

SCIENCE PROGRESSION

Early Years

Enquiry Skills:

- Show curiosity about objects, events and people
- Questions why things happen
- Engage in open-ended activity
- Take a risk, engage in new experiences and learn by trial and error
- Find ways to solve problems / find new ways to do things / test their ideas
- Develop ideas of grouping, sequences, cause and effect
- Comments and asks questions about aspects of their familiar world, such as the place where they live or the natural world
- Use senses to explore the world around them
- Make links and notice patterns in their experiences
- Create simple representations of events, people and objects
- Build up vocabulary that reflects the breadth of their experience

Understanding the world - 3-4 year olds

Understanding the world involves guiding children to make sense of their physical world and their community. To achieve this they will;

- 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.
- 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.

The number and quality of the conversations they have with adults and peers throughout the day in a language-rich environment is crucial. By commenting on what children are interested in or doing, and echoing back what they say with new vocabulary added, practitioners will build children's language effectively.

Vocabulary will be introduced in response to the individual interests of the child and may include:

head, eyes, nose, mouth, ears, hands, fingers, feet, toes, arm, leg,

animal, insect, feathers, fur, skin, scales

tree, leaf, flower, stem, seed

material, wood, glass, paper, hard, soft

Season, Summer, Spring, Autumn, Winter, day, dark, light, night, moon, sun, weather,

Understanding the world - Reception

Understanding the world involves guiding children to make sense of their physical world and their community. To achieve this they will;

- 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.

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Vocabulary will be introduced in response to the individual interests of the child and may include:

face, hair, leg, human, knee, arm, elbow, back, head, toes, ear, hands, eye, fingers, mouth, nose

animal, insect, feathers, fur, skin, scales, herbivore, carnivore, omnivore, fish, birds

tree, petals, trunk, fruit, branch, roots, leaves, bulb, flowers, seed, stem

material, metal, wood, rock, plastic, hard, glass, soft, paper, fabric, material, smooth, shiny, rough

Season, Summer, Spring, Autumn, Winter, day, dark, light, night, moon, sun, weather, sunny, raining, windy, snowing, sleet, hail thunder, lightening

Key Stage One

Animals, including Humans

Year 1

- 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

arm, leg, hand, foot, eyes, ears, mouth, nose
see, hear, taste, smell, touch

fish, amphibian, reptile, bird and mammal
herbivore, carnivore, omnivore

Year 2

- Understand that animals, including humans, have offspring which grow into adults
- 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

offspring, adult, baby, parents
dead, alive, never-alive

Living things and their Habitats

Year 1	Year 2
	<ul style="list-style-type: none"> • Explore and compare the differences between things that are living, dead, and things that have never been alive • 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 • Identify and name a variety of plants and animals in their habitats, including micro-habitats • 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.
	<p>dead, alive, never alive</p> <p>habitat- desert, arctic, rainforest, ocean</p> <p>food chain, predator, prey, diet</p>

Plants

Year 1	Year 2
<ul style="list-style-type: none"> • Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • Identify and describe the basic structure of a variety of common flowering plants, including trees 	<ul style="list-style-type: none"> • Observe and describe how seeds and bulbs grow into mature plants • Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy
deciduous, evergreen, plant, tree, leaf, stem, flower, petals, roots	seed, bulb, germination, temperature, sunlight, water, healthy, root, shoot

Seasonal changes

Year 1	Year 2
<ul style="list-style-type: none"> • Observe changes across the four seasons • Observe and describe weather associated with the seasons and how day length varies 	
autumn, winter, spring, summer, rain, snow, frost, wind, sun, fog, mist, clouds, temperature (warm/cold/freezing)	

day, night,

Materials

Year 1

- 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 on the basis of their simple physical properties

object, material, wood, plastic, metal, water, rock, fabric property-
everyday language e.g. hard/soft, stretchy, rough, bendy, see-through,
strong etc.
sort, waterproof

Year 2

- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses
- Describe how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

squash, bend, twist, stretch