Key Knowledge for subject — Science Subject Lead: Mrs Gavriluk Date: April 2023 EYFS Year B





Prior knowledge Nursery:

Natural World

- Use all their senses in hands-on exploration of natural materials. 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.

Animals including humans:

- 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.
- Talk about what they see, using a wide vocabulary.

Plants

- Most plants start growing from a seed or bulb.
- All plants need water & light to grow & survive.
- Observe plants closely through a variety of means e.g., magnifiers & photographs.
- Extend vocabulary: leaves, petals, roots, bulb, trunk, branches, stem, garden plants, wild plants, seeds.
- Use all the senses in hands-on exploration of plants.

Early Learning Goals 4.9.23

The Natural World

Children at the expected level of development will: - 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; - Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Statutory framework for the early years foundation setting 4/9/23

Understanding the World

Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension.

Year Group Expectations

Natural World

- Understand the effect of changing seasons on the natural world around them.
- Explore the natural world around them.
- Use new vocabulary in different contexts.
- Learn new vocabulary.

Animals including humans:

- Understand the key features of the life cycle of an animal.
- Be able to show care and concern for living things.
- Have some understanding of growth and change.
- Talk about things they have observed including animals.
- Observational drawings of animals

Plants

- All plants need water, light, and warmth to grow and survive.
- A seed produces roots to allow water to get into the plant and shoots to produce leaves to collects the sunlight.

Year 1 expectations

Animals including humans.

- 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.
- Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds, and mammals, including pets) Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.

Plants

- Identify and name a variety of common wild and garden plants including deciduous and evergreen trees.
- Identify and describe basic structure of a variety of common flowering plants including trees.

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Materials

- 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 Explore how things work e.g., pulleys.
- Explore & talk about different forces they can feel e.g., stretch, snap, rigid, magnetic repulsion, water pushing up when pushing a boat under it.
- Talk about the differences between materials and changes they notice e.g., cooking, melting, shadows, floating & sinking.
- Characteristics of liquids & solids e.g., cooking eggs, melting chocolate

- Extend vocabulary: blossom, buds, bulb, evergreen, deciduous.
- Describe what they see, hear & feel whilst outside.
- Name & describe some plants.
- Draw pictures of plants Understand the effect of changing seasons on the natural world around them Understand the key features of the life cycle of a plant.

Materials

- Observe & interact with natural processes, such as ice melting, a sound causing a vibration, light travelling through transparent material, an object casting a shadow, a magnet attracting an object & a boat floating on water.
- Use vocabulary to name specific features of the natural world, both natural & man-made
 Notice & discuss patterns around them.

Seasons Changes

- What happens in different seasons?
- Discuss features of the environment and how environments may vary from one another.
- Talk about the changes that each season brings in relation to their environment: the clothes they wear, the weather and the plants.

Working Scientifically

- Looks closely at similarities, differences, patterns, and change.
- Make observations and explain observations.
- Carry out observations on changes such as melting ice, floating and sinking, magnets.
- Children question why things happen having their own ideas.

Everyday Materials

- Identifying materials and comparing materials
- 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 based on their simple physical properties.

Seasons

- Observe changes across the four seasons.
- Observe and describe weather associated with the seasons and how day length varies.

Working Scientifically

- Asking simple questions and recognising that they can be answered in different ways.
- Observing closely using simple equipment. Performing simple tests.
- Identifying and classifying
- Using their observations and ideas to suggest answers to questions.
- Gathering and recording data to help in answering questions.

SCIENCE Theme: DINOSAURS	SCIENCE Theme: THE NATURAL WORLD	Theme: AMAZING MATERIALS (Science Theme Week)	Theme: SEASONS (Continuous theme)
	egg caterpillar chrysalis adult adult emerges		S E A S O N S
Understanding the world:	Understanding the world:	Understanding the world	Understanding the world
Early Learning Goal: To make observations of animals and explain	Early Learning Goal: To explore the natural world around	Early Learning Goal: To know about similarities and	Early Learning Goal: To make observations of plants
why some things occur, and talk about changes	them. To be able to observe and draw pictures of plants and animals.	differences in relation to places, objects, materials	and explain why some things occur, and talk about changes
Procedural Knowledge.	Procedural Knowledge.	Procedural Knowledge.	Procedural Knowledge.
 I can identify the names of some dinosaurs including T Rex, Pterodacty diplodocus, triceratops. I know what extinct means – no longe exists. I know what prehistoric means – very old, before humans were alive. I know who Mary Anning (born 1799) and what a palaeontologist is. I know what a fossil is – the remains of traces of plants and animals that lived long ago. I know what an omnivore, carnivore and herbivore is 	 I know what plants need to grow: nutrients from the soil, sunlight, warmth, and water. Life cycle of a frog – frogspawn, tadpole, froglet, frog 	 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 understand the need to respect and care for the natural environment and all living things. Explore and talk about different forces they can feel. Talk about the differences between materials and changes they notice 	 To observe and describe the weather associated with the seasons. Observe the movement of the sun during the day. Describe what is seen, heard and felt whilst outside at different times of the year
 Key Knowledge: Make observations of animals and explain why things occur and talk about changes Look at different animals and their body parts. Talk about why they have them e.g., beal wings, leg. Talk about the differences between animals 	explain Why things occur and talk about changes. • Examine change over time, for	 Key Knowledge: Children know about similarities and differences in relation to places, objects, materials and living things. Sort materials using criteria such as soft, hard, flexible, plastic, wood, metal. 	 Key Knowledge: Understand the changes each season brings. To be able to talk about how humans and animals adapt to the seasons.
Key Vocabulary: T Rex, Pterodactyl, diplodocus, triceratops, extinct, prehistoric, Mary Anning, palaeontologist, fossil, omnivore, carnivore, and herbivore	Key Vocabulary: bean, shoot, stem, root, leaves, photosynthesis, nutrients from the soil, sunlight, warmth and water, frogspawn, tadpole, froglet, frog	Key Vocabulary: material, wood, plastic, glass, paper, shiny, metal, rock, hard, soft, fabric, smooth, rough	Key Vocabulary: summer, autumn, winter, spring, season, sun, moon, day, dark, light, night

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Assessment:	Assessment:	Assessment:	

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