



Science Medium Term Plan - Cycle A

Year 1/2	Autumn 1 - Identifying Materials	Autumn 2 - Habitats	Spring 1 - Uses of Materials	Spring 2 - Parts of animals	Summer 1 - Feeding and Exercise	Summer 2 - Plants
Big Concepts						
Big questions	What is it made out of?	Where do animals live?	What does suitable mean?	What are the features of different animals?	How do I stay healthy?	How do I identify different plants?
Prior Learning	EYFS - be able to ask questions about the place they live. Talk about why things happen and how things work. Discuss the things they have observed such as natural and found objects. Manipulates materials to achieve a planned effect.	EYFS - Comments and questions about the place they live or the natural world. Shows care and concern for living things and the environment. Can talk about things they have observed such as plants and animals. Notifies features of objects in their environment. Comments and asks questions about their familiar world.	EYFS - Discuss the things they have observed such as natural and found objects. Y1 - Distinguish between and object and the material from which it is made. Identify and name a variety of everyday materials, including wood, metal, plastic, glass, 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 properties.	EYFS - Explore the natural world around them, making observations and drawing pictures of animals and plants. Y1 - Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	EYFS - Know the effects exercise has on their bodies, be able to identify different parts of their body, have some understanding of healthy food and the need for variety in their diet, have some understanding of growth and change.	EYFS - Make observations of plants, know some names of plants, trees and flowers, may be able to name and describe different plants, trees and flowers, show some care for their world around them
Overview of knowledge	In this unit children will have identified and named common types of materials including wood, metal, plastic, rubber, fur, towelling, nylon, wool, sponge, cotton wool, paper, card, brick, ceramics, rock and some liquids and powdered solids. They will have labelled, collected and grouped together objects made from the same material. They will state that different objects can be manufactured from the same	Children will have been introduced to the terms 'habitat') and 'micro-habitat'. They will have identified that most living things live in habitats to which they are suited and have described how different habitats provide for the basic needs of different kinds of animals and plants. Children will have explored their immediate local environments. They will have identified local and global habitats and recognised, in simple terms,	In this unit children will name, identify and hunt for everyday materials including wood, metal, plastic, glass, rubber, brick, rock, paper, fabric and card. They will list properties of different materials such as hardness, strength, flexibility and shininess. They will learn that the properties of materials are important to the object they are made from. They will identify suitable and unsuitable materials for different	Children will learn about their senses and how they use them to describe the world. Children will identify and name the basic external parts of the human body and recognise the functions of some body parts, including the sense organs. Children will describe and compare common animals, and will recognise and name a variety of animals and their body parts. They will construct and label a map of the	Children will have described the importance of exercise, eating the right amounts of different types of food and hygiene. They will have found out about and described the basic needs of animals, including humans, for survival and will have considered what humans need to live. Children will identify different foods and have classify some of the foods that humans eat by plant or animal origins. Children will have described how animals	This unit will introduce children to the idea of plants as living things which grow and change over time. The unit will encourage children to recognise the common features, similarities and differences between plants. Children will learn about the basic structure of a variety of common flowering plants, including trees. They will identify, name and describe the main parts of plants, including trees. They will learn that trees are



mate
mate

some
some

those which are similar in scale or diversity. They will have recognised how differences between places close to each other result in a different range of plants and animals being found. They will have identified and named a variety of plants and animals in their habitats including micro-habitats and have described habitats in terms of their physical conditions.

objects and will be able to explain why.

human body and will draw comparisons between human and animal body parts.

obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. They will have identified and created a simple food chain. Children will have been able to use ideas about feeding and exercise to learn about ways we need to look after ourselves to stay healthy. They will demonstrate understanding by making a diet and exercise plan and will have considered food safety and hygiene guidelines. Children will also have opportunities to consider ways in which science is relevant to their personal health and to relate science to aspects of their everyday life (food, exercise, hygiene), and to recognise and control hazards and risks to themselves.

plants and will learn the meaning of 'evergreen' and 'deciduous' when describing and comparing trees. Children will describe and compare common plants and trees in their local environment and will learn specific vocabulary relating to trees, e.g. trunk, bark etc. They will have the opportunity to plant, grow and observe their own plants throughout the unit. Children will consider how to treat plants as living things with care.

