



St Monica's R.C Primary School – Reception Knowledge Organiser – Science



Science in Reception

We become Scientists through the following EYFS areas of learning:

- Understanding the World
- Physical Development
- Communication and Language
- Personal, Social and Emotional Development

In Reception, we cover Science through the following themes:

- Exploring Autumn
- Starry Night
- Growth and Change
- Big Wide World

Seasonal Changes

The Seasons

There are 12 months in a year. The four seasons of the year are Autumn, Winter, Spring and Summer.



The weather changes at different times in the year.

Autumn

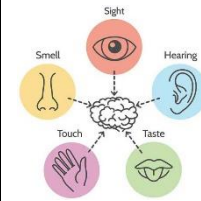
In Autumn, the days are shorter and the weather is colder. Leaves fall from the trees and change colour. Some animals begin preparing for winter during autumn.



Materials

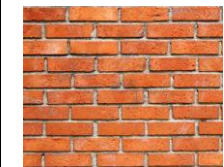
Senses

- Our 5 senses are: sight, smell, touch, hear and taste
- We use our senses to explore and describe different materials and food



Textures

- We can use adjectives to describe different textures: Bumpy, rough, hard, fuzzy, smooth, soft, lumpy, prickly or shiny.



Living Things and Their Habitats

Animals (inc. humans)

- Animals are living things that need food, water, air and shelter to survive. Some eat other animals and some eat plants.
- Animal babies are known by different names than adult animals e.g. calf, kid, puppy.
- Animals have features that make them easier to identify e.g. sheep have wool, cows have udders.
- Some animals live on a farm, some are pets, and some live in the wild.



Plants

- Plants are living things that need sunlight, water and soil to grow.
- Some key parts of a plant are: stem, stalk, roots, leaves.
- Some plants produce seeds so that they can grow new plants.
- Plants can be big like trees and small like flowers.



Solar System

- We live on a planet called Earth
- There are 8 planets in our solar system
- The sun is in the centre of the solar system
- An astronaut is a person who goes into space



Healthy Living

- Healthy ways of living include healthy eating, exercise, water and hygiene
- Fruit and vegetables are healthy and give us energy



Dinosaurs

- Dinosaur remains/bones are called fossils.
- A palaeontologist is a scientist that studies fossils.



Key Vocabulary

Scientist, experiment, Earth, Solar System, Seasons, Animals, Plants, Environments, Healthy, Texture, Senses

Science Links to EYFS Statutory Framework and Development Matters

Science

Communication and Language	Physical Development	Understanding the World	Personal, Social, Emotional Development
<p>3/ 4 Year olds: Understand ‘why’ questions, like: “Why do you think the caterpillar got so fat?”</p> <p>Reception:</p> <ul style="list-style-type: none"> - 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 <p>ELG: C&L: Listening, Attention and Understanding Make comments about what they have heard and ask questions to clarify their understanding.</p>	<p>3 / 4 Year olds: Make healthy choices about food, drink, activity and tooth brushing.</p> <p>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.</p>	<p>3 / 4 year olds:</p> <ul style="list-style-type: none"> - 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. <p>Reception</p> <ul style="list-style-type: none"> - 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. <p>ELG: UTW: The Natural World</p> <ul style="list-style-type: none"> - 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. 	<p>ELG: PSED: Managing Self: Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices</p>

KS1 Science National Curriculum Areas of Learning

Year 1

Plants

Pupils should be taught to:

- 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.

Animals including Humans

Pupils should be taught to:

- 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.

Everyday Materials

Pupils should be taught to:

- 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.

Seasonal Changes

Pupils should be taught to:

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

Year 2

Living things and their habitats

Pupils should be taught to:

- 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.

Plants

Pupils should be taught to:

- 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.

Animals, including Humans

Pupils should be taught to:

- notice that animals, including humans, have offspring which grow into adults
- find out about and 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.

Uses of Everyday Materials

Pupils should be taught to:

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