

Year 1 Autumn 1 Topic: Childhood history Science: Chemistry Materials	
Previous learning	
<p>In EYFS, pupils learned that different materials that can be used for different things. We talked about the similarities and differences in relation to places, objects, materials and living things. Pupils also learnt that some materials are magnetic and some materials are non-magnetic.</p> <p>During this chemistry based unit, we will be introduced to a range of basic materials and their properties. We will learn to name and identify a variety of materials and begin to explain that these materials can be made into many different objects. We will then progress and learn to distinguish between an object and the material from which it is made. We will investigate the properties of materials and begin to recognise that a material's properties define its use.</p>	
Substantive Knowledge in Science	Disciplinary knowledge in Science
<p>A material is what an object is made from.</p> <p>Materials are all around us, such as in the home, garden, school and park.</p> <p>Everyday materials include wood, plastic, glass, metal, water, rock, brick, paper and fabric.</p> <p>Materials are important because we use them to make everyday objects for example, plastic is light and stiff. It can be used for a water bottle.</p>	<p>Ask simple questions and recognise that they can be answered in different ways.</p> <p>Observe closely, using simple equipment.</p> <p>Perform simple tests.</p> <p>Identify and classify.</p> <p>Use their observations and ideas to suggest answers to questions.</p> <p>Gather and record data to help in answering questions.</p>
Lesson 1	Object and materials <ul style="list-style-type: none"> To distinguish between an object and the material from which it is made.
Lesson 2	Everyday materials <ul style="list-style-type: none"> To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.
Lesson 3	Properties of everyday materials <ul style="list-style-type: none"> To describe the simple physical properties of a variety of everyday materials.
Lesson 4	Testing materials <ul style="list-style-type: none"> To identify and test of materials.

Lesson 5	Compare and group materials
	<ul style="list-style-type: none"> To compare and group together a variety of everyday materials on the basis of their simple physical properties.
Lesson 6	Investigation
	<ul style="list-style-type: none"> To investigate the best material for bunting.
Vocabulary	
<p>stretchy or stiff</p> <p>rough or smooth</p> <p>opaque or transparent</p> <p>bendy or rigid</p> <p>waterproof or not waterproof</p>	

Year 1 Autumn 2 Topic: Childhood history Science: Biology Human Senses	
Previous learning	
<p>In EYFS, the children talked about the observations of animals and plants and explained why some things occur, and talked about changes.</p> <p>This project teaches children that humans are a type of animal known as a mammal. They name and count body parts and identify similarities and differences. They learn about the senses, the body parts associated with each sense and their role in keeping us safe.</p>	
Substantive Knowledge in Science	Disciplinary knowledge in Science
<p>Animals are living things. Animals can be sorted and grouped into six main groups: fish, amphibians, reptiles, birds, invertebrates and mammals.</p> <p>Humans are living things. They belong to a group of animals called mammals.</p> <p>Ears are used for hearing, eyes are used to see, the nose is used to smell, the tongue is used to taste and skin gives the sense of touch.</p>	<p>Ask simple questions and recognise that they can be answered in different ways.</p> <p>Observe closely, using simple equipment.</p> <p>Perform simple tests.</p> <p>Identify and classify.</p> <p>Use their observations and ideas to suggest answers to questions.</p> <p>Gather and record data to help in answering questions.</p>
Lesson 1	Labelling body parts
	<ul style="list-style-type: none"> To identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.

Lesson 2	Similarities and differences between animals groups
	<ul style="list-style-type: none"> To describe, compare and group a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).
Lesson 3	Similarities and differences between you and me
	<ul style="list-style-type: none"> To gather and record data to help in answering questions.
Lesson 4	Why we have senses
	<ul style="list-style-type: none"> To understand senses and dangers.
Lesson 5	Perform simple tests
	<ul style="list-style-type: none"> To perform simple tests to investigate touch.
Lesson 6	Investigation
	<ul style="list-style-type: none"> To investigate why we have two eyes.
Vocabulary	
<p>hearing, sight, smell, taste, touch</p> <p>fish, amphibian, reptile, bird and mammal</p>	

Year 1 Spring 1 Topic: Bright Lights, Big City Science: Biology Seasonal Changes	
Previous learning	
<p>In EYFS, the children talked about some natural features that they see and feel during different seasons, including different weather.</p> <p>This project teaches children about the seasons, seasonal changes and typical seasonal weather and events. Children begin to learn about the science of day and night and recognise that the seasons have varying day lengths in the UK.</p>	
Substantive Knowledge in Science	Disciplinary knowledge in Science
<p>There are four seasons: spring, summer, autumn and winter.</p> <p>The local environment is a habitat for living things and can change during the seasons.</p> <p>Trees that lose their leaves in the autumn are called deciduous trees. Examples include oak, beech and rowan.</p> <p>Trees that shed old leaves and grow new leaves all year round are called evergreen trees. Examples include holly</p>	<p>Ask simple questions and recognise that they can be answered in different ways.</p> <p>Observe closely, using simple equipment.</p> <p>Perform simple tests.</p> <p>Identify and classify.</p> <p>Use their observations and ideas to suggest answers to questions.</p>

and pine.	Gather and record data to help in answering questions.
Lesson 1	Experiencing the season
	<ul style="list-style-type: none"> To observe trees, plants and animals and to 'feel' the weather.
Lesson 2	Deciduous and evergreen trees
	<ul style="list-style-type: none"> To identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
Lesson 3	Seasonal changes in deciduous trees
	<ul style="list-style-type: none"> To label seasons and put them in chronological and cyclical order.
Lesson 4	Seasonal changes in animals
	<ul style="list-style-type: none"> To understand how seasonal change affects animals.
Lesson 5	What is the weather?
	<ul style="list-style-type: none"> To observe and reiterate the causes and consequences of this weather.
Lesson 6	How does the seasons affect day length
	<ul style="list-style-type: none"> To observe and describe weather associated with the seasons and how day length varies.
Vocabulary	
evergreen, deciduous, oak, beech, holly pine, mature	

