Our vision is for:

- A high quality Science education that inspires pupils to, and prepares them for, work in scientific industries.
- Synthesised knowledge that enables children to think critically about the world around them and solve problems that are yet to be discovered.

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
		States of Matter. EDF Power Station Use of data loggers Why can't we sit on a cloud?	Plants Hawthorn, sweet pea, red campion Where have all the tulips gone?	Animals including humans You are going on a six month journey aboard a sailing ship in the 1800s. How might this affect your health? Link to naval ships like HMS Trincomalee (docked at the Naval Museum) RHE: what constitutes a healthy diet (including understanding calories and nutritional content) the characteristics of a poor diet & risks associated with unhealthy eating (including obesity/tooth decay) and other behaviours (impact of alcohol on diet or health)	States of matter – changes of state. The Gill Why does my picture disappear when I paint it on the yard? What are the droplets on the outside of a cold can of coke?	Sound # How do I hear my favourite music? People Who Inspire Us: Dame Evelyn Glennie	Light Miss Pickles is in a dark room. She can hear properly and her eyesight is perfect but she can't see the person making a noise. Why not?
Cycle A	Topic	Scrumdidlyumptious	Misty Mountain Sierra	The Island of the Stag – functions of the body (healthy diet)	Flow	Raiders and Traders	(Gods and Mortals)
	Scientific Enquiry	• To be able to ask relevant questions and use different types of scientific enquiries to answer them • To be able to set up simple practical enquiries, comparative and fair tests • To make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • To gather, record, classify and present data in a variety of ways to help in answering questions • To be able to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • To be able to report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • To be able to use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • To be able to identify differences, similarities or changes related to simple scientific ideas and processes • To be able to use straightforward scientific evidence to answer questions or to support their findings					
	Year 3	Know the properties of solid state, liquid state and gas state. Be able to name changes that are reversible and irreversible	Describe the functions of different flowering plants: roots, stem, 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	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. Food groups and the contribution they make to our health. Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	What is evaporation and condensation? Where is it in the water cycle?	Identify how sounds are made, associating some of them with something vibrating Recognise that vibrations from sound travels through a medium to the ear. Find patterns between pitch of a sound and features of the object that produced it. Find patterns between the volume of the sound and the strength of the vibration that produced it. Recognise that sound gets fainter as the distance from the sound source increases.	Recognise that they need light in order to see things and that dark is the absence of light. Notice that light is reflected from surfaces Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. Recognise that shadows are formed when the light from a light source is blocked by an opaque object Find patterns in the way that the size of shadows change.

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	Year 4	Compare and group materials together according to whether they are in the solid state, liquid state or gas state. Observe that some materials change state when they are heated or cooled and measure or research the temperature at which this happens.	Describe the functions of different flowering plants: roots – capillary roots and trunk roots, stem, leaves, bud and sepal 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	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. Food groups and the contribution they make to our health. Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature	Identify how sounds are made, associating some of them with something vibrating Recognise that vibrations from sound travels through a medium to the ear. Find patterns between pitch of a sound and features of the object that produced it. Find patterns between the volume of the sound and the strength of the vibration that produced it. Recognise that sound gets fainter as the distance from the sound source increases.	Recognise that they need light in order to see things and that dark is the absence of light. Notice that light is reflected from surfaces Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. Recognise that shadows are formed when the light from a light source is blocked by an opaque object Find patterns in the way that the size of shadows change. To be able to draw and label an accurate light diagram with source, reflection and receiver (arrow heads to point in the correct direction)
		Forces and Magnets How can we use magnets? Shipping containers – making your own magnets and compass	Animals including humans – digestive system and teeth RHE: to know about dental health and the benefits of good oral hygiene and dental flossing, including regular check ups at the dentist	Animals including humans – food chains – classification keys	Plants - requirements and how water is transported Cycle B Nature Knowledge – plant, tree, herb	Rocks and soil Local farming and soil types	Electricity
Cycle B	Topic	I Am Warrior Miss Pickles was tidying her top drawer and spilt all the contents on the floor. The staples, blu tac, sellotape etc were all mixed up . How could she separate them? Why did the land on the floor?	Bottoms, burps and bile Significant Individual: Marie Curie Alice wondered how the Mad Hatter's body digested all of the cake and sandwiches he continuously ate. Can you explain?	Predator What would happen if wolves became extinct in Yellowstone Park?	(Predator) Why don't plants grow everywhere?	Tremors	Road Trip USA
	Scientific Enquiry	• To be able to ask relevant questions and use different types of scientific enquiries to answer them • To be able to set up simple practical enquiries, comparative and fair tests • To make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • To gather, record, classify and present data in a variety of ways to help in answering questions • To be able to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • To be able to report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • To be able to use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • To be able to identify differences, similarities or changes related to simple scientific ideas and processes To be able to use straightforward scientific evidence to answer questions or to support their findings					

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	Year 3	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, depending on which poles are facing.	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.	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.	Compare and group together different kinds of rocks based on their appearance and simple physical properties Describe in simple terms how fossils are formed when things that have lived there are trapped within rock Recognise that soils are made from rocks and organic matter	Identify common appliances that run on electricity Complete 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.
	Year 4	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, depending on which poles are facing.	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	Construct and interpret a variety of food chains, identifying producers, predators and prey.	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.	Compare and group materials together according to whether they are in the solid state, liquid state or gas state with reference to earth matter. Observe that some materials change state when they are heated or cooled and measure or research the temperature at which this happens (e.g. geothermic, igneous rocks etc)	Identify common appliances that run on electricity Complete 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.

Programme of study is not differentiated where year groups will only meet a subject matter once.