

**Key Stage 1**  
**Science**  
**Seasonal changes**

**Previous Learning**

**Year 1**

In Reception, children learn about the changes in the natural world around them, including changing of the seasons.

**Year 2**

In Year 1, children learn and observe changes across the four seasons. They also learn and observe the weather associated with the season and how the day length varies.

**Sticky Knowledge**

1. There are four seasons - Spring, Summer, Autumn, Winter
2. Summer is the hottest season and winter the coldest.
3. Seasons change throughout the year because of the way the Earth travels around the Sun.
4. In summer the longest day of the year is in June and in winter the shortest day of the year is in December.
5. In Autumn, trees shed their leaves.

**Lesson 1**

**Year 1**

- To begin to recognise and understand that there are four seasons and which order they happen in.
- Working scientifically: asking simple questions and recognising that they can be answered in different ways

**Year 2**

- To understand that there are four seasons and the weather changes depending on these seasons.
- Working scientifically: asking simple questions and recognising that they can be answered in different ways

**Lesson 2**

**Year 1**

- To observe and describe weather associated with autumn and how day length varies.
- Working scientifically: observing closely

**Year 2**

- To predict and observe the weather associated with autumn and how the lengths of the days change.
- Working scientifically: observing closely

**Lesson 3**

	<p>Year 1</p> <ul style="list-style-type: none"> <li>• To observe and describe weather associated with winter and how day length varies.</li> <li>• Working scientifically: observing closely</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To predict and observe the weather associated with winter and how the lengths of the days change.</li> <li>• Working scientifically: observing closely</li> </ul>
Lesson 4	<p>Year 1</p> <ul style="list-style-type: none"> <li>• To observe and describe weather associated with spring and how day length varies.</li> <li>• Working scientifically: observing closely</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To predict and observe the weather associated with spring and how the lengths of the days change.</li> <li>• Working scientifically: observing closely</li> </ul>
Lesson 5	<p>Year 1</p> <ul style="list-style-type: none"> <li>• To observe and describe weather associated with summer and how day length varies.</li> <li>• Working scientifically: using their observations and ideas to suggest answers to questions</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To predict and observe the weather associated with summer and how the lengths of the days change.</li> <li>• Working scientifically: using their observations and ideas to suggest answers to questions</li> </ul>
Lesson 6	<p>Year 1</p> <ul style="list-style-type: none"> <li>• To compare the weather within each season</li> <li>• Working scientifically: using observations and ideas to suggest answers to questions</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To compare the weather within each session including</li> <li>• Working scientifically: using observations and ideas to suggest answers to questions</li> </ul>
Vocabulary	
<p>Winter - December, January, February</p> <p>Spring - March, April, May</p> <p>Summer - June, July, August</p> <p>Autumn - September, October, November</p>	

Weather, daylight hours, compare, heatwave, shed

### Key Stage 1

#### Science

#### Autumn 1

#### Materials

#### Previous Learning

##### Year 1

Children can safely use and explore a variety of materials, tools and techniques. They can experiment with colour, design, texture, form and function.

##### Year 2

Children can distinguish between an object and the material it is made of. They can name basic materials such as paper, plastic and wood. Year 2 can identify each of their properties. They can describe the simple physical properties of a variety of everyday materials. Children are able to compare and group together a variety of everyday materials based on their simple physical properties.

#### Sticky Knowledge

1. A material is what an object is made from.
2. Materials are all around us, such as in the home, garden, school and park. Everyday materials include wood, plastic, glass, metal, water, rock, brick, paper and fabric.
3. 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.
4. Absorbent means to soak liquid up.
5. Waterproof means that water does not pass through.

