Science curriculum coverage A &B Two year rolling programme.

Cycle A 2021- 2022

	A1	A2	Sp1	Sp2	Su1	Su2
SF	**I wonder who made these marks…** Seasonal changes Observe and talk about changes in the weather and the seasons Everyday weather/ temperature chart CPD – Seasonal Changes	**I wonder what is in there… (Woodland animals)** Human body – Oral Health (senses) Identify different parts of the body Describe what they see, hear and feel **I wonder how we celebrate… Celebrations (roll into Spring 1)** CPD – Humans and other Animals	**I wonder why we use light… (Celebrations)** Electricity Name light sources Sort light sources/ not light sources Create simple circuits to make a bulb light up **I wonder how big is big… (Dinosaur Planet)** **Mary Anning (history)** Identify body parts of animals Have understanding for growth and change Talk about things they have observed including animals CPD - Animal and human bodies	**I wonder when it grows… (Plant Hunters)** Plants Wild plants and garden plants Deciduous and evergreen Name basic parts of plants, what they do Seeds and bulbs grow into new plants CPD – Plants	**I wonder what is out there… (Moon Zoom/ Superheroes)** Float & Sinking Forces & Movement Observe and interact with natural processes such as a boat floating on water Talk about different forces they can feel – water pushing up when pushing a boat under it Observing a rocket launching and talk about what is happening CPD – Everyday Materials	**I wonder who lives there… (Beach/ Seaside)** Animals, inc humans Discuss how to care for living and their habitats Identify and name some creatures that live on our seaside **Weekly beach schools visit** CPD – Living things and habitats
Dolphin 1/2	**Magnificent Monarchs** ✓ Everyday materials (Y1) Name, describe and sort everyday materials, uses of materials. CPD – Everyday Materials	**Bright Lights, big city** ✓ Seasonal Changes (Y1) Observe and talk about changes in the weather and the seasons Everyday weather/ temperature chart CPD – Seasonal Changes	**Great Fire of London** ✓ Plants (Y1) Wild plants and garden plants Deciduous and evergreen Name basic parts of plants, what they do Seeds and bulbs grow into new plants ✓ Plants (Y2) Germination, plant lifecycles, sunlight, temperature, nutrition, water CPD – Plants	**Close upon Kenya** ✓ Seasonal Changes (Y1) Observe and talk about changes in the weather and the seasons Everyday weather/ temperature chart CPD – Outdoor Science	**Dinosaur Planet** ✓ Animals including humans (Y2) Animals have offspring, basic needs for survival. Importance of exercise CPD – Humans and other Animals	**Land Ahoy!** ✓ Living things and their habitats (Y1) Talk about a range of common animals, name and compare and range of plants and animals, know what animals eat ✓ Living things and their habitats (Y2) Living and dead, describe habitats, basic food chains. CPD – Living things and habitats

