Woodnewton a learning community **Science Progression Document**

FS1 & FS2
Early Learning Goal relating to Science At the end of Reception, children are assessed against the Early Learning Goals. For Science these relate to Understanding the World. Children will be able to confidently talk about the world around them by describing what they see, hear and feel outside. They will also understand the effects of seasonal changes and how their immediate environment differs from other environments in the natural world.

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Childhood	Childhood	Bright Lights, Big City	Bright Lights, Big City	School Days	Rio de Vida
Seasonal Change • I can observe changes across the four seasons (Spring, Summer, Autumn and Winter). **Plants** • I can identify and describe the basic structure of variety of common flowering plants, including trees	**Seasonal Change** • I can observe changes across the four seasons (Spring, Summer, Autumn and Winter). **Animals including humans** • I can identify, name, draw and label the basic parts of the human body Head, neck, shoulders, arms, elbows, hands, fingers, chest stomach, back, legs, knees, ankles, feet, toes and say which part of the body is associated with each sense. • I can identify and name a variety of common animals including fish, amphibians, reptiles, mammals and birds	**Seasonal Change** • I can observe changes across the four seasons (Spring, Summer, Autumn and Winter). **Everyday materials** • I can distinguish between an object and the materials from which it is made • I can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock • I can describe the simple physical properties of everyday materials. The properties investigated hard/soft, stretchy/not stretchy, shiny/dull, rough/smooth, bendy/not bendy,	**Seasonal Change** • I can observe changes across the four seasons (Spring, Summer, Autumn and Winter). **Everyday materials** • I can distinguish between an object and the materials from which it is made • I can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock • I can describe the simple physical properties of everyday materials. The properties investigated hard/soft, stretchy/not stretchy, shiny/dull, rough/smooth, bendy/not bendy,	**Seasonal Change** • I can observe changes across the four seasons (Spring, Summer, Autumn and Winter). **Plants** • I can identify and name a variety of common wild and garden plants such as Daisy, dandelion, clover, buttercup, groundsel, speedwell – those growing in our outdoor environment. (Planning to plant wild flower seeds in wild meadow area, spring bulbs and vegetables in planters so this list will vary). This includes deciduous and evergreen trees • I can identify and describe the basic	**Seasonal Change** • I can observe changes across the four seasons (Spring, Summer, Autumn and Winter). **Plants** • I can identify and name a variety of common wild and garden plants such as Daisy, dandelion, clover, buttercup, groundsel, speedwell – those growing in our outdoor environment. (Planning to plant wild flower seeds in wild meadow area, spring bulbs and vegetables in planters so this list will vary). This includes deciduous and evergreen trees • I can identify and describe the basic

		transparent/not transparent (opaque), Sticky/not sticky. • I can compare and group together a variety of everyday materials on the basis of their simple physical properties	transparent/not transparent (opaque), Sticky/not sticky. • I can compare and group together a variety of everyday materials on the basis of their simple physical properties	structure of variety of common flowering plants, including trees	structure of variety of common flowering plants, including trees **Animals including humans** • I can identify and name a variety of common animals including fish, amphibians, reptiles, mammals and birds • I can identify and name a variety of common animals that are carnivores, herbivores and omnivores I can describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, mammals and birds including pets)

Year 2					
Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Coastline	Coastline	Magnificent Monarchs	Magnificent Monarchs	Movers and Shakers	Land Ahoy
Uses of everyday materials • I can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses • I can find out how the shapes of solid objects made from some materials including playdough and clay can be changed by squashing, bending, twisting and stretching.	**Uses of everyday materials** • I can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses • shapes of solid objects made from some materials including playdough and clay can be changed by squashing, bending, twisting and stretching.	**Animals including humans** • I can notice that animals, including humans, have offspring which grow into adults • I can find out about and describe the basic needs of animals, including humans, for survival (water, food and air) • I can describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	**Animals including humans** • I can notice that animals, including humans, have offspring which grow into adults • I can 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** • I can observe and describe how seeds and bulbs grow into mature plants • I can find out and describe how plants need water, light and a suitable temperature to grow and stay healthy by looking at the germination of sunflower seeds	**Living things and their habitats** • I can explore and compare the differences between things that are living, dead, and things that have never been alive • I can 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 • I can identify and name animals in their habitats, including micro-habitats • I can 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					
Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Gods and Mortals	Gods and Mortals	Rocks, Relics & Rumbles	Through The Ages	Through the Ages	Flow
Animals including humans • I can 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 • I can identify that humans and some other animals including mammals and invertebrates have skeletons and muscles for support, protection and movement	**Light** • I know we need light in order to see things and that dark is the absence of light • I notice that light is reflected from surfaces • I know light from the sun can be dangerous and that there are ways to protect our eyes • I know shadows are formed when the light from a light source is blocked by an opaque object • I can find patterns in the way that the size of shadows change	**Rocks** • I can compare and group together different kinds of rocks on the basis of their appearance and simple physical properties • I can describe in simple terms how fossils are formed when things that have lived are trapped within rock • I know soils are made from rocks and organic matter	**Plants** • I can identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers • I can 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 by comparing the germination condition for cress and runner beans • I can investigate the way in which water is transported within plants by looking at the transportation of coloured water through a celery/carnation stem • I can explore the part that flowers play in the life cycle of flowering	**Forces and magnets** • I can compare how things move on different surfaces including those that are rough, smooth or shiny. • I can notice that some forces need contact between two objects, but magnetic forces can act at a distance • I can observe how magnets attract or repel each other and attract some materials and not others • I can 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 including metallic and non-metallic objects. • I can describe magnets as having two poles	**Forces and magnets** • I can compare how things move on different surfaces including those that are rough, smooth or shiny. • I can notice that some forces need contact between two objects, but magnetic forces can act at a distance • I can observe how magnets attract or repel each other and attract some materials and not others • I can 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 including metallic and non-metallic objects. • I can describe magnets as having two poles

			plants, including pollination, seed formation and seed dispersal	• I can predict whether two magnets will attract or repel each other, depending on which poles are facing	• I can predict whether two magnets will attract or repel each other, depending on which poles are facing