Year 1 Spring 2 Topic: Bright Lights, Big City Science: Biology Seasonal Changes
Previous learning
<p>In EYFS, the children talked about some natural features that they see and feel during different seasons, including different weather.</p> <p>This project teaches children about the seasons, seasonal changes and typical seasonal weather and events. They learn about measuring the weather and the role of a meteorologist.</p>

Substantive Knowledge in Science		Disciplinary knowledge in Science
<p>The weather can change daily and some weather types are more common in certain seasons, such as snow in winter.</p> <p>Some ways to stay safe include staying safe in strong sunlight (sun cream, sun hat and sunglasses).</p> <p>Temperature is the measure of how hot or cold something is.</p> <p>A weather forecast predicts the weather.</p>		<p>Ask simple questions and recognise that they can be answered in different ways.</p> <p>Observe closely, using simple equipment.</p> <p>Perform simple tests.</p> <p>Identify and classify.</p> <p>Use their observations and ideas to suggest answers to questions.</p> <p>Gather and record data to help in answering questions.</p>
Lesson 1	UV light	
	<ul style="list-style-type: none"> To know about safe and unsafe exposure to the sun. 	
Lesson 2	Measuring and recording the wind	
	<ul style="list-style-type: none"> To observe the windssock and measure the wind over a maximum of five consecutive days. 	
Lesson 3	Measuring and recording temperature	
	<ul style="list-style-type: none"> To observe, measure and record the temperature twice a day over three separate days. 	
Lesson 4	Measuring precipitation	
	<ul style="list-style-type: none"> To observe, measure and record rainfall using a rain gauge scale in millimetres. 	
Lesson 5	Results	
	<ul style="list-style-type: none"> To answer the questions and record learning about measuring wind, temperature and precipitation. 	
Lesson 6	Weather forecast	
	<ul style="list-style-type: none"> To use information from scientific results and knowledge to create a weather forecast. 	
Vocabulary		
temperature, thermometer, wind direction, force, rainfall		

Year 1
Summer 1
Topic: School Days
Science: Biology
Plant Parts

Previous learning

In EYFS, the children learnt that plants and trees are living things, and that living things change over time.

This project teaches children about wild and garden plants by exploring the local environment. They identify and describe the basic parts of plants and observe how they change over time.

Substantive Knowledge in Science

In winter, many plants and trees are dormant and have buds on their branches.

In spring, leaves and blossom appear on trees and smaller plants begin to grow and flower.

The basic plant parts include root, stem, leaf, flower, petal, fruit, seed and bulb. Trees have a woody stem called a trunk.

Disciplinary knowledge in Science

Ask simple questions and recognise that they can be answered in different ways.

Observe closely, using simple equipment.

Perform simple tests.

Identify and classify.

Use their observations and ideas to suggest answers to questions.

Gather and record data to help in answering questions.

Lesson 1	Seasonal changes in plants
	<ul style="list-style-type: none"> To recall some similarities and differences between the seasons and the way the seasons change.
Lesson 2	Plant parts and diagrams
	<ul style="list-style-type: none"> To identify and describe the basic structure of a variety of common flowering plants, including trees.
Lesson 3	Seeds and bulbs
	<ul style="list-style-type: none"> To understand where new plants come from and the importance of plants.
Lesson 4	Investigating leaves
	<ul style="list-style-type: none"> To observe leaves and record my observations.
Lesson 5	Change over time
	<ul style="list-style-type: none"> To make comparisons about how a plant has changed over time.
Lesson 6	Recording and identifying
	<ul style="list-style-type: none"> To use evidence to identify a tree or plant.

Vocabulary

evergreen, deciduous, oak, beech, holly pine, mature

Year 1
Summer 2
Topic: School Days
Science: Biology
Animal Parts

Previous learning

In EYFS, the children learnt that different body parts are used for different things, such as the eyes are used to see. The children learnt that animals grow and change over time

This project teaches children about the structure of animals, including fish, amphibians, reptiles, birds, mammals and invertebrates. They identify and describe their common structures, diets, and how animals should be cared for.

Substantive Knowledge in Science

Different animal groups have some common body parts and structures, such as eyes and a mouth, and some different body parts, such as fins or wings.

Living things need to be cared for in order for them to survive. They need water, food, warmth and shelter.

Carnivores eat other animals (meat), herbivores eat plants and omnivores eat other animals and plants.

Disciplinary knowledge in Science

Ask simple questions and recognise that they can be answered in different ways.

Observe closely, using simple equipment.

Perform simple tests.

Identify and classify.

Use their observations and ideas to suggest answers to questions.

Gather and record data to help in answering questions.

Lesson 1

Identifying and grouping animal parts

- To recap the names of the six main animal groups using structures and body parts.

Lesson 2

Sorting and pattern seeking

- To sort data in different ways.

Lesson 3

Our pets

- To classify pets into one of the six animal groups.

Lesson 4

Carnivore, herbivore, omnivore

- To identify and name a variety of common animals that are carnivores, herbivores and omnivores.

Lesson 5	Observation and comparison <ul style="list-style-type: none"><li data-bbox="539 114 1273 147">• To compare the features of earthworms to another animal.
Lesson 6	Investigate <ul style="list-style-type: none"><li data-bbox="539 266 1114 300">• To investigate the senses an earthworm has.
Vocabulary	
hearing, sight, smell, taste, touch fish, amphibian, reptile, bird and mammal	