#### Lesson 1

##### Year 1

- To distinguish between an object and the material from which it is made from.
- To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.
- Working Scientifically: Observing closely and identifying and classifying

##### Year 2

- To identify and compare the suitability of a variety of everyday materials.
- Working scientifically: Identifying and classifying and observing

Lesson 2	<p>Year 1</p> <ul style="list-style-type: none"> <li>• To describe the simple physical properties of a variety of everyday materials</li> <li>• Working Scientifically: To perform simple tests</li> </ul>
	<p>Year 2</p> <ul style="list-style-type: none"> <li>• To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</li> <li>• Working Scientifically: To perform simple tests</li> </ul>
Lesson 3	
	<p>Year 1</p> <ul style="list-style-type: none"> <li>• To distinguish between an object and the material from which it is made from.</li> <li>• Working scientifically: identifying and classifying</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To understand what absorbent and waterproof materials are and to be able to explain this</li> <li>• Working Scientifically: To gather and record data and to observe closely</li> </ul>
Lesson 4	<p>Year 1</p> <ul style="list-style-type: none"> <li>• To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.</li> <li>• Working Scientifically: Observing closely and identifying and classifying</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To identify and compare the suitability of a variety of everyday materials.</li> <li>• Working scientifically: Identifying and classifying and observing</li> </ul>
Lesson 5	<p>Year 1</p> <ul style="list-style-type: none"> <li>• describe the simple physical properties of a variety of everyday materials</li> <li>• compare and group together a variety of everyday materials on the basis of their simple physical properties</li> <li>• Working Scientifically: To perform simple tests</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• describe the simple physical properties of a variety of everyday materials</li> <li>• compare and group together a variety of everyday materials on the basis of their simple physical properties</li> </ul>

	<ul style="list-style-type: none"> <li>• Working Scientifically: To perform simple tests</li> </ul>
Vocabulary	
stretchy or stiff, rough or smooth, opaque or transparent, bendy or rigid, waterproof or not waterproof	

<p>Key Stage 1 Science Autumn 2 Animals including humans</p>	
<p>Previous Learning</p> <p>Year 1</p> <p>In Reception, children started to use chronological words and phrases to recognise when they were a baby, toddler and now.</p>	
<p>Year 2</p> <p>Children can label body parts and talk about how they have grown. They can also talk about their pets and can identify what classification they fit into. They can recall how we grow and can compare how they have grown throughout their lives. Children can describe and compare the structure of a variety of common animals such as pets, including fish and mammals. They can also name a variety of common animals that are carnivore, herbivores and omnivores.</p>	
<p>Sticky Knowledge</p>	
	<ol style="list-style-type: none"> <li>1. Identify and name a variety of fish and amphibians</li> <li>2. Identify and name a variety of reptiles, birds and mammals</li> <li>3. Animals need food, water, shelter, air to survive</li> <li>4. A food chain have a producer and a consumer</li> <li>5. Some animals are cold blooded</li> <li>6. Some animals are warm blooded</li> </ol>
Lesson 1	<p>Year 1</p> <ul style="list-style-type: none"> <li>• Identify and name a variety of common animals including fish, amphibians</li> <li>• Working scientifically: identifying and classifying</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To identify the difference between amphibians, fish, mammals, reptiles and birds.</li> <li>• Working scientifically: using observations and ideas to suggest answers</li> </ul>
Lesson 2	

	<p>Year 1</p> <ul style="list-style-type: none"> <li>• Identify and name a variety of common animals including reptiles, birds and mammals</li> <li>• Working scientifically: identifying and classifying</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To notice that animals, including humans, have offspring which grow into adults</li> <li>• Working scientifically: using observations and ideas to suggest answers</li> </ul>
Lesson 3	<p>Year 1</p> <ul style="list-style-type: none"> <li>• To identify and name a variety of common animals that are carnivores, herbivores and omnivores</li> <li>• Working scientifically: identifying and classifying</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</li> <li>• Working scientifically: asking simple questions</li> </ul>
Lesson 4	<p>Year 1</p> <ul style="list-style-type: none"> <li>• To describe and compare the structure of a variety of common animals (reptiles, birds and mammals)</li> <li>• Working scientifically: identifying and classifying</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene</li> <li>• Working scientifically: gathering and recording data to help in answering questions.</li> </ul>
Lesson 5	<p>Year 1</p> <ul style="list-style-type: none"> <li>• To describe and compare the structure of a variety of common animals (fish, amphibians, reptiles)</li> <li>• Working scientifically: using their observations and ideas to suggest answers to questions</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</li> <li>• Working scientifically: identifying and classifying.</li> </ul>
Lesson 6	<p>Year 1</p>

