Science						
Nursery*	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Settling in/Autumn	Winter	Story telling	Spring, (baby animals, beginning of growth)	Growth and changes	Summer
Compiled from Development Matters document, and EYFS Stat FW	• Use all their senses in hands on exploration of natural materials. • Explore collections of materials with similar and/or different properties. • Talk about what they see, using a wide vocabulary • Begin to make sense of their own life-story and family's history	• Talk about what they see, using a wide vocabulary • Explore and talk about different forces they can see and feel; floating and sinking • Talk about the differences between materials and changes they notice (Melting/freezing)	• Know that there are different countries in the world and talk about the differences they have experienced or seen in photos.(Through celebrations)	• Begin to make sense of their own life-story and family's history. • Explore collections of materials with similar and/or different properties. • Talk about what they see, using a wide vocabulary • Begin to understand the need to respect and care for the natural environment and all living things. • Talk about what they see, using a wide vocabulary	• Plant seeds and care for growing plants. • Understand the key features of the life cycle of a plant and an animal. • Begin to understand the need to respect and care for the natural environment and all living things. • Explore collections of materials with similar and/or different properties. • Talk about what they see, using a wide vocabulary	• Show interest in different occupations. • Talk about the differences between materials and changes they notice (Melting/freezing) • Explore and talk about different forces they can feel – Magnets pirate treasure?
*This is a basic outline of planned activities to ensure coverage, most learning is planned in the moment and around children's interests. Celebrations based on what is important to our children are also covered.						

Reception	Autumn 1	Spring 1	Spring 2	Summer 1	Summer 2
Understanding the world Enriching and widening children's vocabulary will support later reading comprehension.	All about me unique, special, body part names, skeleton celebrate, religion, feelings, emotions, change, family, past, present, baby, toddler, teenager, adult family, animal, human, face, hair, head, shoulders, knees, toes, eyes, ears, mouth, nose • Identifying their family. Commenting on photos of their family; naming who they can see and of what relation they are to them. • Can talk about what they do with their family and places they have been with their family. Can draw similarities and make comparisons between other families. Name and describe people who are familiar to them. • Environments – Features of local environment Maps of local area Comparing places on Google Earth – how are they similar/different	Food Healthy, unhealthy, exercise, diet, energy, growth, chef, cook • Children to be able to talk about favourite foods and any traditions involving foods • To be able to sort healthy and unhealthy food explaining why • Know where food comes from and to be able to sort food into categories • Know the features of a healthy life style ○	Our Natural World ocean, land, country, continent, animal, habitat, environment, recycle, nature, plastic, pollution touch, smell, hear, see, environment, recycle, season, spring, summer, autumn, winter, weather, day, night, **nocturnal** • Introduce the children to recycling and how it can take care of our world. Look at what rubbish can do to our environment and animals. Create opportunities to discuss how we care for the natural world around us. • Can children make comments on the weather, culture, clothing, housing. • Change in living things • Draw children's attention to the immediate environment, introducing and modelling new vocabulary where appropriate. • Encourage interactions with the outdoors to foster curiosity and give children freedom to touch, smell and hear the natural world around them during hands-on experiences. • Look for children incorporating their understanding of the seasons and weather in their play. • Compare animals from different countries • Nocturnal Animals Making sense of different environments and habitats		Journeys Journey, travel, solar system, planet names, star, transport, machine, land, air, road, sea Sink, float, metallic, non-metallic, transport, space, Earth • Materials: Floating / Sinking – boat building Metallic / non-metallic objects • Seasides long ago Share non-fiction texts that offer an insight into contrasting environments. • Discuss how they got to school and what mode of transport they used. Introduce the children to a range of transport and where they can be found. • How has transport changed from the past • Discuss inventors of different modes of transport • Encourage the children to use navigational language.

						• Introduce the children to NASA and America. • Introduce children to significant figures who have been to space and begin to understand that these events happened before they were born.

Scientific Enquiry Skills:
1. Observing changes over time **2**. Noticing patterns **3**.Grouping and classifying things (noticing similarities and differences) **4**.Comparative and fair testing **5**.Finding things out using secondary sources of information

Year 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Senses – **Body Parts** head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth I know how to label all my body parts I know we have five senses I know which body part is used for each sense I know what my senses do SES: 2, 3, 4, 5	Seasonal Changes season, autumn, winter, spring, summer, day, weather, sun I know that the length of daylight is shorter in winter and longer in summer I know that there are four seasons I know that some trees lose their leaves in autumn I know that evergreen trees and plants don't lose their leaves in winter I know that deciduous trees and plants lose their leaves in winter Materials	Animals animal, fish, amphibian, reptile, bird, mammal, carnivore, herbivore, omnivore, pet I know that some body parts are specific to certain animals I know that animals can be sorted into different groups I know the different animal classifications (fish, birds, amphibians, reptiles, mammals) I know that a carnivore only eats meat I know that a herbivore only eats plants I know that an omnivore eats meat and plants SES: 2, 3, 5		Seasonal Changes - **Plants** deciduous, evergreen, tree, plant, leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem I know the different parts of a plant and can label these I know that buds form on trees and plants in spring I know the names of some wild and garden plants. SES 1, 2, 3, 5	Materials hard/soft, stretchy/stiff, shiny/dull, rough/smooth, bendy/not bendy, waterproof/not waterproof, absorbent/not absorbent, opaque/transparent I know the names of everyday materials I know that I can sort materials based on their properties I know that materials are chosen for a job based on their properties I know how to plan a fair test SES: 2, 3, 4

		material, wood, plastic, glass, metal, water, rock I know what material an object is made from. I know that some objects are made of more than one material. SES: 1, 2, 4			

