant survival vary between plants. Note: At this stage children do not need to understand how photosynthesis happens.
Plants	**EYFS** Children can: ● Make simple observations about the natural world around them. ● Identify simple similarities and differences about plants around them. use key vocabulary *plant same different flower tree leaf grass*	**KS1 Science National Curriculum** Children can: ● 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. use key vocabulary *bud leaf roots seed trunk bark deciduous evergreen stem petal daisy, rose, buttercup, dandelion, bluebell, snowdrop oak, beech and willow*	**KS1 Science National Curriculum** Children can: ● 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. use key vocabulary *Mature, temperature warmth/cold, bulb , germinate, reproduction , compare to, survival, growth, healthy* shade/sunlight,	**KS2 Science National Curriculum** Children can: • 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. use key vocabulary *Photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal – wind dispersal, animal dispersal, water dispersal, root, flower, stem/trunk*

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	Year 2	Year 4	Year 5	Year 6
End point	Children at SF describe, give examples and define the difference between living and non living things. Children recognise and discuss the different ways living things may depend on each other. They illustrate and describe this through a simple food chain. Children investigate and examine a range of familiar and unfamiliar habitats and microhabitats and their conditions. They consider the impact these have on the type and amount of animals and plants within them. Children at SF extend their curiosity from the Early years of asking simple questions by answering a question in different ways.	Children as SF observe their local environment throughout the year to question and examine different environmental factors which have an impact on living things and their habitats. Developing their skill of classification and building on from the knowledge of Animals at KS1 children classify animals into vertebrates and invertebrates and plants into flowering and non flowering. Children at SF consider raising awareness of the impact humans have on their environment and initiatives used to protect and support them.	Children at SF extend their understanding of the environmental factors from lower KS2 by examining and explaining the impact of conservation projects and significant scientists . Extending their knowledge of simple animal classifications children observe the features and characteristics to classify a range of living things in different ways and compare their life cycles .They further their understanding of reproduction processes to describe sexual and asexual reproduction in plants, and sexual reproduction in animals. Children ask thought provoking questions providing reasoning and justifications for similarities and differences.	
Living things and their habitats	**KS1 Science National Curriculum** Children can: • 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. use key vocabulary ***Living, dead, never been alive,*** *suited,* ***suitable****, basic needs, food,* ***food chain,source, energy*** *shelter, move, feed, names of local* ***habitats*** *e.g. pond, woodland etc., names of* ***microhabitats*** *e.g. under logs, in bushes etc. habitat micro-habitat, characteristics, conditions, source,*	**KS2 Science National Curriculum** Children can: ● 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. use key vocabulary *Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate vertebrates, fish, amphi*bians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering and nonflowering.Herbivores, Carnivores, omnivores.	**KS2 Science National Curriculum** Children can: • 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. use key vocabulary *Life cycle, reproduce, sexual, sperm, fertilises, egg, live young, metamorphosis, asexual, plantlets, runn*ers, bulbs, cuttings,Photosynthesis, Evergreen, Deciduous, Germination	**KS2 Science National Curriculum** Children can: ● 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 based on specific characteristics. use key vocabulary *Vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering and nonflowering, classify, classification Habitat, micro-habitat, Classification, microorganism,*