Year 4					
Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Emperors & Empires	Emperors & Empires	Misty Mountain, Winding River	Misty Mountain, Winding River	Road Trip USA	Invasion
Animals including humans • I can describe the simple functions of the basic parts of the digestive system including the mouth, oesphagus, stomach, intestines, pancreas and liver in humans • I can identify the different types of teeth in humans and their simple functions • I can construct and interpret a variety of food chains, identifying producers, predators and prey	**States of matter** • I can compare and group materials together, according to whether they are solids, liquids or gases • I can 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) • I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature	**Electricity** • I can identify common household appliances that run on electricity • I can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers • I can 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 • I can recognise if a switch is open or closed in a circuit and associate this with whether or not a lamp lights in a simple series circuit	**Sound** • I can identify how sounds are made, associating some of them with something vibrating • I know vibrations from sounds travel through a medium to the ear • I can find patterns between the pitch of a sound and features of the object that produced it • I can find patterns between the volume of a sound and the strength of the vibrations that produced it • I know sounds get fainter as the distance from the sound source increases	**Living Things and their Habitats** • I know living things can be grouped in a variety of ways including physical or habitual characteristics • I can explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment • I know that environments can change and that this can sometimes pose dangers to living things (Link to No Mow May/wildlife areas around the school).	**Living Things and their Habitats** • I know living things can be grouped in a variety of ways including physical and habitual characteristics • I can explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment • I know that environments can change and that this can sometimes pose dangers to living things (Link to No Mow May/wildlife areas around the school).

		• I know some common conductors and insulators, and associate metals with being good conductors			

Year 5					
Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Pharaohs	Pharaohs	Brazil	Brazil	Ground breaking Greeks	Corby Local Study
Forces • I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object • I can identify the effects of air resistance, water resistance and friction, that act between moving surfaces • I can recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect	**Earth and space** • I can describe the movement of the Earth, and other planets, relative to the Sun in the solar system • I can describe the movement of the Moon relative to the Earth • I can describe the Sun, Earth and Moon as approximately spherical bodies • I can use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	**Properties and changes of materials** • I can 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 • I know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution • I can use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating	**Properties and changes of materials** • I can give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic • I can demonstrate that dissolving, mixing and changes of state are reversible changes • I can 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	**Living Things and their Habitats** • I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird • I can describe the life process of reproduction in some plants and animals	**Animals including humans** • I can describe changes as humans develop to old age

Year 6					
Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Frozen Kingdom	Frozen Kingdom	Maafa - Africa	Hola Mexico	Britain at War	Britain at War
Living Things and their Habitats • I can 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 • I can give reasons for classifying plants and animals based on specific characteristics including vertebrates, invertebrates and flowering and non – flowering plants.	**Evolution and Inheritance** • I know living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents • I can identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution • I know living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago	**Electricity** • I can associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit • I can 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 • I can use recognised symbols to represent wires, bulb, battery, motor and switch when representing a simple circuit in a diagram.	**Animals including humans** • I can identify and name the main parts of the human circulatory system such as the heart, blood vessels and blood and describe their functions. • I know the impact of diet, exercise, drugs and lifestyle on the way our bodies function • I can describe the ways in which nutrients and water are transported within animals, including humans	**Light** • I know light appears to travel in straight lines • I can 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 • I can 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 • I can use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.	**Animals including humans** • I can identify and name the main parts of the human circulatory system such as heart, blood vessels and blood and describe the functions of these. • I know impact of diet, exercise, drugs and lifestyle on the way their bodies function • I can describe the ways in which nutrients and water are transported within animals, including humans

Working Scientifically (Ongoing throughout the year)					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Asking Questions • I can ask simple questions and recognise that they can be answered in different ways		**Asking Questions** • I can ask relevant questions and use different types of scientific enquiries to answer them • I can set up simple practical enquiries, comparative and fair tests		**Asking Questions** • I can plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	
Measuring and Recording • I can observe closely, using simple equipment • I can perform simple tests • I can gather and record data to help in answering questions		**Measuring and Recording** • I can make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • I can gather, record, classify and present data in a variety of ways to help in answering questions		**Measuring and Recording** • I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	
Concluding • I can identify and classify • I can use their observations and ideas to suggest answers to questions		**Concluding** • I can identify differences, similarities or changes related to simple scientific ideas and processes		**Concluding** • I can identify scientific evidence that has been used to support or refute ideas or arguments • I can report and present findings from enquiries, including conclusions, causal relationships and	

	• I can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • I can use straightforward scientific evidence to answer questions or to support their findings	explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
	Evaluating • I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	**Evaluating** • I can use test results to make predictions to set up further comparative and fair tests