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Jellyfish 3/4	**Pharaohs** ✓ States of Matter (Y4) Solids, liquids and gases, changes when heated/cooled, evaporation/ condensation in water cycle CPD – States of Matter ✓ Forces and Magnets (Y3) Replace States of Matter with this in 2023-2024 Surfaces effects moving objects, magnets can act at a distance, attract/ repel materials, two poles and make predictions CPD – Forces and Magnets	**Rocks, Relics and Rumbles** ✓ Rocks (Y3) Group different rocks, how they are formed. Fossils – how they are formed. Focus on plate tectonics etc CPD – Rocks and Soils	**Traders and Raiders** ✓ Animals including humans (Y3) Identify animals (humans) need right types and levels of nutrition, cannot make own food, nutrition comes from what they eat Identify humans and some animals have skeletons and muscles for support, protection and movement CPD – Food and Feeding/ Body Systems	**Misty Mountains** ✓ Plants (Y3) Function, including how water is transported, life cycles of plants. CPD – Plants and Growth	**What do we know about Benin?** ✓ Light (Y3) Light is needed to see and dark is the absence of light, notice light is reflected from surfaces, light from the sun can be dangerous, ways to protect eyes, shadows are formed when light from a light source is blocked, shadow sizes changing CPD – Light Sound (Y4) How sound is made, how it travels, pitch and volume. CPD – Sound	**Map Detectives** ✓ Living things and habitats (Y4) Living things can be grouped in a variety of ways, use classification to group, identify and name living things; environment can change and pose danger to living things. CPD – Environments and Habitats
Seals 4/5	**Invasion** ✓ States of Matter (Y4) Recovered from JF Y3, but only needed for 2021-2022 Solids, liquids and gases Changes when heated/ cooled Evaporation/Condensation ✓ Properties and changes of materials (Y5) Separating materials, group/sort materials on properties, uses of everyday materials, reversible changes CPD – Changing Materials	**Water Cycle** ✓ Earth and space (Y5) Movement Earth, planets and moon. Night and day. CPD – Earth and Space	**Traders and Raiders** ✓ Animals including humans (Y5) Describe changes as humans develop to old age (Y5) CPD – Lifecycles	**Misty Mountains** ✓ Sound (Y4) ✓ Need to replace Sound for Electricity in 2023-2024 ✓ Electricity (Y4) How sound is made, how it travels, pitch and volume. CPD – Sound	**Dynamic Dynasty** ✓ Forces (Y5) Objects fall due to gravity, effects of air resistance, water resistance and friction Recognise some mechanisms including pulleys, levers, gears CPD – Forces and Magnets	**Our Local Ecosystem** ✓ Living things and their habitats (Y4) Group living things How change in environment can threaten life. Run alongside Y5 ✓ Living things and habitats (Y5) Lifecycles (mammal, amphibian, insect, bird). Reproduction of some plants and animals CPD – Environments and Habitats

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Sea Turtles 6	**Childs war** ✓ Light (Y6) Travels in straight lines. How light enables us to see. How shadows are formed – shape. CPD – Light	**Sustainable Living** ✓ Earth and space (Y5) Movement Earth, planets and moon. Night and day. Recovery due to some Year 6 not having completed Earth and Space in Year 5 as they were in a Y3/Y4 class and COVID stopping the mix of age groups the following year, where they would have covered this topic. CPD – Earth and Space	**Revolution** ✓ Evolution and inheritance (Y6) Offspring different to parents Animal adaption – evolution. CPD – Evolution and Inheritance	**Frozen Kingdom** ✓ Living things and their habitats (Y6) Classification, including microorganisms, plants and animals. CPD – Classification .	**Cornwall Links to the trading world** ✓ Electricity (Y6) Brightness of lamp, volume of buzzer, symbols, circuits. CPD – Electricity	**Our Mevagissey** ✓ Animals including humans (Y6) Human circulatory system. Exercise, drugs and lifestyle CPD – Body Systems

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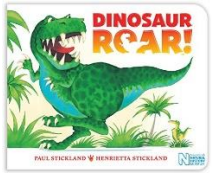
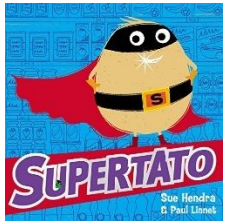
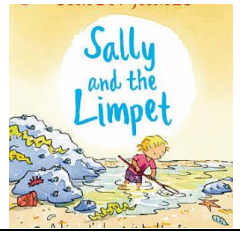
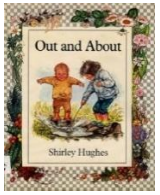
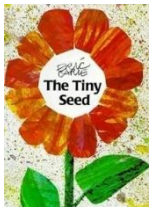
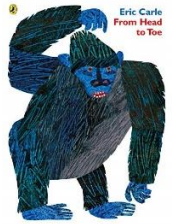
Cycle B 2022 – 2023 (add related texts to topics)

