



Science Long Term Plan					
EYFS Theme (1 year cycle)	EYFS – focus intentions taken the EYFS curriculum	Whole School Text Topic (2 year Cycle)	KS1	LKS2	UKS2
All About Me	Growth and aging and generations. Learning their characteristics. Community Experts	Traditional Tales, Myths and Legends	Year 2 Animals Animals Experience Animals at Normaby Hall Year 2 Materials	Year 4 Electricity Community Experts Year 4 Sound	Year 6 Animals Dissect a Heart Year 6 Evolution and Inheritance
Festivals and Remembrances	Changing states of matter. Different materials. Community Experts	Other Worlds	Year 2 Chinese Animals	Year 4 Animals Including Humans	Year 6 Electricity Community Experts Year 6 Light
Water and Ice	Changing states of matter Reasoning and problem solving Predicting and testing	Environment	Year 2 Plants Community Experts Year 2 Living things and their Habitats	Year 4 Living Things and Their Habitats Year 4 Materials and States of Matter Community Experts	Year 6 Living things and their Habitats Also plants to Grow and eat
Traditional Tales	Changing stats of matter Materials Community Experts	Belonging	Year 1 Animals that live in the UK Community Experts Year 1 Materials	Year 3 Light Year 3 Forces	Year 5 Earth and Space
Beasts	Animals in the environment Life cycles Community Experts	Hope Triumph and Heroes	Year 1 Animals Community Experts Year 1 Animals including Humans - senses	Year 3 Rocks	Year 5 Forces Year 5 Materials Community Experts
Growth	Plants in the environment Life cycles Trip to Whisby	Change	Year 1 Plants Community Experts Year 1 Seasonal Change	Year 3 Animals Including Humans Community Experts Year 3 Plants Community Experts	Year 5 Animals Including Humans Year 5 Living things and their Habitat

	AUTUMN1 All About Me	AUTUMN2 Festivals and Remembrances	SPRING 1 Water and Ice	SPRING 2 Traditional Tales	SUMMER 1 Beasts	SUMMER 2 Growth
EYFS CYCLE 1	Observe changes in seasons and weather Different family makes up People live in families In the continuous provision there are objects intentionally made from a range of materials. The weather is observed daily and seasonal change highlighted.	Observe changes in seasons and weather Other things melt, like chocolate and butter. It gets dark early Materials toys are made of In the continuous provision there are objects intentionally made from a range of materials. The weather is observed daily and seasonal change highlighted.	Observe changes in seasons and weather Water can be frozen solid and melted to a liquid with heat. Explain it is 'gravity' that causes water (and everything else) to fall when poured. Even though it is sunny, it is not hot Floating/sinking Problem solving Experimentation Critical thinking Working together: experimentation In the continuous provision there are objects intentionally made from a range of materials. The weather is observed daily and seasonal change highlighted.	Observe changes in seasons and weather Children know that ingredients can be combined to create wonderful new foods In the continuous provision there are objects intentionally made from a range of materials, especially in the mud and indoor kitchen areas that children may be using for role playing the traditional tales. The weather is observed daily and seasonal change highlighted.	Observe changes in seasons and weather Things grow in cycles Name some creatures in their environment Living things need food to grow People have to be careful about what they eat and choose healthy options Name several creatures in the outside area We must care for our world and not drop litter In the continuous provision there are objects intentionally made from a range of materials. The weather is observed daily and seasonal change highlighted.	Observe changes in seasons and weather Plants grow from seeds or bulbs Plants have roots, a stem and leaves Grass is a plant Trees are plants Name several plants in the outside area We must care for our world and not drop litter In the continuous provision there are objects intentionally made from a range of materials. The weather is observed daily and seasonal change highlighted.
Why this, why now?	Children will look at how they have parents and grandparents and they are older. They will look at siblings and babies and being to understand the human life cycle and that thing grow.	Children look at melting in this term too as they bake food for festivals. This is also a good time of year to look at the nights darkening. AS children look at old toys, they will be considering what materials they are made of. They will also be making toys with wood and textiles.	This is the perfect time of year for children to look at the changing states of water as they see ice and frost form. They can problem solve with water, experiment and create their own ideas about processes happening. They can explore range of other effects with water this term too.	Children can explore materials that things like bowls, spoons and cups are made from as they explore traditional tales. Children can look at changes in mixtures in the baking process.	Children are introduced to cycles, an important concept for many aspects of scientific understanding. This is a great time of year to learn about minibeasts and watch things hatch as we celebrate new life and Easter too. There are many other links to future learning in this term and all set the children in good stead for KS1 science. Children also begin to name and identify the animals living in their local environment.	Continuing to think about their local environment, children learn to name and identify plants around school. They also learn the basics of a plant life cycle, knowing that plants come from seeds and that the fruit the seed comes from is what will grow as they explore the basic plants need to grow. They are also learning to care for their environment. This is the natural time to look at such things as it is happening all around them.
	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
KS1 CYCLE 1	Animals 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	Materials 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	Animals 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) Working Scientifically: observing closely, using simple equipment, asking simple questions and recognising that they can be answered in		Plants 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	Living Things and Their Habitats 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

