EYFS -Reception

Science knowledge and skills Progression

People who help us – Humans		
Prior Learning	Key Learning Now	Future Learning
• Use all their senses in hands-on exploration of natural materials. (Nursery) • Begin to make sense of their own life-story and family's history. (Nursery) • Understand the key features of the life cycle of a plant and an animal. (Nursery) • Begin to understand the need to respect and care for the natural environment and all living things. (Nursery)	Understanding the World: Talk about members of their immediate family and community. Name and describe people who are familiar to them. Links to other areas of the curriculum: Personal, Social and Emotional Development • See themselves as a valuable individual. • Manage their own needs. Physical Development • Know and talk about the different factors that support their overall health and wellbeing: regular physical activity; healthy eating; toothbrushing; sensible amounts of 'screen time'; having a good sleep routine; being a safe pedestrian. • Further develop the skills they need to manage the school day successfully: lining up and queuing; mealtimes; personal hygiene. Mathematics • Compare length, weight and capacity.	• Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. (Y1 – Animals, including humans)

Key Learning	Skills	Possible evidence
- Know the names of different body parts - Know different genders - Know how we are similar and different - Understand how to be healthy (hygiene, physical activity and sleep).	**Encouraging scientific enquiry** **Classification** • Sort images of people according to their characteristics. Researching using secondary sources • Find out information from visitors (dentist, nurse etc.). **Pattern seeking** • Are taller children faster? • Are taller children stronger?	**What adults might do?** Encourage children to look at photographs of different people and to describe them. Encourage children to describe their friends and family using photographs to help them. Encourage children to talk about how their friends and family are the same and different. Encourage children to compare themselves to characters in books. Encourage children to compare their hand, foot and fingerprints with their friends. Encourage children to talk about the people who look after them, both within their family and the wider community e.g. teachers, doctors, dentists etc. Encourage children to ask a dentist, nurse, meal supervisor/school cook, road crossing supervisor etc. questions. **What adults might provide?** Talking about themselves, friends, family and community using photographs Using mirrors to look at their faces • Creating pictures or collages of themselves, friends, family and community Making hand and footprints using paint Making fingerprints using ink pads Using a 'magic' mirror which shows everything about them and getting children to describe themselves and how they are special Sharing books about different types of families

Key vocabulary:

Model and encourage children to use vocabulary such as:
• hair (black, brown, dark, light, blonde, ginger, grey, white, long, short, straight, curly), eyes (blue, brown, green, grey), skin (black, brown, white), big/tall, small/short, bigger/smaller, baby, toddler, child, adult, old person, old, young, brother, sister, mother, father, aunt, uncle, grandmother, grandfather, cousin, friend, family, boy, girl, man, woman
Expose children to supplementary vocabulary such as:
• bald, elderly, wrinkles, male, female, freckles

Spring has Sprung – Living things		
Prior Learning	Key Learning Now	Future Learning
• Understand the key features of the life cycle of a plant and an animal. (Nursery) • Begin to understand the need to respect and care for the natural environment and all living things. (Nursery)	**Understanding the World: The Natural World** Explore the natural world around them, making observations and drawing pictures of animals and plants; 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;	• Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. (Y1 – Animals, including humans) • Identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Y1 – Animals, including humans) • Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). (Y1 – Animals, including humans)

Key Learning	Skills	Possible evidence
- Know where a chick comes from - Know names of common animals and where they live - Know the similarities and differences between different habitats - Know the life cycle of some common animals (chicks, caterpillars, frogs) - Know that a chick is a bird and why	**Encouraging scientific enquiry** **Classification** Sort animals according to where they live. **Researching using secondary sources** Learn how animals from a different habitat are cared for. Learn about animals in a different habitat.	**What adults might do?** Encourage children to name and describe animals that live in different habitats while reading books, watching videos, looking at pictures or playing matching games. Encourage children to ask questions about different animals and the habitats they live in. Encourage children to describe habitats. Encourage children to talk about how animals are cared for when they live outside their natural habitat. Encourage children to move like different animals **What adults might provide?** Sharing books about animals in the local area and animals in other countries e.g. jungle, polar regions, desert, ocean Looking at pictures of animals in different habitats Exploring other animals born from eggs (turtles, snakes (some), crocodiles) Watching videos of animals in different habitats Playing games involving matching animals to their habitats • Playing with small world animals in different habitats Visiting the zoo, focusing on animals that live in different habitats Caring for pets from a different habitat e.g. tropical fish Creating pictures of animals in their habitats Pretending to be animals Naming and describing animals they see in books, pictures, videos or while on a trip Describing different habitats

Key vocabulary:

Model and encourage children to use vocabulary such as:
• names of animals, live, on land, in water, jungle, desert, North Pole, South Pole, sea, hot, cold, wet, dry, snow, ice

Expose children to supplementary vocabulary such as:
• environment, polar regions, ocean, camouflage

Our Changing World - Seasonal Changes		
Prior Learning	Key Learning Now	Future Learning
• Understand the key features of the life cycle of a plant and an animal. (Nursery – Plants & Animals, excluding humans)	Understanding the World: • Explore the natural world around them. • Describe what they see, hear and feel whilst outside. • Understand the effect of changing seasons on the natural world around them.	• Observe changes across the four seasons. (Y1 – Seasonal changes) • Observe and describe weather associated with the seasons and how day length varies. (Y1 – Seasonal changes)