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	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5
End point	Children in the EYFS have opportunities to explore a range of materials describing simple similarities and differences and making links to their own experiences.	Children at SF confidently identify, name and describe a range of materials and explain the different ways they are used in everyday life. Children recognise and give examples of objects made from multiple materials and how some materials may vary. They use their Geographical knowledge to give examples of natural and human made materials whilst using the features and properties to group them in different ways.		Children at SF apply their Geography knowledge to identify and classify rocks according to whether they have grains or crystals and have fossils. Children explain and give examples of how rocks in structures change over time. Children investigate the effect of temperature on substances and discuss how this is observed in everyday life. They use scientific vocabulary to explain the water cycle Note: Teachers should avoid using materials where heating is associated with chemical change, for example, through baking or burning.		In upper KS2 children deepen their understanding of the process of change of state by observing, describing and explaining reversible and irreversible changes in a range of materials including those that are difficult to reverse and discuss the processes used. They examine and describe how these processes have impacted our lives. They discuss the work of significant chemists and the impact of the new material created. Note: Pupils are not required to make quantitative measurements about conductivity and insulation at this stage.
	Everyday Materials			Rocks	States of Matter	Properties and Changes of Materials
	EYFS Children can: Begin to describe, sort and group objects according to physical similarities and differences. Explore a range of materials including natural and synthetic materials. use key vocabulary soft, hard, thick, thin, heavy, light, smooth, rough,	**KS1 Science National Curriculum** Children can: • 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. use key vocabulary *Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, hard, soft, stretchy, stiff, bendy, floppy,* ***waterproof,*** *breaks/tears, rough, smooth, shiny, dull,* ***transparent,*** **opaque,** twist/twisting,flexible, rigid	**KS1 Science National Curriculum** Children can: 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. use key vocabulary: *elastic, foil, card/cardboard, rubber, wool, clay,* Hollow, suitable ***translucent,*** ***absorbent,*** reflective, non-reflective, Shape,push/pushing, pull/pulling,, squash/squashing. Bend/bending, stretch/stretching	**KS2 Science National Curriculum** Children can: • 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. use key vocabulary *Solid, 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, Sedimentary, Metamorphic, Igneous, Magma, Lava*	**KS2 Science National Curriculum** Children can: • compare and group materials together, according to whether they are solids, liquids or gasses; • 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 use key vocabulary *solid, liquid, gas, melt, boil, freeze, solidify, evaporate, evaporation, condense, condensation, temperature, States of matter, Matter Precipitation, Materials, water cycle*	**KS2 Science National Curriculum** Children can: • compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets; • 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 gasses 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 actio use key vocabulary *Thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, mixture, dissolve, solution, soluble, insoluble, filter, sieve* reversible/irreversible change, *burning, rusting, new material,* ***Melting, Condensation*** ***Evaporation, change of state***

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	Year 3	Year 6
End point	Children at SF explain the importance of light in the world around them. They distinguish and give examples of the difference between light sources and reflections. They ask and answer questions about how light behaves. Children investigate how shadows are formed and how their shape and size may change. They explain how and why the eyes should be protected from bright lights.	Children at SF build on their understanding from Year 3 by investigating and outlining the processes and relationship between light sources, objects, shadows and sight. They make justified hypotheses and predictions to explore light. Through examining shadows' shape and size, they deduce how light travels in straight lines. Children demonstrate their understanding of light by developing ideas to solve a simple problem. They discuss and interpret a range of phenomena including rainbows, colours on soap bubbles, objects looking bent in water and coloured filters
Light	**Ks2 Science National Curriculum** Children can: 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. use key vocabulary *Light, Light source, Dark, Absence of light, Transparent, Translucent, Opaque, Shiny, Matt, Surface, Shadow, Reflect, Mirror, Sunlight, Dangerous*	**KS2 Science National Curriculum** Children can: • recognise that light appears 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 sources to our eyes or from light sources to objects and then to our eyes; • use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. use key vocabulary *Straight lines, light rays, Light, Light source, Dark, Absence of light, Transparent, Translucent, Opaque, Shiny, Matt, Surface, Shadow, Reflect, Mirror, Sunlight, Dangerous, artificial, natural*

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	Year 3	Year 5
End point	Children distinguish how magnetic forces act without direct contact unlike most forces. They explain the different ways magnets and other forces are used in everyday life. They consider and discuss the effect of friction on surfaces. Children make simple predictions and investigate the strength of different forces, patterns and in the way they behave, including the pole of a magnet. They apply their knowledge of magnetism to sort and group materials. Children develop creative uses for different magnets.	Children describe the principles of gravity and outline the work of significant scientists. They hypothesize, investigate and demonstrate resistance (air/water) and friction on movement and find out how it slows or stops moving objects. They determine which designs are the most effective for a desired effect. Children explain the effects of mechanisms such as levers and pulleys on movement and suggest how they could be used. . They might explore resistance in water by making and testing boats of different shapes. They might design and make products that use levers, pulleys, gears and/or springs and explore their effects.
Forces	**KS2 Science National Curriculum** Children can: 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. use key vocabulary *Force, push, pull, twist, contact force, non-contact force, friction* *magnetic force, magnetism, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole*	**KS2 Science National Curriculum** Children can: • 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. use key vocabulary *Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears, surface resistance,*