	<ul style="list-style-type: none"> <li>• To name basic parts of the body.</li> <li>• Working scientifically: identifying and classifying.</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To name basic parts of the body including skeleton, heart, lungs and the brain.</li> <li>• Working scientifically: identifying and classifying.</li> </ul>
Vocabulary	
<p>Skeleton, heart, lungs, brain, fish, amphibians, reptiles, food chain, hygiene, birds, mammals, carnivores, herbivores, omnivores, warm blooded, cold blooded</p>	

<p>Key Stage 1 Science Spring 2 Living things and their habitats</p>	
<p>Previous Learning Year 1 Children can recall important processes and changes in the natural world around them, including changing states of matter.</p> <p>Year 2 Year 2 can talk about the seasons in Africa and how it is hotter compared to England. Children can recall how this impacts animals and humans.</p>	
Sticky Knowledge	
<ol style="list-style-type: none"> <li>1. Compare the differences between living, dead and never been alive.</li> <li>2. Animals have different body parts E.g. some animals have scales but some animals have feathers.</li> <li>3. MRS GREN is a way to remember all the features of living things: Movement, Respiration, Sensitivity, Growth, Reproduction, Excretion and Nutrition</li> <li>4. A habitat is a place where living things, such as animals and plants, can find all of the things they need to survive.</li> <li>5. A micro-habitat is a smaller area where a plant or animal lives.</li> <li>6. Living things need different food sources.</li> </ol>	
<p>Lesson 1</p>	<p>Year 1</p> <ul style="list-style-type: none"> <li>• To explore and compare the differences between things that are living, dead and that have never been alive.</li> <li>• Working scientifically: grouping and classifying</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To explore and compare the differences between things</li> </ul>

	<p>that are living, dead and that have never been alive.</p> <ul style="list-style-type: none"> <li>• To explain why they have been grouped this way.</li> <li>• Working scientifically: grouping and classifying</li> </ul>
Lesson 2	<p>Year 1</p> <ul style="list-style-type: none"> <li>• To begin to explain how different habitats provide for different animals and plants.</li> <li>• Working scientifically: I can use my observations and ideas to suggest answers to questions</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To explain how different habitats provide for different animals and plants.</li> <li>• Working scientifically: Ask questions (Why? How? What if?)</li> <li>• Working scientifically: I can use my observations and ideas to suggest answers to questions</li> </ul>
Lesson 3	<p>Year 1</p> <ul style="list-style-type: none"> <li>• To explain how an animal is suited to its habitat.</li> <li>• Working scientifically: To identify and classify to order living things</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To explain how living things in a habitat depend on each other.</li> <li>• Working scientifically: using their observations and ideas to suggest answers to questions</li> </ul>
Lesson 4	<p>Year 1</p> <ul style="list-style-type: none"> <li>• Identify and name a variety of plants and animals in their habitats, including micro-habitats</li> <li>• Working scientifically: To recognise that answers can be answered in many different ways</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To explain how an animal is suited to its habitat and to explain how living things in a habitat depend on each other.</li> <li>• Working scientifically: using their observations and ideas to suggest answers to questions</li> </ul>
Lesson 5	<p>Year 1</p> <ul style="list-style-type: none"> <li>• Describe how animals obtain their food from plants and other animals and identify and name different sources of</li> </ul>