Scientific Enquiry Skills:
1. Observing changes over time **2**.Noticing patterns **3**.Grouping and classifying things (noticing similarities and differences) **4**.Comparative and fair testing **5**.Finding things out using secondary sources of information

Year 2	Autumn	Spring 1	Spring 2	Summer
	Living things and their habitats living, dead, never been alive, habitat, micro-habitat, plant, animals, food chain, source I know that I can compare different objects using alive, dead and never been alive I know that habitats can be classified by what is in them I know that animals might have special adaptations to help them live in different habitats (Y6) I know animals in the wild are part of a food chain I know that a food chain starts with a producer and ends with a top predator SES: 2, 3, 5	**Use of everyday materials** suitability, wood, metal, plastic, glass, brick, rock, paper, cardboard, squashing, bending, twisting, stretching I know that different materials have different properties I know the materials can be changed by manipulating them in different ways I know that materials are suited to different jobs, e.g. paper is not a good material for shoes I know that John Dunlop invented the air-filled rubber tyre I know Charles Macintosh invented waterproof fabrics SES: 2,3,4,5	Plants plants, seeds, bulbs, mature, water, light, temperature, grow, healthy I know that seeds and bulbs need the right conditions to grow and stay healthy I know that plants are living things I know that plants can be called crops if they are eaten by humans I know that the life cycle of a plant depends on seeds being dispersed SES: 1,2,3,4,5	Animals including humans animals, humans, offspring, adult, survival, water, food, air, exercise, food, hygiene I know that animals and human babies grow I know that a baby animal needs air, food and water I know what a human baby needs to stay alive I know that there are healthy and unhealthy diets I know how and why I should keep myself clean SES: 2,3,5

Scientific Enquiry Skills: **1**. Observing changes over time **2**.Noticing patterns **3**.Grouping and classifying things (noticing similarities and differences) **4**.Comparative and fair testing **5**.Finding things out using secondary sources of information					
Year 3	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer**
	Magnets and Forces Forces, surface, magnet, magnetic, poles, repel, attract I know that magnets have a north and south pole I know that opposite ends of a magnet attract I know that like ends of a magnet repel I know that some metals are attracted to magnets I know that some forces push and some pull SES: 2,3,4,5	Electricity electricity, generate, renewable, appliances, battery, circuit, insulate, conduct I know that large appliances need mains electricity I know that electricity can be generated by the sun and wind I know that plastic is an insulator I know that electricity will travel through a conductor SES: 2,3,4,5	Light and Dark Light, light source, dark, reflect, ray, shadow, opaque I know that light comes from several different sources I know that light can be reflected I know that shadows are caused by solid objects blocking light I know that shiny surfaces reflect light better I know that looking directly at the sun can damage my retina SES: 1,2,3,4,5	Human Systems Healthy, nutrients, energy, skeleton, muscles, tendons, joints I know that animals need nutrients to grow and live. I know that humans do not make their own food I know that humans have skeletons to support and protect them I know that humans and animals have different types of skeletons I know that muscles contract and relax to help us move SES: 2,3,4,5	Plants evaporation, fertilisation, pollination, pollinator, germination, seed dispersal I know that roots anchor the plant to the ground and transport water and nutrients I know that plants need sunlight to make their own food I know that water is transported around the plant by the stem I know that leaves are used by the plant to expel oxygen I know that plants have male and female parts I know that there are 5 key stages in a plants life cycle I know that some plants produce flowers to help with pollination by insects SES: 1,2,3,4,5
Scientific Enquiry Skills: **1**. Observing changes over time **2**.Noticing patterns **3**.Grouping and classifying things (noticing similarities and differences) **4**.Comparative and fair testing **5**.Finding things out using secondary sources of information					