	A1	A2	Sp1	Sp2	Su1	Su2
SF	**I wonder where it comes from…** ✓ Human body (faces) Oral health ✓ Forces: Machines – how they move CPD – 	**I wonder what is in there… Enchanted world (photos of holes)** ✓ Electricity CPD - Future Energy/ Electricity 	**I wonder how big is big… Dinosaur Planet** ✓ Animal and human bodies CPD - Humans and other animals 	**I wonder when it grows… Plant Hunters** ✓ Plants CPD – Plants 	**I wonder what makes it move… Superheroes/ Machines** ✓ Forces: Machines – how they move CPD - Forces and Magnets 	**I wonder who lives there… Beach/ Seaside** ✓ Animals and their habitats **Seashore science lessons (PSTT)** ✓ Floating and sinking CPD – Humans and other animals 
	✓ **Seasonal changes throughout the year with Outdoor schools and daily weather/temperature chart**					
Dolphins 1	**Street Detectives** ✓ Everyday materials (Y1) 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	**Why are landscapes so different?** ✓ Seasonal changes (Y1) Autumn/ Winter observe changes across the 4 seasons observe and describe weather associated with the seasons and how day length varies CPD – Seasonal Changes 	**Memory box** ✓ Plants (Y1) 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 CPD – Plants 	**Splendid skies** ✓ Seasonal changes (Y1) Spring/ Summer observe changes across the 4 seasons observe and describe weather associated with the seasons and how day length varies CPD – Seasonal Changes 	**Movers and Shakers** ✓ Animals including humans (Y1) identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense CPD – Humans and other animals 	**Coastline** ✓ Living things and their habitats (Y1) **Seashore science lessons (PSTT)** 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,

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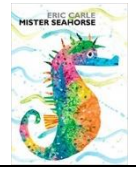
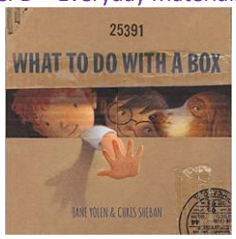
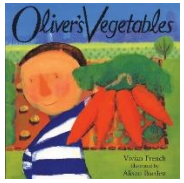
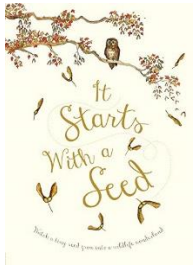
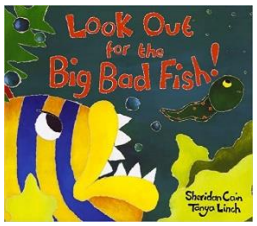
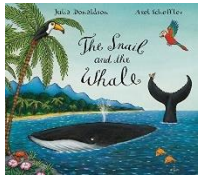
	CPD – Everyday Materials 					amphibians, reptiles, birds and mammals including pets) CPD – Living things and habitats 
Lobsters 2	**Street Detectives** ✓ Use of everyday materials (Y2) identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, 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 CPD – Everyday Materials 	**Why are landscapes so different?** ✓ Animals including humans (Y2) describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene find out about and describe the basic needs of humans, for survival (water, food and air) CPD – Humans and other animals 	**Memory box** ✓ Plants (Y2) 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 CPD – Plants 	**Splendid skies** ✓ Animals including humans (Y2) notice that animals, including humans, have offspring which grow into adults (lifecycles) consolidate the basic needs of animals for survival (water, food and air) compare to needs of humans CPD – Humans and other animals 	**Movers and Shakers** ✓ Living things and their habitats (Y2) 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 CPD – Living things and habitats	**Coastline** ✓ Living things and their habitats (Y2) **Seashore Science lessons (PSTT)** 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  CPD – Outdoor Science