	<p>food.</p> <ul style="list-style-type: none"> <li>Working scientifically: identifying and classifying</li> </ul> <p><b>Year 2</b></p> <ul style="list-style-type: none"> <li>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain and be able to explain the difference between a herbivore and a carnivore.</li> <li>Working scientifically: asking simple questions and recognising that they can be answered in different ways</li> </ul>
<b>Vocabulary</b>	
<p>Habitat, animals, plants, living, dead, never alive, MRS GREN, food chain, Movement, Respiration, Sensitivity, Growth, Reproduction, Excretion and Nutrition, survive, micro-habitat</p>	

	<p><b>Key Stage 1</b>  <b>Science</b>  <b>Summer 1</b>  <b>Plants</b></p>
<p><b>Previous Learning</b></p>	
<p><b>Year 1</b></p>	
<p>Children can explore the natural world around them, making observations and drawing pictures of animals and plants over time. They can also recall similarities and differences between the natural world around them and contrasting environments.</p>	
	<p><b>Year 2</b></p>
	<p>In Year 1, the children learnt that plants are living things. Children can identify and name a variety of common wild and garden plants, alongside describing the basic structure of a variety of common flowering plants, including deciduous and evergreen trees whilst looking at the plants in the Jurassic coast area.</p>
	<p><b>Sticky Knowledge</b></p>
	<ol style="list-style-type: none"> <li>1. A plant is a living thing that usually grows from the ground.</li> <li>2. Trees are plants.</li> <li>3. In order for a seed to survive and grow into a strong plant it needs, water, sunlight and nutrients (food, that it gets from the soil).</li> <li>4. Deciduous tree is a tree that sheds its leaves</li> <li>5. Evergreen tree is a tree that does not shed its leaves.</li> <li>6. The basic structure of a tree - roots, trunk, branch, leaves</li> </ol>
<p><b>Lesson 1</b></p>	

	<p>Year 1</p> <ul style="list-style-type: none"> <li>• To know that objects, materials and living things can be looked at, compared and grouped according to their features.</li> <li>• Working scientifically: identifying and classifying</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• To know that objects, materials and living things can be looked at, compared and grouped according to their features and justify the reasons for the groupings</li> <li>• Working scientifically: identifying and classifying and using their observations and ideas to suggest answers to questions</li> </ul>
Lesson 2	<p>Year 1</p> <ul style="list-style-type: none"> <li>• identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</li> <li>• Working scientifically: asking simple questions and recognising that they can be answered in different ways</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• identify and name a variety of common wild and garden plants and name sunflowers, roses, lavender, and tulips. Explore deciduous trees and name silver birch and oak trees.</li> <li>• Working scientifically: asking simple questions and recognising that they can be answered in different ways</li> </ul>
Lesson 3	<p>Year 1</p> <ul style="list-style-type: none"> <li>• identify and describe the basic structure of a variety of common flowering plants, including trees.</li> <li>• Working scientifically: observing closely, using simple equipment</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• Identify and compare the structural features of different flowering plants</li> <li>• Working scientifically: observing closely, using simple equipment</li> </ul>
Lesson 4	<p>Year 1</p> <ul style="list-style-type: none"> <li>• observe and describe how seeds and bulbs grow into mature plants</li> <li>• Working scientifically: observing closely, using simple equipment</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• Explain the similarities and differences between the</li> </ul>

	<p>growth of seeds and bulbs</p> <ul style="list-style-type: none"> <li>Working scientifically: observing closely, using simple equipment</li> </ul>
Lesson 5 & 6	<p>Year 1</p> <ul style="list-style-type: none"> <li>To investigate what plants need to grow and be healthy</li> <li>Working scientifically: performing simple tests</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>To investigate and describe how plants need water, light and a suitable temperature to grow and stay healthy</li> <li>Working scientifically: gathering and recording data to help in answering questions.</li> </ul>
Vocabulary	
<p>deciduous, evergreen, plant, tree, leaf, stem, flower, petals, roots, seed, bulb, germination, temperature, sunlight, water, healthy, root, shoot</p>	