	right amounts of different types of food, and hygiene Working Scientifically: observing closely, using simple equipment, identifying and classifying, asking simple questions and recognising that they can be answered in different ways, using their observations and ideas to suggest answers to questions	squashing, bending, twisting and stretching Scientist: Charles Macintosh Working Scientifically: observing closely, using simple equipment, identifying and classifying, performing simple tests, using their observations and ideas to suggest answers to questions, gathering and recording data to help in answering questions	different ways, using their observations and ideas to suggest answers to questions		Working Scientifically: observing closely, using simple equipment, using their observations and ideas to suggest answers to questions, gathering and recording data to help in answering questions	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 Working Scientifically: observing closely, using simple equipment, identifying and classifying, using their observations and ideas to suggest answers to questions, gathering and recording data to help in answering questions
Why this, Why now?	Children continue their learning from EYFS when looking at beasts. They think about healthy diets, life cycles and basic human needs. Thinks links back to healthy eating and life cycles from EYFS. This sets children in good stead for learning in LKS2. This may be linked to what the characters were doing in traditional tales. Children will look at seasonal change through the year.	This fits very nicely with looking at homes and suitable building materials. Children explore materials and undertake tests to assess their suitability for different purposes, learning about Charles Macintosh and his development of a waterproof fabric. Children will look at seasonal change through the year.	Due to the crucial information acquired in this unit for identifying and classifying animals all the way through the curriculum, children cover this content in both years of KS1. Historically we have found children lose this information so the decision has been taken to repeat it in both years to aid retention. Children apply the information in different ways. In this unit, they look at the animals of China in their 'Other Worlds' topic. Children will look at seasonal change through the year.		This is a great time for growing and children can link this topic to their environment theme as they understand the life cycles of bulbs and plants which grow from seeds. They use experimentation to test out what it is that plants needs to survive and what happens if they don't get it. Children will look at seasonal change through the year.	Children continue to think about environment as they look at the habitats in their local environment and some others around the world. They look at how animals are suited to their habitats and how living things in a habitat may interact through a simple food chain. They study their local habitat and find microhabitats in our school area. Children also consider what it is to be alive, never alive and dead. Children will look at seasonal change through the year.
KS1 CYCLE 2	Animals 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,	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	Animals 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,	Human Senses identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense Working Scientifically: observing closely, using simple equipment, performing simple tests, using their observations and ideas to suggest answers to questions,	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 Working Scientifically: observing closely, using simple equipment, identifying and classifying, performing simple tests, using	Seasonal Change observe changes across the 4 seasons observe and describe weather associated with the seasons and how day length varies Working Scientifically: observing closely, using simple equipment, asking simple questions and recognising that they can be answered in different ways, using their observations and ideas to