Year 4	**Autumn 1**	**Autumn 2**	**Spring**	**Summer 1**	**Summer 2**
	Sound	Electricity	States of Matter	Human Systems	Living things and their habitats

	vibration, sound wave, volume, pitch, ear, particles, soundproof, vacuum, eardrum I know that travels in waves I know that sound travels through liquids, solids and gases I know that sounds are made by vibrations SES: 2,3,4,5	circuit diagram, symbol, voltage, cell/battery, resistance, current, I know that a circuit must be complete for electricity to flow I know that electricity runs from negative to positive in a circuit I know that a battery is a source of stored electricity I know that the unit of measurement, volts, is named after the scientist Volta. SES: 2,4,5	states, matter, solids, liquids, gases, water vapour, melt, freeze, evaporate, condense, precipitation I know that water changes states at 100 and 0 degrees centigrade I know the three states of matter are solids, liquids and gases I know that evaporation and condensation are key stages of the water cycle I know that particles are tightly grouped in solids and less so in liquids and gases SES: 1,2,3,4	digest, esophagus, stomach, small intestine, large intestine, rectum I know that chewing is part of the digestion process I know that nutrients are stored in different foods I know that water and nutrients are absorbed through the small and large intestines SES: 3,4,5	organisms, environment, endangered, species, extinct, specimen, characteristics I know plants and animals can be grouped according to characteristics I know vertebrates have a spine and invertebrates don't I know an environment can contain more than one habitat and that humans can have positive and negative impacts on them SES: 1,2,3,4,5

Scientific Enquiry Skills:
1. Observing changes over time **2**.Noticing patterns **3**.Grouping and classifying things (noticing similarities and differences) **4**.Comparative and fair testing **5**.Finding things out using secondary sources of information

Year 5	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer
	Properties and changes in materials Soluble, solvent, reversible, dissolve, irreversible, filter variables, mixture I know that some changes are irreversible I know that irreversible changes	Forces forces, gravity, gravitational pull, weight, mass, air resistance, water resistance, buoyancy, streamlined, mechanism I know that weight is the measurement of gravity acting on a subject	Rocks and soils Igneous, sedimentary, metamorphic, magma, lava, permeable, impermeable, fossilisation, erosion I know the three different types of rocks are igneous, sedimentary, metamorphic.	Living things and their habitats asexual reproduction, fertilise, gestation, life cycle, pollination, sexual I know that plants can reproduce sexually and asexually	Animals including humans (including RSE) fertilization, gestation, reproduce, adolescence, puberty, menstruation, adulthood, life expectancy, metamorphosis I know that birds, mammals, insects and amphibians share some similarities in their life cycles I know that there are 6 stages to human development

	produce new materials I know that independent variables need to be controlled to ensure a fair test I know that some substances dissolve to make a solution I know that water is known as the universal solvent SES: 1, 3, 4, 5	I know that mass is the amount of material an item is made of I know that friction slows an object I know that having a larger surface area increases the effects of air resistance I know that streamlined objects are affected less by water resistance and air resistance SES: 2,3,4,5	I know soils are formed from different types of matter I know that some rocks are natural and some are man made I know that fossils form in different ways I know there are different processes which make different types of fossils I know that Mary Anning was an important palaeontologist SES: 1, 2, 3, 4, 5	I know that plants use flowers to attract pollinating insects I know that Jane Corden was an influential botanist SES: 1,2,3,5	I know that hormones have physical, mental and emotional influences during puberty I know that boys produce semen I know that girls produce an egg I know that humans have a gestation period of nine months SES: 1, 2, 5

Scientific Enquiry Types:
1. Observing changes over time **2**.Noticing patterns **3**.Grouping and classifying things (noticing similarities and differences) **4**.Comparative and fair testing **5**.Finding things out using secondary sources of information

Year 6	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Light source, prism, spectrum, translucent, transparent, pupil, retina I know that light travels in straight lines I know that light travels from a	Habitats – Classification species, micro-organisms, characteristics, taxonomy, classify, bacteria, microscope, classify I know that Carl Linnaeus compiled a scientific classification system	Earth and Space sun, star, moon, planet, sphere, spherical bodies, satellite, orbit, rotate, axis I know that the Earth and other planets orbit the Sun I know that the moon orbits Earth I know that night and day happen due to the Earth's rotation on its axis I know that it takes 365.25 days for the Earth to orbit the Sun		Evolution and inheritance offspring, inheritance, variations, characteristics, adaptation, habitat, environment, evolution, natural selection, adaptive traits, inherited traits I know that Charles Darwin was the first scientist to explain the ideas of evolution.	Human Systems blood vessels, heart, circulatory system, oxygenated, deoxygenated, drug, alcohol, nutrients I know that humans have an internal skeleton

	source to an object to the eye. I know that visible light is made up of a spectrum of colours SES: 2,3,4,5	I know that all animals and plants can be classified into groups based on observable characteristics I know that some micro-organisms can be harmful or helpful to humans SES: 1,2,3,4,5	I know there are eight planets in our solar system I know the order of the phases of the moon SES: 1,2,3,4,5	I know that evolution occurs over thousands of years I know that humans evolved from apes I know that adaptations are random mutations I know that physical traits are passes from one generation to the next through genes SES: 2,3,5	I know that muscles and attached to bone with tendons I know that the body needs nutrients to survive I know that exercise and diet directly impact on health I know that the heart is a muscle that pumps blood around the body I know that arteries carry oxygenated blood I know that veins carry deoxygenated blood SES: 2,3,4,5