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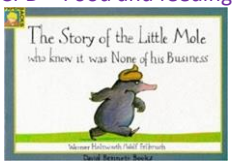
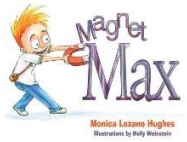
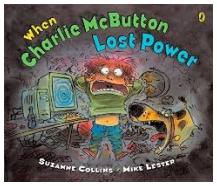
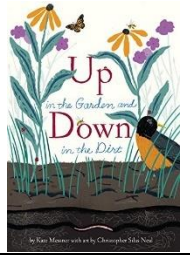
Jellyfish 3/4	**Local history study** ✓ Animals including humans (Y4) describe the simple functions of the basic parts of the digestive system in humans identify the different types of teeth in humans and their simple functions construct and interpret a variety of food chains, identifying producers, predators and prey CPD – Food and feeding 	**Our UK – Comparing UK regions** ✓ Forces and Magnets (Y3) 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 CPD – Forces and Magnets 	**Through the Ages** ✓ Electricity (Y4) 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 CPD – Future Energy/ Electricity 	**Sow, Grow and Farm** ✓ Plants (Y3) 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 CPD – Plants and growth 	**I am a warrior** ✓ States of matter (Y4) 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 CPD – States of Matter 	**UK Study – Scotland** ✓ Living things and their habitats (Y4) **Seashore Science lessons (PSTT)** 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 CPD – Environments and Habitats 
Seals 5	**Gods and Mortals** ✓ Earth and Space (Y5) describe the movement of the Earth and other planets relative to the sun in the solar system	**Bonjour Biarritz** ✓ Properties and changes of materials (Y5) compare and group together everyday materials on the basis of their properties, including their	**Off with her head** ✓ Forces (Y5) explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object	**Sow, Grow and Farm** ✓ Living things and habitats(Y5) ~~Lifecycles (mammal, amphibian, insect, bird).~~ describe the life process of reproduction in some plants and animals	**I am Warrior** ✓ Animals including humans (Y5) describe the changes as humans develop to old age CPD – Lifecycles	**Exploring Brazil** ✓ Living things and habitats(Y5) **Seashore Science lessons (PSTT)** describe the differences in the life cycles of a

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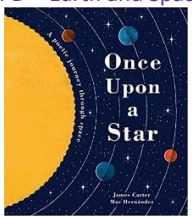
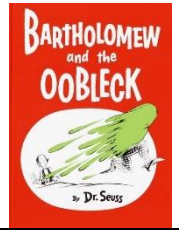
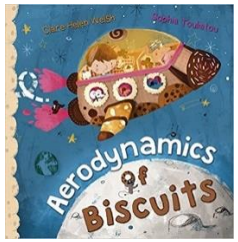
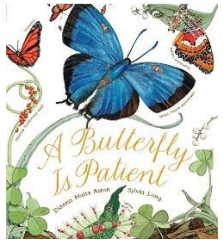
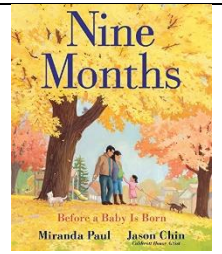
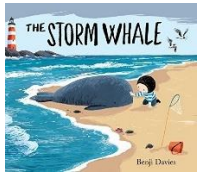
	describe the movement of the moon relative to the Earth describe the sun, Earth and moon as approximately spherical bodies use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky CPD – Earth and Space  	hardness, solubility, transparency, conductivity (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 CPD – Changing Materials  	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 CPD – Forces  	reproduction of some plants and animals (with recap of Year 3 plants prior to this) CPD – Environments and Habitats  	 	mammal, an amphibian, an insect and a bird ~~Reproduction of some plants and animals~~ CPD – Environments and Habitats 

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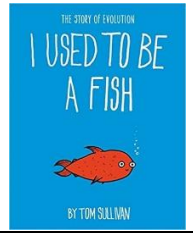
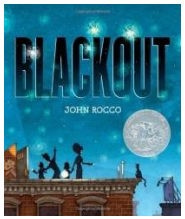
Sea Turtles 6	**Childs war** ✓ Light (Y6) recognise that light appears to travel in straight lines use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye explain that we see things because light travels from light sources 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 CPD – Light 	**Sustainable Living** ✓ Evolution and inheritance (Y6) 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 CPD – Evolution and Inheritance 	**Revolution** ✓ Electricity (Y6) 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 CPD – Electricity 	**Frozen Kingdom** ✓ Living things and their habitats (Y6) 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 CPD – Classification .	**Cornwall Links to the trading world**	**Our Mevagissey** ✓ Animals including humans (Y6) 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 (but also some Beach Science once SATS are finished) CPD – Body Systems