	reptiles, birds and mammals including pets) Working Scientifically: observing closely, using simple equipment, identifying and classifying, asking simple questions and recognising that they can be answered in different ways, using their observations and ideas to suggest answers to questions	the basis of their simple physical properties Working Scientifically: observing closely, using simple equipment, identifying and classifying, performing simple tests, using their observations and ideas to suggest answers to questions, gathering and recording data to help in answering questions	reptiles, birds and mammals including pets) Working Scientifically: observing closely, using simple equipment, identifying and classifying, asking simple questions and recognising that they can be answered in different ways, using their observations and ideas to suggest answers to questions	gathering and recording data to help in answering questions	their observations and ideas to suggest answers to questions, gathering and recording data to help in answering questions	suggest answers to questions, gathering and recording data to help in answering questions
Why this, why now?	Children learn about classifying animals that live in their local environment. This also means they become familiar with the common species found and can identify and name and study them through the years. Children look at those animals that belong in our local habitat. Children will look at seasonal change through the year.	Children look at Tudor houses and again think about the properties and use of materials. They consider where materials have come from and how they become different to what they are simply made of. Children will be determining properties as they work scientifically. Children will look at seasonal change through the year.	Due to the crucial information acquired in this unit for identifying and classifying animals all the way through the curriculum, children cover this content in both years of KS1. Historically we have found children lose this information, so the decision has been taken to repeat it in both years to aid retention. Children look in more detail at how the structure of an animals can show what it is and what its diet may be. Children will be focusing on pets. This is good preparation for LKS2. Children will look at seasonal change through the year.	Children will name the parts of their body and those parts of their boy associated with the senses. They will work scientifically to test their senses in a variety of ways to answers questions about their bodies and how they work. Children will look at seasonal change through the year.	Again, this is the time of year for planting. Children learn more about their local environment as they learn to classify plants including trees. They can use the plats they are growing to name the parts of a flowering plant. Children will look at seasonal change through the year.	Children will have been observing change through each term, but will bring together their learning in this unit. They will also study the weather and how it can be measured and reported, using specialised equipment. They will link this heavily to geography. This topic, especially day length variation, is crucial for LKS2 geography about time zones and also UKS2 Earth and Space. Children will look at seasonal change through the year.
LKS2 CYCLE 1	Electricity 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	Sound 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 Working Scientifically: asking relevant questions and using different types of scientific	Animals Including Humans 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 Working Scientifically: asking relevant questions and using different types of scientific enquiries to answer them, 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, identifying differences, similarities or changes related to simple scientific ideas and processes, using straightforward scientific evidence to answer questions or to support their findings		Living Things and Their Habitats 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 Working Scientifically: asking relevant questions and using different types of scientific enquiries to answer them, gathering, recording, classifying and presenting data in a variety of ways to help in answering questions, recording findings	Materials and States of Matter 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 Working Scientifically: asking relevant questions and using different types of scientific enquiries to answer them,

	Working Scientifically: asking relevant questions and using different types of scientific enquiries to answer them, setting up simple practical enquiries, comparative and fair tests, using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions , 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 straightforward scientific evidence to answer questions or to support their findings	enquiries to answer them, setting up simple practical enquiries, comparative and fair tests, using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions 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 straightforward scientific evidence to answer questions or to support their 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, identifying differences, similarities or changes related to simple scientific ideas and processes, using straightforward scientific evidence to answer questions or to support their findings	setting up simple practical enquiries, comparative and fair tests, using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions , 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 straightforward scientific evidence to answer questions or to support their findings
Why this, Why now?	In this unit children have their first look at electricity to set them in good stead for UKS2 and also some D&T work. Children look at what appliances use electricity and what are insulators and conductors. Children also begin to see how electricity has to be in a circuit in order to flow. They explore circuits and find out what happens when they change or add components and begin to draw them out.	Children also have their first look at how sound works. They will have been studying music in previous year groups, but this is where they begin to see the science behind sound. Children will explore and experiment with making sounds and how sounds can be changed.	Continuing their learning from KS1, children look at digestion, teeth and food chains. This unit will build really well on foundations made in previous years. They will think about carnivore and herbivore teeth, link this to animals in food chains and learn about digestion.	Children use their understanding of the local environment from KS1 to begin classifying animals in different ways. They will link this study of living things to their art skills as they make scientific sketches of what they find. They begin to look at classification keys.	Children are learning about the water cycle in geography and this science unit really helps the children understand the changes in state happening between the stages of the cycle. Children will have explored some of these concepts back in EYFS 'Water World' topic. Children may also link this to melting other substances such as chocolate when learning about the Mayans. This should be a very practical unit where children are testing and recording.
LKS2 CYCLE 2	Light 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	Forces and Magnets compare how things move on different surfaces notice that some forces need contact between 2 objects, but magnetic forces can act at a distance	Rocks 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.	Animals including Humans 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	Plants 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,

