



Year 1: Science



Autumn Term – Chemistry Everyday Materials

Overview of unit:	Substantive Knowledge:	Disciplinary Knowledge:
In Year 1, pupils are provided with an opportunity to explore everyday materials. They learn to distinguish between an object and the material from which it is made and learn to identify and name a variety of everyday materials. In addition, pupils learn to describe the simple physical properties of a variety of everyday materials and to compare and group together a variety of everyday materials based on simple physical properties of the materials.	<ul style="list-style-type: none"> • what materials are and the names of different materials • what different materials look like • which materials different objects are made from • what some the properties of different materials are and if materials can have other properties • some properties are easy to see but others need to be investigated • how the properties of materials mean they are used to make certain objects 	<ul style="list-style-type: none"> • identifying and classifying - how to group, sort, and compare objects and materials • perform simple tests to explore questions • using their observations and ideas to suggest answers to questions

Sequence:

The content from this unit leads directly into the 'Uses of Materials' unit in Year 2 and then subsequent materials across Key Stage 2. All chemistry units are about materials, or matter and being able to identify materials and the properties of those materials is a thread which will flow through all of them despite the vocabulary used being different.

Autumn Term – Physics Seasonal Change – autumn and winter

Overview of unit:	Substantive Knowledge:	Disciplinary Knowledge:
In Year 1 pupils observe changes across the four seasons. They observe and describe weather associated with the seasons and how the length of a day varies. This unit focusses on two seasons: autumn and winter.	<ul style="list-style-type: none"> • names of the four seasons • which months are in each of the four seasons • what we mean by the word 'weather' weather patterns, weather symbols and what the weather is like in both autumn and winter • how we, as humans, might dress differently according to the weather outside • how daylight hours change across autumn and winter • the impact of changing weather and seasons on different plants and animals 	<ul style="list-style-type: none"> • Observing closely, using simple equipment • Asking simple questions • Using their observations and ideas to suggest answers to questions

Sequence:

Autumn and Winter is the first physics unit pupils will encounter and is the first of two Year 1 units designed to look at seasons and seasonal changes. The National Curriculum states that pupils should observe the changes

across the four seasons, and therefore the decision has been made to teach the knowledge across two units rather than one. By teaching the unit at this point in the year, pupils can observe the changes from autumn to winter for themselves.

Spring Term – Biology Animals including humans – Amazing Animals

Overview of unit:	Substantive Knowledge:	Disciplinary Knowledge:
In Year 1, pupils learn to identify and name a variety of common animals. They learn to identify and name carnivores, herbivores and omnivores and to describe and compare the structure of a variety of animals. In addition, pupils are taught to identify, name, draw and label the basic parts of the human body and say which part is associated with each sense.	<ul style="list-style-type: none"> • recognise and name a variety of common animals including fish, amphibians, reptiles, birds, and mammals • recognise and name a variety of common animals that are carnivores, herbivores, and omnivores • know similarities and differences across a variety of common animals (fish, amphibians, reptiles, birds, and mammals, including pets) • recognise and name the basic parts of the human body and say which part of the body is associated with each sense 	<ul style="list-style-type: none"> • identifying and classifying • asking simple questions

Sequence:

This unit builds on pupils' Understanding of the World (ELG 13). In Reception, pupils learnt about similarities and differences between living things, made observations, explained why things occur and talked about changes. By looking at the natural world, pupils in Year 1 begin to build their scientific vocabulary, with words such as amphibian and omnivore. In science Unit 1 and history Unit 2, pupils grouped items according to their properties. Unit 3 introduces the concept of classifying animals. Pupils will understand that scientists look at commonalities between animals and use similarities to group them.

Summer Term – Biology Common Plants

Overview of unit:	Substantive Knowledge:	Disciplinary Knowledge:
In Year 1, pupils identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. They also identify and describe the basic structure of a variety of common flowering plants, including trees.	<ul style="list-style-type: none"> • what a plant is and the basic parts of a plant • recognise and name common garden plants • recognise and name common wild plants • recognise and name different types of trees • know why plants are important 	<ul style="list-style-type: none"> • identifying and classifying • asking simple questions

Sequence:

This is the first unit on the topic of plants. Pupils have observed their local environment throughout the year in the two seasons units and they have learnt the names of some common season plants. This unit builds on pupils' understanding of the seasons by demonstrating how different plants are present in their local environments during different times of the year.

Summer Term – Physics

Seasonal Change - spring and summer

Overview of unit:	Substantive Knowledge:	Disciplinary Knowledge:
<ul style="list-style-type: none"> In Year 1, pupils observe changes across the 4 seasons. They observe and describe weather associated with the seasons and how the length of a day varies. This unit focusses on two seasons: spring and summer. 	<ul style="list-style-type: none"> how the weather changes from winter to spring what happens to plants and animals in spring and summer what changes can be seen in the weather from spring to summer Sequence: understand how the changing seasons can affect humans 	<ul style="list-style-type: none"> Observing closely, using simple equipment Asking simple questions Using their observations and ideas to suggest answers to questions

Sequence:

The National Curriculum states that pupils should observe the changes across the four seasons, and therefore the decision has been made to teach the knowledge across two units rather than one. By teaching the unit at this point in the year, pupils can observe the changes from spring to summer for themselves.