EYFS- Reception					
Subject content from the programme of study	**When will pupils be taught this?**	**What texts will be used?**	**Links to Scientists**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
Mini People and Mini Beasts **ELG: The Natural World** Explore the natural world around them, making observations and drawing pictures of animals and plants.	Autumn 2	The Very Hungry Caterpillar. Tad. A Butterfly is patient.		Expressive Art and Design- Drawing minibeasts and printing butterflies. Forest Schools- Worm's eye view.	English- Writing labels and CVC words Maths- Counting minibeasts, one more and one less with minibeasts
How things grow **ELG: The Natural World** Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.	Summer 1	Katie and the Sunflowers.		Expressive Art and Design- Drawing flowers and creating a sunflower collage Forest schools- Make rain gauges and collect rain	English- Write simple sentences Maths- Measure rain fall
Seasonal Change **ELG: The Natural World** Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	Summer 2	Percy the Parkkeeper (each season book).		Expressive Art and Design- Drawing pictures to represent each season	English- Writing simple sentences

Year One (1 of 2)					
Subject content from the programme of study	**When will pupils be taught this?**	**What texts will be used?**	**Links to Scientists**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Plants</u> Pupils should be taught to identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.	Spring 2	The Tiny Seed. I love the seasons: Spring .		Busy Bees Community Garden project	English- Write a comparison
Pupils should be taught to identify and describe the basic structure of a variety of common flowering plants, including trees.					
<u>Animals, including humans</u> Pupils should be taught to identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.	Autumn 1		Linda Brown Buck		English- Description of an animal Maths- Sorting animals into a venn diagram.
Pupils should be taught to identify and name a variety of common animals that are carnivores, herbivores and omnivores.				Forest schools- Minibeast hunt	English- Animal Fact file.
<u>Everyday materials</u> Pupils should be taught to distinguish between an object and the material from which it is made.	Summer 1				
Pupils should be taught to identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.				Art- Weaving	Maths- Sorting materials into a venn diagram English- Explanation of each material

Year One (2 of 2)					
Subject content from the programme of study	**When will pupils be taught this?**	**What texts will be used?**	**Links to Scientists**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
Pupils should be taught to describe the simple physical properties of a variety of everyday materials.	Summer 1				English- Guess what I am description
Pupils should be taught to compare and group together a variety of everyday materials on the basis of their simple physical properties.					English- Write up of scientific investigation
<u>Seasonal changes</u> Pupils should be taught to observe changes across the four seasons.	Taught across the year	Tree- Seasons come seasons go. Little Goose's Autumn. I love the Seasons – Autumn, I love the seasons- Winter, I love the seasons- Spring, I love the seasons- Summer.		Forest schools- Identifying trees and their features Music- Weather and seasons	Maths- Record observations in a table
Pupils should be taught to observe and describe weather associated with the seasons and how day length varies.					English- Seasons poem
Curriculum enrichments (visits, visitors, themed events etc.) • Autumn 1- Trips- Standish trail • Spring 2- Community project- Create a vegetable garden. • RHS Bridgewater Trip.					

Year Two (1 of 2)					
Subject content from the programme of study	**When will pupils be taught this?**	**What texts will be used?**	**Links to Scientists**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Living things and their habitats</u> Pupils should be taught to explore and compare the differences between things that are living, dead, and things that have never been alive.	Spring 1 and Spring 2	Pond Circle. Growing Frogs.			Maths- Venn diagram sorting objects
Pupils should be taught to 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.					English- Setting description
Pupils should be taught to identify and name a variety of plants and animals in their habitats, including micro-habitats.					Maths- Data handling. Record results from survey on tally chart
Pupils should be taught to 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.					English- Explanation of a simple food chain
<u>Plants</u> Pupils should be taught to observe and describe how seeds and bulbs grow into mature plants.	Summer 1	The Flower. It starts with a seed. The Big Book of Blooms.		**Art**-Leaves and flowers using batik. **Forest School-** Tree bark rubbings Creating Wood Fold Wild Garden.	English- Writing a description of a flower
Pupils should be taught to find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.					English- Scientific investigation- Which plant grows best? Maths- Display results

Year Two (2 of 2)					
Subject content from the programme of study	**When will pupils be taught this?**	**What texts will be used?**	**Links to Scientists**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Animals, including humans</u> Pupils should be taught to notice that animals, including humans, have offspring that grow into adults.	Autumn 1 and 2	Little People, Big Dreams- David Attenborough. Growing Frogs.			Maths- Flow diagrams
Pupils should be taught to find out about and describe the basic needs of animals, including humans, for survival (water, food and air).					English- Information text
Pupils should be taught to describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.				PSHE- Healthy Me	English- Create a leaflet on ways and the importance of staying healthy
<u>Uses of everyday materials</u> Pupils should be taught to identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	Summer 2		Ole Kirk Christiansen Charles Macintosh	DT- Structures and mechanisms	Maths- Carroll diagram to compare materials English- Research an inventor
Pupils should be taught to find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.					English- Write up of a scientific investigation- exploring a range of materials Maths- Display results

Curriculum enrichments (visits, visitors, themed events etc.)

