Science Learning Journey – EYFS & KS1

EYFS — Explore the natural world

Outdoor play and exploration. Foster curiosity – touch, smell and hear in natural world. Discuss care for the world. Observational drawing. Observe and interact with natural processes; ice melting, sound vibration, light travel, shadows, magnets and floating. Children reflect on the similarities and differences in relation to places, objects, materials and living things.

Describe outside

Encourage focused observations of the natural world. Listen to children describing and commenting on things outside. Encourage positive interactions with the outside world. Talk about the features of their own immediate environment.

Recognise some environments that are different to the one in which they live.

Teach children about a range of contrasting environments; both locally and nationally. Model vocabulary for specific features of the world. Share non-fiction texts that offer insight into contrasting environments. Listen to how children communicate their understanding of their environment.

1 Sensitive Bodies

Familiarising themselves with the basic parts of the human body, children investigate their senses through stimulating experiences that highlight how we interact with the world around us. They work scientifically, using their senses to make observations, spot patterns and use data to answer questions. They develop an understanding of how science can support those who have lost sensory function and consider how firefighters use their senses at work.

Seasonal Change

Reflecting on their own experiences, children learn about the four seasons and the weather associated with each. Pupils explore how seasonal changes affect trees, daylight hours and our choices about outfits. They plan and carry out their own weather reports, considering the knowledge required for this job

Comparing Animals

Studying both local and global animals, children recognise common characteristics and physical features. They use this information to make comparisons and classify animals. Pupils consider the most effective way to collect data about class pets and record their findings in a block chart. They develop their understanding of classification by comparing the dietary habits of different animals and role play as Jane Goodall carrying out research into chimpanzees in the wild.

Introduction to Plants

Identifying the difference between objects and materials, children explore their surroundings to find examples of each. They work scientifically by planning tests, making observations and recording data. Pupils use results to answer questions and sort and group materials based on their properties.

Everyday Materials

Venturing outside, children identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. They use magnifying glasses to observe and name plant parts and draw and label diagrams of flowers. Children closely observe leaves and sort them into groups based on their appearance. They use non-standard units to measure leaf length and record their observations in a table. Pupils investigate if beans need water for growth and identify edible plant parts.

2 Habitats

Using picture books and hands-on outdoor activities, children broaden their understanding of plants and animals. They gather and record data to find out if taller trees have larger trunks and recap the features of different animal groups. They identify animals by closely observing footprints and construct waterproof animal homes with natural materials. Pupils sort birds according to their diet and seek patterns in their physical characteristics.

Making Connections: Investigating science through stories

Considering the life processes that all living things have in common, pupils classify objects into alive, was once alive or has never been alive. Pupils explore global habitats, naming plants and animals that can be found there. They learn how a range of different living things depend on each other for food or shelter. Pupils explore this further by creating food chains to show the sequence that living things eat each other for energy to grow and stay healthy

Microhabitats

Developing their understanding of scientific enquiry, pupils learn that scientists use a range of skills to answer questions. They discover that microhabitats provide what minibeasts need to

Uses of everyday materials

Building on their knowledge of everyday materials and their properties, pupils recognise that materials are suited to specific purposes and explore how actions such as stretching and bending affect the shape of solid objects. They compare the suitability of materials; gather and record

Life Cycles and Health

Studying the life cycles of various animals, children learn what animals need to survive and how they change over time. Pupils collect data that allows

Plant Growth

Identifying ways to reduce, reuse and recycle, children draw on their knowledge of properties to invent creative uses for old objects. They discover some natural materials derived from plants and look at the processes involved in making paper. Using their observational skills, they conduct simple tests to choose the most suitable material for homemade plant pots, venturing outdoors to find natural materials to decorate them.

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Making Connections: Plant Based Materials

Carrying out comparative tests, pupils identify the conditions required for seed germination and compare these to the survival needs of plants in later growth phases. Pupils use rulers to measure stem growth and record data in a table. They use their results to conclude that plants need water, light and a suitable temperature to grow and stay healthy. Children identify the stages in a plant's life cycle and discover how humans impact plants in the environment.

All Science units give children the opportunities to plan and conduct experiments. Data is recorded at an appropriate level and finding are reported and analysed.

Physics	Biology	Chemistry