Woodlands Park Primary – Science Curriculum Map

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Foundation Stage	**30 – 50 months** Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world.	**30 – 50 months** Remembers and talks about significant events in their own experience.	**Space** Looks closely at similarities, differences, patterns and change.	**40 – 60 months** Looks closely at similarities, differences, patterns and change.	**Understanding the world** **Natural world** • Explore the natural world around them making observation and drawing picture of animals and plants. • Know some similarities and differences between the natural world around them and contrasting environments drawing upon their experiences and what has been read in class. • Understands some important processes and changes in the natural world around them induding the seasons and changing states of matter.	**Understanding the world** **Natural world** • Explore the natural world around them making observation and drawing picture of animals and plants. • Know some similarities and differences between the natural world around them and contrasting environments drawing upon their experiences and what has been read in class. • Understands some important processes and changes in the natural world around them induding the seasons and changing states of matter.
Year 1	Living things ♣ identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense ♣ describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	**Celebrations** ♣ 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.	Blast Off ♣ observe changes across the four seasons ♣ observe and describe weather associated with the seasons and how day length varies.	**ISpy Spring Time** Identify and describe the basic structure of a variety of common flowering plants, including trees.	Underwater explorers ♣ 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	Into the woods ♣ identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
Year 2	**Unique You and Marvellous Me** • To know what animals including humans need to survive. • To understand the life cycle of a human and what we can do at each stage (baby, toddler, child and adult). • Perform simple tests and observe what happens to living things (plants) in different conditions. • Predict what could happen to other living things using our findings.		**Ready Steady Go!** • Name materials and identify their properties. • Know what materials objects are made from and suggest why these are suitable. • Gather and record data (about insulators). • Use observations to answer a question.		**Express Yourself** • 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	**Safari Adventures** • Explore and compare the differences between things that are living, dead, and things that have never been alive • Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other • Identify and name a variety of plants and animals in their habitats, including microhabitats • Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.
Year 3	**Forces** • Compare how things move on different surfaces • Notice that some forces need contact between two objects, but	**Magnets** • Observe how magnets attract or repel each other and attract some materials and not others	**Stone Age - Rocks (Kent's Cavern Trip)** • Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties	**Light** • Recognise that they need light in order to see things and that dark is the absence of light	**Plants** • Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers	**Amazing bodies** • identify that animals, including humans, need the right types and amount of nutrition,

	magnetic forces can act at a distance. • Asking relevant questions and using different types of scientific enquiries to answer them. • Setting up simple practical enquiries, comparative and fair tests. • Using straightforward scientific evidence to answer questions or to support their findings.	• 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 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.	• 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.	• 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.	• 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.
Year 4	**(Caribbean)** **Animals Including Humans** • Describe the simple functions of the basic parts of the digestive system in humans. • Pupils should be introduced to the main body parts associated with the digestive system, for example, mouth, tongue, teeth, oesophagus, stomach and small and large intestine and explore questions that help them to understand their special functions.	**(Arctic)** **States of Matter** • Compare and group materials together, according to whether they are solids, liquids or gases. • Asking relevant questions and using different types of scientific enquiries to answer them. • Setting up simple practical enquiries, comparative and fair tests. • Using straightforward scientific evidence to answer questions or to support their findings. • 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.	**(Greeks)** **Electricity (2022 – Covering Rocks & Soils)** • 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. • Asking relevant questions and using different types of scientific enquiries to answer them. • Setting up simple practical enquiries, comparative and fair tests. • Using straightforward scientific evidence to answer questions or to support their findings.	**(Romans – 2022 continuing Greeks)** **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.	**(Rainforests)** **Living Things and Habitats (Eden Trip)** • 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.	**(Health & Nutrition)** **Animals Including 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. • Asking relevant questions and using different types of scientific enquiries to answer them. • Setting up simple practical enquiries, comparative and fair tests. • Pupils might work scientifically by: comparing the teeth of carnivores and herbivores, and suggesting reasons for differences; finding out what damages teeth and how to look after them. They might draw and discuss their ideas about the digestive system and compare them with models or images. • Using straightforward scientific evidence to answer questions or to support their findings. •
Year 5		**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.	**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 microorganisms, plants and animals. • Give reasons for classifying plants and animals based on specific characteristics. • Life cycles of birds.	**Living things and their habitats** • Describe the life process of reproduction in some plants and animals. • Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.	**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.	**Properties and changes of material** (New topic to add to current provision) • Setting up simple practical enquiries, comparative and fair tests. • 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.

		• Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.	• Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. • Identifying differences, similarities or changes related to simple scientific ideas and processes.			• 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.
Year 6	**<u>Evolution and Inheritance</u>** • Identifying scientific evidence that has been used to support or refute ideas or arguments. • 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.		**<u>Earth and Space</u>** • 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. • Using straightforward scientific evidence to answer questions or to support their findings.	**<u>Forces - Didn't teach this term</u>** • 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. • Data handling. • Asking relevant questions and using different types of scientific enquiries to answer them.	**<u>Light</u>** • Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. • 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.	**<u>Animals including humans</u>** • Describe the changes as humans develop to old age.