	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 Working Scientifically: asking relevant questions and using different types of scientific enquiries to answer them, setting up simple practical enquiries, comparative and fair tests, using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions , 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 straightforward scientific evidence to answer questions or to support their findings	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 Working Scientifically: asking relevant questions and using different types of scientific enquiries to answer them, setting up simple practical enquiries, comparative and fair tests, using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions , 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 straightforward scientific evidence to answer questions or to support their findings	Scientist: Mary Anning Working Scientifically: asking relevant questions and using different types of scientific enquiries to answer them, setting up simple practical enquiries, comparative and fair tests, using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions , 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, identifying differences, similarities or changes related to simple scientific ideas and processes, using straightforward scientific evidence to answer questions or to support their findings, using straightforward scientific evidence to answer questions or to support their findings	identify that humans and some other animals have skeletons and muscles for support, protection and movement Working Scientifically: asking relevant questions and using different types of scientific enquiries to answer them, 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, identifying differences, similarities or changes related to simple scientific ideas and processes, using straightforward scientific evidence to answer questions or to support their findings	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 Working Scientifically: asking relevant questions and using different types of scientific enquiries to answer them, setting up simple practical enquiries, comparative and fair tests, using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions, 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, identifying differences, similarities or changes related to simple scientific ideas and processes, using straightforward scientific evidence to answer questions or to support their findings
Why this, why now?	Children undertake their first study of light. They have looked at the sun as the source of light for day length variation in KS1. They will look further into this topic in UKS2. Children will be able to use lots of scientific	Another practical topic for children to see the science behind the everyday. Children learn about forces with a strong focus on magnets and magnetism. They will revisit this learning in UKS2 Forces.	Linking closely with the geography topic of volcanoes and earthquakes, children will be learning about rocks, where they come from, how they can be classified and how they may change. Children will be exploring the processes with some practical activities to explore how things like fossils are formed and rocks deform to become metamorphic. They will learn about a fossil pioneer in Mary Anning.	Children continue to think about how the human body works. They look at the skeletal structure, muscle system and precision of movement. The children will explore what would happen without a skeleton	Building on from plants in KS1, children learn about the life cycle of flowering plants, how they make seeds, are pollinated and They will be exploring how plants use capillary action to draw water up the stems with practical

	enquiry skills here to explore the properties of light.				experiments. This is a great time of year to be looking at the plant and pollination happening around them.
UKS2 CYCLE 1	Animals Including Humans 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 Working Scientifically: 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, 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	Evolution and Inheritance 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: Charles Darwin Working Scientifically: recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs, 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	Electricity 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 Working Scientifically: planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary, using test results to make predictions to set up further comparative and fair tests , taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate, 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	Light 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 Scientists: Isaac Newton Working Scientifically: planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary, using test results to make predictions to set up further comparative and fair tests , taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate, 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	Living Things and Their Habitats describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals give reasons for classifying plants and animals based on specific characteristics Scientists: Carl Linnaeus Working Scientifically: recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs, 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 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Why this, Why now?	In this unit, children learn about how blood moves around their body. They have the fascinating experience of dissecting a pig heart to really see how it works and what the chambers are like. This will build on children's understanding of other system from LKS2, such as digestive or skeletal.	Building on LKS2 rocks, children will think about what fossils can tell us about life forms in the past. They think about evolution and inheritance relating to their own families and other species. They also look at the work of Charles Darwin and how he came to his ideas about evolution and inheritance.	Building on work from LKS2, children further explore electricity. They develop their understanding of components and how they affect the circuits and also move to drawing more technical diagrams.	Children have learnt about light already in LKS2 so can bring that understanding with them as they learn more about how light behaves. They learn about famous local scientist, Isaac Newton, and his work around understanding how light can be separated. They will also look at his work on gravity in forces.	Following on from LKS2, the children learn more about classification and identification of animals. They learn about Carl Linnaeus who developed a classification system which is still used as the basis for classification today.			
UKS2 CYCLE 2	Earth and Space 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 Working Scientifically: recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs, 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		Forces 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 Working Scientifically: planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary, using test results to make predictions to set up further comparative and fair tests 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, 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		Properties and Changes of Materials 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 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 Working Scientifically: planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary, using test results to		Animals Including Humans describe the changes as humans develop to old age Working Scientifically: recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs, 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	Living Things and Their Habitat 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 Scientist: Jane Goodall Working Scientifically: recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs, 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

		identifying scientific evidence that has been used to support or refute ideas or arguments	make predictions to set up further comparative and fair tests , 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, 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		
	Children spend a whole term on this topic they only encounter once. However, they will be drawing on some learning from LKS2 geography and KS1 seasonal change. Learning about our place in the universe, they learn about the solar system and how the Earth rotates around the sun. This will also allow children to remember some learning from light units in KS2 as well. Children link this to their English learning with 'Here We Are' by Oliver Jeffers – and watch the Vimeo of Overview.	Following on from Earth and Space, children can think about the force of gravity and how it affects objects on Earth. They will also be learning about levers and pulleys and other mechanisms in some very practical sessions.	This wonderfully practical unit provides lots of problem solving and reasoning challenges as children learn more about liquids, solutions, and mixtures and how to separate them. Following on from LKS2 states of materials, children will be able to see the changes happening and what changes cant be reversed.	Linking well with change and thinking about transitions, children, look st the humans life cycle and how people age.	Continuing to think about human life cycles, and fitting with RSE, children learn about human reproduction and other types of reproduction. Children will have some learning from LKS2 around lifecycles.