



The BIG Picture

Pupils will have lots of opportunities to explore and understand the world around them. They will be encouraged to make sense of their physical world and their community through opportunities to explore, observe and find out about the environment. They will be encouraged to work scientifically, and adults will be on hand for support and challenge if needed. Stimulus related to their interests and topics will be placed tactically within the environment to encourage further exploration of scientific enquiry. Pupils will be supported to articulate their ideas, predictions and results from their own scientific enquiry through questions to prompt. They will be encouraged to make observations, ask questions about why things happen and how they work. They will be given the opportunity to manipulate different things and observe the effects. They will have access to a range of objects and tools that will allow them to work scientifically; for example, leaves, conkers, pinecones, flowers, a range of toys to explore floating and sinking, magnifying glasses, bug catching equipment etc. They will be given the opportunity to explore some scientists and will look at what a scientist is and how they have changed our world today!

Additional experiences to enhance learning: STEM visitors and experiences, links with the local High School, can visit the pond at a local Primary School and use the school grounds

Development matters EYFS curriculum objectives We are scientists through...

Communication and Language 3/4 Year olds: - Understand 'why' questions, like: "Why do you think the caterpillar got so fat?"

Reception: - Learn new vocabulary. - Ask questions to find out more and to check what has been said to them. - Articulate their ideas and thoughts in well-formed sentences. - Describe events in some detail. - Use talk to work out problems and organise thinking and activities. Explain how things work and why they might happen. - Use new vocabulary in different contexts.

ELG: Listening, attention and Understanding: - Make comments about what they have heard and ask questions to clarify their understanding.

Physical Development 3 / 4 Year olds: - Make healthy choices about food, drink, activity and toothbrushing.

Reception: 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.

Understanding the World 3/4 year olds: - 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. - Explore how things work. - 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 and talk about different forces they can feel. - Talk about the differences between materials and changes they notice.

Reception: Explore the natural world around them. - Describe what they see, hear and feel while they are outside. - Recognise some environments that are different to the one in which they live. - Understand the effect of changing seasons on the natural world around them.

ELG: 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. - Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Personal, Social, Emotional Development ELG: Managing Self: - Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.

Key vocabulary:

Suggested vocabulary throughout the year:

Names of common animals, hair, eye, skin, 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
plant, tree, bush, flower, vegetable, herb, environment, habitat, 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, 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, sun, sunny, light, shadow, shady, clouds, torch, see-through, non-see through, source, light source

What do we already know?

- Begin to make sense of their own life-story and family's history. (Nursery)
- Use all their senses in hands-on exploration of natural materials. (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)
- Explore collections of materials with similar and/or different properties.
- Explore collections of materials with similar and/or different properties. (Nursery)
- Talk about the differences between materials and changes they notice. (Nursery)
- Explore how things work. (Nursery)
- Explore and talk about different forces they can feel. (Nursery)

Knowledge: Year F:

Animals including humans:

- Describe people who are familiar to them
- Learn about how to take care of themselves
- Name and describe animals that live in different habitats
- Describe different habitats

Living things and their habitat:

- Explore plants in the surrounding natural environment
- Explore plants in a contrasting natural environment

Materials: including changing materials::

- Explore a range of materials
- Make objects from different materials
- Observe, measure and record how materials change when heated and cooled

Seasonal changes:

- Play and explore outside in all seasons and in different weather
- Observe living things throughout the year

Light:

- Explore shadows
- Explore rainbows

Types of scientific enquiry:

- Changes overtime
- Observations
- Grouping

Sticky Knowledge:

Can they name some basic animals?

Can they name some body parts?

Can they describe some animals?

Can they say where some animals live?

Can they explain (very simply) how some animals change overtime?

Can they discuss a sign of a season?

Can they say that a plant needs watering?

Can they describe (very simply) what plants they can see on the school grounds?

Can they describe (very simply) what they animals they can see on the school grounds?

Can they name some common materials?

Can they talk about some materials?

Can they talk about what they can see?

Scientists across the Curriculum:

Focus on modern day scientists linked to the 'Scientist just like me' document