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	Year 4	Year 6
End point	Children at SF describe the impact electricity has on our daily lives. They construct, demonstrate and explain the processes of simple series circuits to create devices. Children express their ideas through simple diagrams (conventional symbols not required). Children determine the best conductors and insulators and suggest the potential uses for them. Children at SF identify the dangers of electricity and explain different ways to keep safe. By predicting and experimenting they define when a circuit is complete. Children investigate the effect of the amount of different components within a circuit and the patterns these create.	Children at SF extend their understanding of electricity by systematically investigating the effect of changing different components in a circuit. They identify the voltage in batteries and recognise the effect it has on the circuit. construct, and evaluate their own series circuit to meet a purpose/specification Children will hypothesize and investigate ideas around the effectiveness of series circuits . They use accurate symbol representations for series circuits. Pupils demonstrate necessary precautions when working with electricity.
Electricity	**KS2 Science National Curriculum** Children can: • 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 use key vocabulary *circuit, cell, electrical. electricity, battery, bulb, buzzer, motor, break, electrical conductor, electrical insulator, component, wires, switch, appliance*	**KS2 Science National Curriculum** Children can: ● 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 of switches; • use recognised symbols when representing a simple circuit in a diagram. use key vocabulary *Circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage NB Children do not need to understand what voltage is but will use volts and voltage to describe different batteries. The words cells and batteries are now used interchangeably*

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	EYFS	Year 1	Year 4	Year 5	Year 6
	Seasonal changes		**Sound**	**Earth and space**	**Evolution and inheritance**
End point	Children in the EYFS spend time outside in every season experiencing the weather first hand. They can describe how the weather affects their lives and talk about the clothes and experiences related to different seasons.	Children use scientific vocabulary to recognise and describe the change in weather patterns across days, and seasons including daylight. They give examples of how the seasons affect their daily lives including common patterns in the types and amount of weather.Children explain what happens to the plants and environment around them at different times of the year.	Children identify the way sound is made through vibration in a range of different musical instruments from around the world. They discover how pitch and volume of sounds can be changed in a variety of ways. They experiment and identify patterns in the sounds that are made by different objects such as saucepan lids of different sizes or elastic bands of different thicknesses. They consider which materials make good sound insulators.	Children demonstrate and explain the process of day and night. They recognise the Sun is a star at the center of our solar system. Name and identify its eight planets. Compare the amount of moons orbiting Earth and Jupiter. Children summaries how our understanding of the solar system has developed over time including the geocentric and heliocentric model. They outline the work of significant Scientists. They examine and investigate how time and days can be measured through the sun and moon, they suggest how this was done in the past. NB. (Pluto was reclassified as a 'dwarf planet' in 2006).	Children examine the process of characteristics being passed from parents to their offspring and discuss the long term implications of cross breeding .Children identify, examine and give examples of how animals have developed from natural selection (simplified understanding) and evolution (Note: At this stage, pupils are not expected to understand how genes and chromosomes work.). They analyse the advantages and disadvantages of specific adaptations for plants and animals, including living things which survive in extreme conditions. Through analysing the work of significant scientists they devise questions and express their ideas about how living things have adapted to their environment.
	EYFS Children can: Observe changes in the local environment throughout the seasons Name the four seasons and discuss the key weather features of each. use key vocabulary *Weather, season, Summer, Autumn, Winter, Spring, (sunny, rainy, windy, snowy etc.)*	**KS1 Science National Curriculum** Children can: • observe changes across the 4 seasons; • observe and describe weather patterns associated with the seasons and how day length varies. use key vocabulary *Weather (sunny, rainy, windy, snowy etc.), Seasons (winter, summer, spring, autumn), Sun, sunrise, sunset, Day length, deciduous, evergreen, pattern, shower, drizzle, pouring, torrential, breeze, gale force, gust, draft, temperature, warm, hot, cold, freezing storm,* calm *N:B use to describe feeling of temperature and relate to water turning to ice.*	**KS2 Science National Curriculum** Children can: • 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. use key vocabulary *sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, loud, insulation, medium*	**KS2 Science National Curriculum** Children can: • 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. use key vocabulary *Planet, Earth, Sun, Moon, Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune Spherical, Solar system, rotates, star, orbits, planets, axis, satellite, gravity,season*	**KS2 Science National Curriculum** Children can: • recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago; • 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. use key vocabulary *Offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils, evolution*