- Spring 1- Forest Schools- Creating Wood Fold's Wild Garden.
- Summer 1- Community Projects- Planting and growing flowers for Busy Bees Community Garden.

Year Three (1 of 4)					
Subject content from the programme of study	**When will this be taught?**	**What texts will be used?**	**Links to Scientists?**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Plants</u> Pupils should be taught to identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.	Summer 2	A seed is sleepy.	Jeanne Baret	Art- Drawing and printing- Flower patterns and designs Forest school- Painting with plants and making paint Geography- Agriculture	English- Explanation task- parts of the plant
Pupils should be taught to 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.					Maths- Venn diagram- sort and compare the plants according to whether they have had air etc.
Pupils should be taught to investigate the way in which water is transported within plants.					English- Write up of a scientific investigation Maths- Recording results in a bar chart
Pupils should be taught to explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.					English- Story (Sam's seed) Maths- Carroll diagram- grouping seeds into the way they are dispersed
<u>Animals, including humans</u> Pupils should be taught to 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.	Autumn 1	Flowchart Science: Skeleton and Muscles	Marie Curie		English- Information text- food groups
Pupils should be taught to identify that humans and some other animals have skeletons and muscles for support, protection and movement.					English- Information about muscle pairs

Year Three (2 of 4)					
Subject content from the programme of study	**When will this be taught?**	**What texts will be used?**	**Links to Scientists?**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Rocks</u> Pupils should be taught to compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.	Autumn 2	Stone girl, bone girl. You wouldn't want to live without soil.	Mary Anning	Forest School- Making stone age jewelry	English- Write up of a scientific investigation- permeability and hardness of rocks.
Pupils should be taught to describe in simple terms how fossils are formed when things that have lived are trapped within rock.					English- Explanation text- how fossils are formed
Pupils should be taught to recognise that soils are made from rocks and organic matter.					English- Write up of a scientific investigation- permeability and hardness of rocks.

Year Three (3 of 4)					
Subject content from the programme of study	**When will this be taught?**	**What texts will be used?**	**Links to Scientists?**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Light</u> Pupils should be taught to recognise that they need light in order to see things and that dark is the absence of light.	Summer 1	Flowchart Science: Light			
Pupils should be taught to notice that light is reflected from surfaces.					
Pupils should be taught to recognise that light from the sun can be dangerous and that there are ways to protect their eyes.					English- Children to create a sun safety leaflet
Pupils should be taught to recognise that shadows are formed when the light from a light source is blocked by a solid object.					English- Explanation on how shadows are formed
Pupils should be taught to find patterns in the way that the size of shadows change.					English- Write up of a scientific investigation Maths- Measure and display results

Year Three (4 of 4)					
Subject content from the programme of study	**When will this be taught?**	**What texts will be used?**	**Links to Scientists?**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Forces and magnets</u> Pupils should be taught to compare how things move on different surfaces.	Spring 1 and 2		Guillaume Amontons		English- Write up of a scientific investigation- how cards travel on different surfaces Maths- Measuring how far the cars have travelled
Pupils should be taught to notice that some forces need contact between two objects, but magnetic forces can act at a distance.				Geography-Earths magnetic poles	
Pupils should be taught to observe how magnets attract or repel each other and attract some materials and not others.					Maths- Group objects into a venn diagram- are they attracted to the magnet?
Pupils should be taught to 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					
Pupils should be taught to describe magnets as having two poles.					
Pupils should be taught to predict whether two magnets will attract or repel each other, depending on which poles are facing.					English- Write a prediction then an explanation

Curriculum enrichments (visits, visitors, themed events etc.)

- Summer 2- School trips- RHS- Exploring Plants trip and Workshop.