Common misconceptions

Some children may:

- Confuse the property of a material with the materials itself.
- The distinction between material and fabric.

Some children may think:

- an animal's habitat is like its 'home'
- plants and seeds are not alive as they cannot be seen to move
- arrows in a food chain mean 'eats'.

Some children may think:

- only fabrics are materials
- only building materials are materials
- only writing materials are materials
- the word 'rock' describes an object rather than a material
- 'solid' is another word for hard

Some children may think:

- only four-legged mammals, such as pets, are animals
- humans are not animals
- insects are not animals
- all 'bugs' or 'creepy crawlies', such as spiders, are part of the insect group
- amphibians and reptiles are the same

Some children may think:

- respiration is breathing
- breathing is respiration.

- Many children have a concept of 'plant' that does not include trees. They may perceive that plants are small scale and can be grown only in pots.
- Trees are seen as a separate grouping. This can also sometimes be true of grass. Children may not recognise that the school field is covered with plants
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Working Scientifically

Children will have the opportunity to identify and classify different materials (see list above). They will observe materials closely, using equipment and perform simple tests in order to answer simple questions.

Children will be observing plants and animals closely in their habitats using simple equipment and by gathering and recording data to help answer questions they may have raised. Children will have had the opportunity to investigate and compare local habitats in detail, and also to compare animals in familiar habitats with animals found in less familiar

Working Scientifically, children will classify materials sorting them into groups in a variety of ways. They will compare materials in a mark making investigation.. They will learn what absorbency means and explore the absorbency of different types of materials. They will examine different ways to record results and select an appropriate way to record the

Children will explore the senses, observe and communicate ideas about their own body parts and those of animals, and record their ideas in diagrams.

Children will work scientifically by using observable features and research to identify and classify foods into those of plant or animal origin. They will ask questions and use their observations and ideas to suggest answers to their questions. Children will have the opportunity to carry out an investigation into what garden birds prefer to eat where they can

Working Scientifically, children will focus on observing closely using simple equipment, naming and grouping and recognising similarities and differences between plants. Children will make and record their observations and will also have the opportunity to gather and record data in a simple way to help in answering questions.



habitats, for example, on the seashore, in woodland, in the ocean, in the rainforest. They will have the opportunity to conduct an investigation into worms and their habitat in their local environment.

They will have recognised that living things are found in many places and have been able to make a prediction about why living things are found in some places and not others.

results of an investigation about waterproof materials. They will apply the findings from these investigations to design a school bag.

carry out simple comparative tests, gathering and recording data to help in answering questions.

Key Vocabulary

Object, material, everyday, common, properties, wood, metal, plastic, paper, rock, solid, liquid, fabric, thick, thin, runny, colour, transparency, texture, weight, hollow,

Habitats, micro-habitats, food, leaf litter, under bushes, shelter, woodland, ocean, rainforest, hot, warm, cold, dry, damp, wet, bright, shade, dark

identify, materials, wood, metal, plastic, glass, rubber, brick, rock, paper, fabric, card, properties, hardness, strength, flexibility, shininess

Taste, smell, sight, hear, touch, tongue, nose, eyes, skin, ears, head, neck, arms, hands, fingers, legs, feet, toes, tummy, elbows, shoulders, knees, hair, fur,

Survive, survival, basic needs, exercise, hygiene, food, healthy, origin, diet, plants, animals, source, food chain, safety.

Wild plants, garden plants, deciduous, evergreen, trunk, branches, leaf, root, bud, flowers, blossom, petals, root, stem, fruit, vegetables, bulb, seed