

# Pudsey Bolton Royd Primary School Science Long-Term Plan

## Year 2

<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>
<b>Enquiry Questions</b>		
What does my body need?		Why do different animals live in different places?
<b>Outcomes</b>		
Do I eat more fruit and vegetables on a school day than on the weekend? (Pattern seeking) Pupils produce a frequency table show results of the investigation.		How would you group these plants and animals based on what habitat you would find them in? (Identifying and classifying) Pupils identify a variety of species around school (plants, frogs, squirrels, insects). They then design an environment for their chosen living thing to live (like a hotel room). With a description of what it is like. Eg. For an insect it might be dark, warm and damp.
<b>Linked Texts</b>		
Lunchbox: The Story of Your Food (Paperback)		Why can't penguins fly?
<b>Linked Experiences</b>		
N/A		
<b>Overview</b>		
Through the main enquiry type of pattern seeking, pupils will investigate the key requirements for life on earth. They will begin collecting data from a variety of practical enquiries such as 'Do boys or girls wash their hands more times in a day?' and 'Do I eat more fruit and vegetables on a school day than on the weekend?' Pupils will make simple predictions about the results of an enquiry and record results as a tally, using the data collected to answer a variety of questions. Pupils will then keep a food and exercise diary and discuss the importance exercise and of eating a variety of foods.		In this unit, pupils will think about the difference between things that are living, dead and never alive. They will understand that not all living things are animals by discussing the key life processes. Pupils will then explore different habitats around school (pond, wooded area, grass) and discuss how the living things they find are suited to their environment. As part of this, pupils will be able to explain why certain living things would not be able to survive in certain areas (eg. Why wouldn't a work survive for long on the grass?) Pupils will then explore a variety of food chains, understanding that some living things obtain their food from plants, whilst others obtain it from other animals.
<b>Knowledge and/or Skills Covered</b>		
Ask and answer simple questions about what might happen (e.g. get hotter, faster) Make more sophisticated recordings during the enquiry process (e.g. frequency tables where the template is given) Answer questions about their predictions and results (e.g. were they right?)		Use first-hand observations with some simple equipment (e.g. magnifying glass) Identify differences and similarities in what they observe Explain their findings verbally, through writing, and in age-appropriate graphic form (block diagrams, pictograms, simple tables)

# Pudsey Bolton Royd Primary School Science Long-Term Plan

## Year 2

### National Curriculum Attainment Targets

Find out and describe the basic needs of animals, including humans, for survival (water, food, air).  
Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene  
Notice that animals, including humans, have offspring which grow into adults  
Gather and record data to help in answering questions.  
Use their observations and ideas to suggest answers to questions.

Explore and compare the differences between things that are living, dead and things that have never been alive.  
Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants.  
Identify and name a variety of plants and animals in their habitats, including micro-habitats.  
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.  
Identify and classify.

### Important Vocabulary

Balanced diet, adult, young, toddler, child, teenager, heart rate, fat, sugars, lifestyle.

Habitat (and name some eg log, pond), Environment, Conditions (and describe eg damp, dark), Life cycle, Food source, Predator, Prey, Reproduce, Suited, Adapted

# Pudsey Bolton Royd Primary School Science Long-Term Plan

## Year 2

<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
<b>Enquiry Questions</b>		
How does a plant get what it needs to survive?	How have the materials we use changed over time?	Which is the rainiest season?
<b>Outcomes</b>		
What happens to my seed after I have planted it? (observing over time)	How have the materials we use changed over time? (research)	Which is the rainiest season? (observing over time)
Diary of how the height of their plant changes over time.	Short presentation to their peers explaining how one item has changed over time.	Pupils keep a diary of the number of times it rains each month over the course of the year. Pupils draw a bar graph/pictogram showing results.
<b>Linked Texts</b>		
The magic and mystery of trees		Plants: How they change with the seasons
<b>Linked Experiences</b>		
	N/A	
<b>Overview</b>		
Building on their knowledge from Year 1, pupils will again have the opportunity to seeds sprout and grow into mature plants. Pupils will practise measuring accurately (to the nearest cm) and use this to record the changes in height of their plant. Pupils will also explore the school grounds, noticing the growth of many plants, including dandelions. Pupils will also explore the requirements for plant growth. They will observe what happens if a plant is not watered, frozen or grown in the dark.	Building their knowledge of distinguishing between an object and the material from Year 1, pupils will learn to select appropriate materials for relevant uses. They will use their knowledge of the properties of materials to go on a material scavenger hunt, selecting objects from around the school site that match the specification. Through the main enquiry type of research, pupils will look at how the materials we use has changed over time. Pupils will select an item, such as an umbrella, and investigate how the materials used to make it have changed. They will use a range of books and online sources and present their findings to their peers.	Building on their knowledge from year 1, pupils will comment on the weather and temperature they expect with each season. Pupils will document the number of days it rains across the year and begin to analyse the data at the end of the Summer term. Pupils will then get the opportunity to present their data as a simple graph and suggest further questions they would like to explore related to this topic.
<b>Knowledge and/or Skills Covered</b>		
Give a brief overview of their plans, in a context given to them, using some science vocabulary Measure to nearest cm (and equivalents) Make comments about the method (e.g. were there unforeseen variables?)	Start to select and use a range of books, websites, photos and other sources to learn about science Use everyday words but in a more precise way; occasionally use scientific vocabulary Show curiosity, e.g. voluntarily ask questions about what they have heard, read or observed Explain their findings verbally, through writing, and in age-appropriate graphic form (block diagrams, pictograms, simple tables)	Explain their findings verbally, through writing, and in age-appropriate graphic form (block diagrams, pictograms, simple tables) Answer questions about their predictions and results (e.g. were they right?)
<b>National Curriculum Attainment Targets</b>		
Observe and describe how seeds and bulbs grow into mature plants.	Ask simple questions and recognise that they can be answered in different ways.	Use their observations and ideas to suggest answers to questions.

# Pudsey Bolton Royd Primary School Science Long-Term Plan

## Year 2

Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. Observe closely using simple equipment.	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard, for particular uses. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	Performing simple tests
<b>Important Vocabulary</b>		
Growth, Shoot, Mature, Healthy, Earth (i.e. soil), Nutrients, Function	Man-made, natural, suitable, useful, function, property, rigid, flexible, waterproof.	Seasonal, Daily (weekly monthly etc), Fortnight, January, February (etc), Poles, Equator, Temperature