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Key stage 1 National curriculum strands			
Working Scientifically	**Biology Pupils should be taught to:**	**Chemistry Pupils should be taught to:**	**Physics Pupils should be taught to:**
During Years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: • 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	**Living things and their habitats** • explore and compare the differences between things that are living, dead, and things that have never been alive Animals, including humans • identify and name a variety of common animals including, fish, amphibians, reptiles, birds and mammals • identify and name a variety of common animals that are carnivores, herbivores and omnivores • describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets) • identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. • 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 **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. • 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. **Habitats** • 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 food.	**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 the basis of their simple physical properties • identify and compare the suit- ability 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, bend- ing, twisting and stretching.	**Seasonal changes** •observe changes across the four seasons •observe and describe weather associated with the seasons and how day length varies

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Lower Key stage 2 National curriculum strands

Working Scientifically	Biology Pupils should be taught to:	Chemistry Pupils should be taught to:	Physics Pupils should be taught to:
Working scientifically During Years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: • 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 writ- ten 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.	**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 Animals, including human • 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. • 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 **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, 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 of flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	**Rocks** •compare and group together different kinds of rocks on the basis of their simple physical properties • recognise that soils are made from rocks and organic matter •Describe in simple terms how fossils are formed when things that have lived are trapped within rock. States of matter •compare and group materials together, according to whether they are sol- ids, 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.	**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 **Forces and magnets** •compare how things move on different surfaces •notice that some forces need contact between two 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 two poles •predict whether two magnets will attract or repel each other, de- pending on which poles are facing **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 •recognise that light from the sun can be dangerous and that there are ways to protect their eyes •recognise that shadows are formed when a light source is blocked by a solid object • find patterns in the way that the size of shadows change Sound •identify how sounds are made, associating some of them with something vibrating •recognise that vibrations from sound 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.

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			•recognise that sounds get fainter as the distance from the sound source increases.

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Upper Key stage 2 National curriculum strands

Working Scientifically	Biology Pupils should be taught to:	Chemistry Pupils should be taught to:	Physics Pupils should be taught to:
Working scientifically During Years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: • 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 la- bels, 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 results, explanations of and 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 • describe the life process of reproduction in some plants and animals • describe the differences in the life cycle of a mammal, an amphibian, an insect and a bird • recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. Animals, including humans • describe the changes as humans develop to old age • 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 Evolution and inheritance • recognise that living things produce off- spring of the same kind, but but normally off- spring vary and are not identical to their parents • recognise that living things have changed over time and that fossils provide the information about living things that inhabited the Earth millions of years ago • identify how animals and plants are adapted to suit their environment in different ways and that adaption leads to evolution normally off- spring vary and are not identical to their parents • recognise that living things have changed over time and that fossils provide the information about living things that inhabited the Earth millions of years ago • identify how animals and plants are adapted to suit their environment in different ways and that adaption leads to evolution	**Properties of everyday 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 Reversible change • demonstrate that dissolving, mixing and changes of state are reversible changes. Changes that form new materials • 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.	**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 **Forces** • explain that unsupported objects fall to- wards the Earth because of the force of gravity acting between the Earth and the falling object • identify the effect 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 **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 **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

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Websites and Resources for topics:

https://www.pzaz.online

PZAZ scheme of work and resources/ CPD videos

https://explorify.wellcome.ac.uk/en/activities

Explorify has been highly recommended on all the science training I have done– excellent for quick activities that link to all Science topics. These really develop reasoning skills and discussion whilst using science language etc. My class have absolutely loved Zoom in, Zoom out and Odd one out. Quick activities that require no recording, if time is tight.

Also, suggestions for investigations etc linked to all year group topics.

https://www.reachoutcpd.com/

This site is great for support/ fast training with your subject knowledge. Training takes about an hour and covers every Science topic you will be covering. This is for teachers not children. Ideally, before teaching your next topic, do the online training as it can update and extend your subject knowledge.

https://www.liketobe.org/

You can makes links to 'real' scientists here that can help answer some of the questions the children ask, which you may not know the answer to. Starfish class asked an engineer, working on a space rocket, questions about rockets when we were doing our space topic. Ruth Peacey (who took the flag to the Antarctic) is on here too.

https://www.stem.org.uk/

Useful for investigation ideas, CPD and resources linked to each year groups topics. I think I have signed everyone up for this before, but you may need to create a new account or reset it.

https://www.hamilton-trust.org.uk/science

Every year group science topics are covered here, with lesson plans and ideas – although they are not all free!