Year Four (1 of 4)					
Subject content from the programme of study	**When will this be taught?**	**What texts will be used?**	**Links to Scientists?**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Animals, including humans</u> Pupils should be taught to describe the simple functions of the basic parts of the digestive system in humans.	Autumn 1	Flowchart Science: the digestive system. Food chains – who eats what?			English- Information text functions of the digestive system
Pupils should be taught to identify the different types of teeth in humans and their simple functions.					English- Persuasive text- looking after teeth
Pupils should be taught to construct and interpret a variety of food chains, identifying producers, predators and prey.					English- Explain the process of a food chain
<u>States of matter</u> Pupils should be taught to compare and group materials together, according to whether they are solids, liquids or gases.	Autumn 2				Maths- Sort the materials into a venn diagram, children to decide how to sort these
Pupils should be taught to 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).					English- Full write up of a scientific investigation
Pupils should be taught to identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.					English- Wind in the willows- explanation of the water cycle

Year Four (2 of 4)					
Subject content from the programme of study	**When will this be taught?**	**What texts will be used?**	**Links to Scientists?**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Sound</u> Pupils should be taught to identify how sounds are made, associating some of them with something vibrating.	Summer 1 and 2	Flowchart Science: Sound	Robert Boyle		English- Observation writing- rice on a drum
Pupils should be taught to recognise that vibrations from sounds travel through a medium to the ear.					English- Explanation text- how people hear (with labelled diagram)
Pupils should be taught to find patterns between the pitch of a sound and features of the object that produced it.					English- Write up of a scientific investigation
Pupils should be taught to find patterns between the volume of a sound and the strength of the vibrations that produced it.					English- Write up of a scientific investigation
Pupils should be taught to recognise that sounds get fainter as the distance from the sound source increases.					Maths- statistics- record results on a graph. Explain findings

Year Four (3 of 4)					
Subject content from the programme of study	**When will pupils be taught this?**	**What texts will be used?**	**Links to Scientists?**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Living things and their habitats</u> Recognise that living things can be grouped in a variety of ways.	Spring 2		Rachel Carson		Maths- Group into a Carroll diagram
Explore and use classification keys to help group; identify and name a variety of living things in their local and wider environment.				Forest Schools- Classifying living things in our environment- data collection	English- Write a guide to explore and identify local living things
Recognise that environments can change and that this can sometimes pose dangers to living things.					English- Discussion text- positives and negatives

Year Four (4 of 4)					
Subject content from the programme of study	**When will pupils be taught this?**	**What texts will be used?**	**Links to Scientists?**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Electricity</u> Pupils should be taught to identify common appliances that run on electricity.	Spring 1		Lewis Latimer		
Pupils should be taught to construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.				DT- Design and make a spotlight	
Pupils should be taught to 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.					English- Write up of a scientific investigation- test to see what happens to the brightness of the bulb as more cells are added
Pupils should be taught to recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.					English- Write from an electricians point of view what happens around a circuit
Pupils should be taught to recognise some common conductors and insulators, and associate metals with being good conductors.					English- Write up of a scientific investigation- testing conductors and insulators

Curriculum enrichments (visits, visitors, themed events etc.)

- Autumn 1- Digestive system (AR worksheet) and Teeth (AR worksheet)
- Summer 2- VR Experience- Earthquake damage

Year Five (1 of 3)					
Subject content from the programme of study	**When will pupils be taught this?**	**What texts will be used?**	**Links to Scientists?**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Living thing and their habitats</u> Pupils should be taught to describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.	Summer 1 and 2	Big Cat: Lifecycles. A butterfly is patient	Jane Goodall	Geography- Amazon Rainforest	English- Information text about the life cycles
Pupils should be taught to describe the life process of reproduction in some plants and animals.				Art- Sculpture- create 3D plants/flowers Forest school- Explorer day and creating habitats	English- Explanation text- how plants reproduce
<u>Animals, including humans</u> Pupils should be taught to describe the changes as humans develop to old age.	Summer 1 and Summer 2				Maths- Plot data about length and mass of animals as they grow English- Comparison old and young
<u>Forces</u> Pupils should be taught to explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.	Spring 1	Collins big Cat: Copernicus, Galileo and Newton. Flowchart Science: Forces. Forces: Boom Science	Galileo Galilei Isaac Newton		English- Issac Newton research
Pupils should be taught to identify the effects of air resistance, water resistance and friction, that act between moving surfaces.					English- Write up of a scientific investigation- design, make and test a range of parachutes
Pupils should be taught to recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.					English- Set of instructions- how to make a toy

