



# Science in Early Years

## Sticky Knowledge and Key Learning

### Nursery

- I can describe the weather today
- I can identify my body parts
- I can use my senses and talk about what I can see, hear, smell, feel or taste
- I can explore different materials and talk about the changes I notice
- I can identify and name different farm animals
- I can begin to talk about the life cycles of a duck and a caterpillar and the changes I can see
- I can look after a seed and know it needs water and sunlight to grow
- I can identify which animals live in water and which animals live on land

### Reception

- I can name the four seasons and talk about the changes in our natural world during each season
- I can describe what I can see, hear, smell, feel or taste and recognise which body part we use for each sense
- I can identify how to care for an animal
- I can recognise farm animals and match them to their offspring
- I can organise a life cycle of a caterpillar, observe changes and talk about each stage
- I know how to plant and care for a seed and I can observe the changes over time
- I recognise that we can grow plants and vegetables to eat and I can help to take care of our gardening patch
- I can talk about the differences in materials and describe the changes I can see
- I can describe different forces I can feel

## What we do:

In Early Years, we encourage the children to explore the world around them and we explore changes in the natural world as they happen throughout the year. We start the year by learning all about ourselves. We learn the names for body parts through action songs and rhymes and we encourage the children to use their senses to explore natural materials and resources/activities within our provision. We talk about the weather regularly and we observe seasonal changes throughout the year. We go on seasonal walks to observe the effect the seasons have on our world and we introduce new vocabulary so that children leave EYFS with a good understanding of the weather and how it changes throughout seasons. We explore natural phenomenon such as freezing and melting during winter and we also set up our provision to encourage scientific exploration such as floating and sinking. We also enhance our provision to develop children's understanding of the world around them. For example, we add animals from the polar regions to our enhancements during Winter, and alongside the desert animals in our sand area and the sea creatures in our water area, this starts to develop the children's understanding of contrasting environments and animals and habitats that they will build upon in KS1. We provide opportunities for baking so that children can observe changes to materials and we have an investigation area in each classroom so the children can access resources such as magnets, magnifying glasses and colour paddles and explore how they work. During Spring, the children learn about life cycles by caring for caterpillars and ducklings and we invite the farm into school where the children can hold and feed the animals. We learn about what animals need to grow and we begin to name farm animals and their offspring. We also plant seeds, learn what they need to grow and observe changes over time as we care for them. The children help to care for plants and flowers and they also begin to grow fruit and vegetables to eat in our garden. These experiences lay the foundations for the children to build upon in Key Stage 1.

### Science Coverage

Children will be encouraged to make observations of the weather on a daily basis and explore the natural world during each season. The children will leave EYFS knowing how we can use our senses to explore the world around us and be able to identify the body parts we use for each sense. Children will explore and describe a variety of materials and observe how they change. All children will leave EYFS with experiences of caring for plants and animals. They will know how plants and animals grow and change over time and understand the importance of looking after living things and our environment. Children in EYFS will explore numerous experiments and be able to explore how things work.

### Key Vocabulary

#### Nursery

- Weather, sun, cloud, rain, snow, wind, nose, eyes, mouth, hands, ears, seed, plants, sunlight, water, flowers, egg, caterpillar, chrysalis, butterfly, duckling, duck,

#### Reception

- Seasons, Spring, Summer, Autumn, Winter, smell, taste, touch, hear, see, offspring – calf, lamb, chick, kid, lifecycle, freezing, melting, push, pull, change,

## Going Forward

Children in Ks1 begin Cycle A by learning about the human body, learning to identify and name the parts of the body building on their observational skills from Reception all about the human senses. Children will learn about different materials and their everyday uses. Children will build upon their foundation of knowledge on plants and living things and learn about a variety of common and wild plants. Throughout the year is opportunities for children to build their observational skills by studying the weather and seasons; learning about the changing seasons and the weather associated with them. Children will develop their observational skills throughout the year, allowing them to ask simple questions and perform simple tests to find these answers. They will look at and describe what they see accurately using scientific language.

In Cycle B, KS1 children will begin their journey with a recap on the human body and then an animal study, learning scientific language such as carnivore and herbivore as well as learning about animals (inc humans) and their offspring. Children will then apply this knowledge to learning about all living things and their habitats, including simple food chains. Children will revisit their learning on Plants and develop it further by carrying out simple tests involving the survival of plants. Children will revisit their learning on materials and develop their investigative skills further by observing how materials can be changed by different forces.