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	EYFS	Year 1	Year 2	Year 3 and 4	Year 5 and 6
End point	Children in the EYFS spend time as groups discussing, observing and sharing their ideas about the world around them. children and adults investigate together to develop critical thinking.	Children in SF are curious about the world around them and raise simple scientific questions. They give examples of different tests they have performed and explain what they find out. Children in KS1 use simple scientific language and simple tables and diagrams to communicate their findings and suggest possible answers. They make simple Comparisons and decide how to sort and group objects and living things. Children begin to identify patterns and relationships including change over time.		Building on KS1 children choose appropriate scientific enquiries to answer scientific questions and the most effective way to record the results. Children use relevant scientific language to discuss their ideas and communicate their findings. They give examples of fair tests they have set up and explain why it is important. The children make decisions about the types of observations, and length of observations, appropriate units of standard measure, notes, tables, charts and loggers to accurately record and analyse their findings. They begin to identify new lines of enquiry from their investigations and make predictions based on this. Children identify when secondary sources can be used to support an investigation. Identify changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions and being to evaluate and suggest improvements to their investigations.	Children explore a range of scientific questions and select and plan the most appropriate scientific enquiry to answer scientific questions. They use and develop keys and a range of information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment. Building on lower KS2 children give examples of comparative and fair tests and explain which variables need to be controlled and why. Children decide and justify whether to repeat investigations or if further tests and observations are needed. They identify which secondary sources will be most useful to research their ideas and begin to separate opinion from fact. They use relevant and accurate scientific language and illustrations to discuss, communicate and justify their scientific ideas and how scientific ideas have developed over time.
Working Scientifically	EYFS Ask questions to find out more and to check what has been said to them. Describe what they see, hear and feel while they are outside Test ideas using a pre planned experiment.	**KS1 Science National Curriculum** • asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions		• asking relevant questions and using different types of scientific enquiries to answer them • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • identifying differences, similarities or changes related to simple scientific ideas and processes • using straightforward scientific evidence to answer questions or to support their findings.	• planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • using test results to make predictions to set up further comparative and fair tests • reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • identifying scientific evidence that has been used to support or refute ideas or arguments

Working Scientifically progression document				
	Nursery	Reception	Yr 1	Yr 2
Asking questions	CCL: **answer** understand 'why' questions	Ask questions to find out more and to check what has been said to them.	Ask a range of questions and provide logical answers.	Ask a range of questions and provide and explain multiple logical answers.
observing closely, using simple equipment	UW: Use all their senses in hands-on exploration of natural materials	UW Describe what they see, hear and feel while they are outside UW:Use simple tools including magnify glasses and tweezers syringes and pipettes. With support, make comparisons, using hands and feet and other non-standard measures e.g. building blocks and beakers. pouring and scooping	Use simple, equipment and nonstandard measurements in a practical task. (pre teach/ support if not covered if maths yet) Equipment tweezers magnify glasses non standard units of measure sand timer objects for non standard units of measure	Use simple equipment to make standard measurements to make increasingly accurate observations equipment stop watches syringes and pipettes. hand lenses microscopes jugs/rulers to measuring in whole grams/cm
performing simple tests	UW:Explore how things work	Test ideas using a pre planned experiment. - Observe over time (e.gSeasonal changes) - Grouping and sorting - research using secondary sources(e.g. simple identification sheets)	Follow instructions to complete a pre planned simple test individually or in a group. ● Observe over time (e.gSeasonal changes) ● Comparative test (expose but not teaching fair test) ● Classifying and grouping ● -pattern seeking ● research using secondary sources(e.g. simple identification sheets)	Plan and test simple ideas. Do things in the correct order and begin to recognise when something is unfair. ● Observe over time ● Comparative test (introducing fair tests) ● Classifying and grouping (identify own criteria for sorting) ● --pattern seeking ● research using secondary sources
identifying and classifying	UW: **Explore** collections of materials with similar and/or different properties.	Begin to **sort** according to similarities and differences.	Use simple features to compare objects, materials and living things into given groups and with support begin to classify.	With help, decide how to sort and group objects, materials and living things according to their identified features.
gathering and recording data to help in answering questions	Use an increasing range of vocabulary and begin to mark make ideas.	Gather simple information from their observations. Present their ideas with simple drawings./annotations Articulate ideas in well formed sentences.	Gather data in different ways. Begin to record data in a given simple table/drawing. Talk about their findings and explain what they have found out. e.g tally charts, tables (including tick lists),pictures/ diagrams, block charts	from a selection choose appropriate ways to gather and record data. Use simple scientific vocabulary to discuss how their findings helps to answer their questions. e.g ven diagram, tally charts, picktogram tables ,diagrams , block charts
Vocabulary	look closely, observe, watch, touch, feel, smell, listen, same, different, compare, ask questions, record, sort, group		observe, changes, patterns, grouping, sorting, compare, same, different, identify (name), measure, data, record results, drawing,picture, table, tally chart, present, pictogram, block chart, Venn diagram, ask questions, test, investigate, explore. equipment, resources, magnifying glass, hand lens, ruler, tape measure, meter stick, pipette, syringe, spoon, teaspoon, answer questions, interpret result**s**, scientific enquiry, pattern seeking, comparative testing, observing over time, classifying, researching using secondary sources	