Year Five (2 of 3)					
Subject content from the programme of study	**When will pupils be taught this?**	**What texts will be used?**	**Links to Scientists?**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Properties and changes of materials</u> Pupils should be taught to 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.	Autumn 1 and 2	Materials- Reversible and irreversible changes			Maths- Sorting objects into a Carroll diagram
Pupils should be taught to know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.					English- Write up of a scientific investigation- which items will dissolve and which wont
Pupils should be taught to use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.					English- Write up of a scientific investigation- Investigate different ways to separate materials
Pupils should be taught to give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.					
Pupils should be taught to demonstrate that dissolving, mixing and changes of state are reversible changes.					English- Write up results and conclusion of scientific investigation Maths- Display results
Pupils should be taught to 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.					English- Write a story chapter- how the magic potion reversed a change

Year Five (3 of 3)					
Subject content from the programme of study	**When will pupils be taught this?**	**What texts will be used?**	**Links to Scientists?**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Earth and space</u> Pupils should be taught to describe the movement of the Earth, and other planets, relative to the Sun in the solar system.	Spring 2	Collins Big Cat: Copernicus, Galileo and Newton. The Skies above my eyes.	Katherine Johnson		English- Information text- information about the plants and their distance from the sun
Pupils should be taught to describe the movement of the Moon relative to the Earth.					English- Explanation text- Children to recreate a lunar month simulation and get chn to explain why, scientifically.
Pupils should be taught to describe the Sun, Earth and Moon as approximately spherical bodies.					
Pupils should be taught to use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.					English- Explanation text- how night and day occurs Maths- Link to different time zones around the world

Curriculum enrichments (visits, visitors, themed events etc.)

- Spring 2- VR Headsets- Solar System (AR worksheet)
- Summer 2- Forest Schools Project- Creating habitats

Year Six (1 of 4)					
Subject content from the programme of study	**When will pupils be taught this?**	**What texts will be used?**	**Links to Scientists?**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Living things and their habitats</u> Pupils should be taught to 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.	Autumn 1	Collins Big Cat: Linnaeus: Organising nature.	Libbie Hyman Carl Linnaeus		English- Information text- about the different categories and why they belong to that category Maths- Sort into venn/carroll diagram
Pupils should be taught to give reasons for classifying plants and animals based on specific characteristics.					English- Information text- Create their own classification keys
<u>Animals, including humans</u> Pupils should be taught to identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.	Autumn 2	Flowchart Science: The human body, the heart.	Marie Maynard Daly	Computing- VR design model of the heart	English- Information text about each organ Write and present- Explanation of how the heart works
Pupils should be taught to recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.					English- Persuasive text- how and why to stay healthy Maths- Data- heart rate recordings
Pupils should be taught to describe the ways in which nutrients and water are transported within animals, including humans.					English- Annotated diagrams with explanation of how water is transported

Year Six (2 of 4)					
Subject content from the programme of study	**When will pupils be taught this?**	**What texts will be used?**	**Links to Scientists?**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Evolution and inheritance</u> Pupils should be taught to recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.	Summer 1 and 2	Collins Big Cat: Mary Anning Fossil Hunter. Big Cat: Charles Darwin and Alfred Russel Wallace. The Origin of the species. Moth – An evolution story.	Charles Darwin Alfred Wallace		English- Explanation of fossilisation Write and present- Explain Darwin's theory of evolution
Pupils should be taught to recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.					
Pupils should be taught to identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.					English- Information text- different animals and the features they have which make them suitable for the environment English- Descriptive writing- children to make up their own animal and write a description of it and how it has adapted to their environment

Year Six (3 of 4)					
Subject content from the programme of study	**When will pupils be taught this?**	**What texts will be used?**	**Links to Scientists?**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Electricity</u> Pupils should be taught to associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.	Spring 2				English- Write up of scientific investigation
Pupils should be taught to 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.					English- Write up of scientific investigation
Pupils should be taught to use recognised symbols when representing a simple circuit in a diagram.					

Year Six (4 of 4)					
Subject content from the programme of study	**When will pupils be taught this?**	**What texts will be used?**	**Links to Scientists?**	**Links with other subjects?**	**Opportunities for pupils to apply basic skills**
<u>Light</u> Pupils should be taught to recognise that light appears to travel in straight lines.	Text- • Flowchart Science- Light.	Spring 1			English- Set of instructions for making a periscope and explain how it works
Pupils should be taught to 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.					English- Explanation how we see
Pupils should be taught to 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.					
Pupils should be taught to use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.					English- Explain how shadows are formed and why this makes them the shape of the object they have created

Curriculum enrichments (visits, visitors, themed events etc.)

- Autumn 1- RHS- Investigating Plants trip and workshop
- Autumn 2- VR Headset- Heart (AR worksheet) and Blood cells (AR worksheet)
- Summer 1- VR Headset- Animal adaptation (AR worksheet)