Key Learning	Skills	Possible evidence
- Know that the weather changes throughout the year - Know there are different seasons	**Encouraging scientific enquiry** **Classification** Which clothes are suitable for each season? **Observing over time** How does a puddle change over time? How does a snowman change as it melts? How does the natural world change with the seasons? **Researching using secondary sources** Find out about how animals behave in different seasons. Find out about the weather and seasons.	**What adults might do?** Encourage children to talk about how they feel in different types of weather/seasons. Encourage children to talk about the clothes they wear in different seasons and why. Encourage children to talk about the weather throughout the year. Encourage children to find shelter or make shelters to keep themselves dry in the rain or shade themselves when it is sunny. Encourage children to talk about how the ground changes when it rains. Encourage children to measure the size of puddles using their feet after it rains. Encourage children to talk about how puddles change over time after it rains. Encourage children to talk about the animals and plants that they find in different seasons. Encourage children to ask questions about the weather and seasonal changes. **What adults might provide?** Playing in the rain and snow Drawing around puddles Catching rain and hail in buckets Catching snowflakes on frozen black paper and looking at them with magnifying glasses or an app on a tablet Making icicles Using scarves or pinwheels to explore the strength and direction of the wind Looking at photographs of different seasons and types of weather Sharing books about different seasons and types of weather

Key vocabulary:

Model and encourage children to use vocabulary such as:
• spring, summer, autumn, winter, seasons, sunny, cloudy, hot, warm, cold, shower, raining, storm, thunder, lightning, hail, sleet, snow, icy, frost, puddles, windy, rainbow, animals, young, plants, flowers

Expose children to supplementary vocabulary such as:
• hibernate, migrate, snowflake

Materials		
Prior Learning	Key Learning Now	Future Learning
Use all their senses in hands-on exploration of natural materials. (Nursery) Explore collections of materials with similar and/or different properties. (Nursery) Talk about the differences between materials and changes they notice. (Nursery)	Understanding the World: Explore the natural world around them. Describe what they see, hear and feel whilst outside.	Distinguish between an object and the material from which it is made. (Y1 – Everyday materials) Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. (Y1 – Everyday materials) Describe the simple physical properties of a variety of everyday materials. (Y1 – Everyday materials) Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Y1 – Everyday materials)

Key Learning	Skills	Possible evidence
- Know materials can change - Know names of common materials - Know some materials float - Know some names of materials that are suitable for certain objects - Know words to describe materials	**Encouraging scientific enquiry** **Comparative testing** How quickly do ice cubes melt in different areas of the playground? How are pizza bases different when made with different flours? What materials are best for staying dry? **Observing over time** How does the block of ice change over time? How does a snowman change over time? How does cake mixture/bread dough change as it is cook **Pattern Seeking** What floats?	**What adults might do?** Encourage children to talk about the natural materials they explore, using their senses. Encourage children to talk about the materials they are using when making pictures. Encourage children to choose from a range of materials, including natural materials, when making models and identify a key property that was required. Encourage children to reuse materials and talk about what can be recycled to care for the natural world. Support children to list the properties the material has. Encourage children to test that their model is fit for purpose and that the materials are suitable. Encourage children to compare and describe how materials change over time and in different conditions. Encourage children to take photographs or draw pictures to record how materials change. Encourage children to measure how objects change when they melt. Encourage children to ask questions about materials and how they change. **What adults might provide?** **Opportunities to compare how materials change** Making popcorn in a microwave and on a fire Making pizza dough with different flours • Baking bread in different tins or for different times to compare the outcome

		Baking cupcakes and removing one after every five minutes • Choosing where to put ice cubes in the playground and observing how quickly they melt Observing how a large block of ice changes over time, using string to measure around it Putting wax crayons in different areas of the playground and observing how they change Making a snowman and observing how it changes over time Making snowballs and putting them in different parts of the playground and observing how they change over time **Opportunities to make objects from different materials, including natural materials** Making pictures using natural materials they have gathered from the environment Making dens, nests, bug hotels etc. using natural materials Making ice pictures by putting water in a shallow tray and adding natural objects gathered from the environment and then leaving them outside to freeze or putting them in the freezer Making junk models with a range of materials, including natural materials they have gathered from the environment **Opportunities to explore a range of materials in a sensory way, including natural materials** Looking for dew, ice, icicles and frost in the playground Using their senses to explore natural materials in the environment, such as stones, twigs, leaves, feathers, seeds, flowers etc. Gathering natural materials to make collections
Key vocabulary: Model and encourage children to use vocabulary such as: • ice, water, frozen, icicle, snow, melt, wet, cold, slippery, smooth, big, bigger, biggest, smaller, smaller, smallest, hard, soft, bendy, rigid, wood, plastic, paper, card, metal, strong, weak, hot, apply heat, waterproof, soggy, not waterproof, best, change, change back Expose children to supplementary vocabulary such as: • solid, liquid, gas, most suited		