



Science at Beckford



We believe that Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

- THIS CURRICULUM MAP IS TO BE USED IN CONJUNCTION WITH THE A.S.E. PLANNING MATRICES AND OGDEN TRUST RESOURCES

Aim to ensure all pupils:

- develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics
- develop understanding of the **nature, processes and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the **uses and implications** of science, today and for the future.

YEAR 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic Title	SPACE.	WE ARE BUILDERS	HEROES	OUR SECRET GARDEN	CARNIVAL OF THE ANIMALS	TRAVELLERS
Science Unit	<p>Weather and Seasons-One week each term (Trees over time)</p> <p>Pupils should be taught to: Observe changes across the four seasons</p> <p>Observe and describe weather associated with the seasons and how day length varies.</p>					
	Humans and five senses	Materials	Healthy Eating and cooking	Healthy Eating and cooking	Living Things (Plants)	Animals including humans
Knowledge	<p>Pupils should be taught to:</p> <p>Identify, name draw and label the basic parts of the human body and say which parts of the body is associated with each sense.</p>	<p>Pupils should be taught to:</p> <p>Distinguish between an object and the material from which it is made.</p> <p>Identify and name a variety of everyday materials, including wood, plastic, glass, water and rock.</p> <p>Describe the</p>	<p>Pupils should be taught to:</p> <p>Understand the importance for humans of exercise, eating the right amounts of different types of food, and hygiene,</p> <p>That we need the right types and amount of nutrition, and that we get nutrition from</p>	<p>Pupils should be taught to:</p> <p>Understand the importance for humans of exercise, eating the right amounts of different types of food, and hygiene,</p> <p>That we need the right types and amount of nutrition, and that we get nutrition from what they eat</p>	<p>Pupils should be taught to:</p> <p>Identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen</p> <p>Identify and describe the basic structure of a variety of common plants including roots, stem/trunk, leaves and flowers.</p>	<p>Pupils should be taught to:</p> <p>Identify and name a variety of common animals that are birds, fish, amphibians, reptiles and mammals</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</p> <p>Describe and compare the structure of a variety of common animals (birds, fish, amphibians, reptiles and mammals, and including pets).</p>

		<p>physical properties of a variety of everyday materials.</p> <p>Compare and group together a variety of everyday materials on the basis of their physical properties.</p>	<p>what they eat</p> <p>To develop the knowledge to make and implement healthy food choices.</p>	<p>To develop the knowledge to make and implement healthy food choices.</p>		
Plants	<p>I can identify the roots, stem, trunk, leaves and flowers of a plant.</p> <p>Spring 2</p>	<p>I can identify and name some plants. I know the difference between deciduous and evergreen trees.</p> <p>Spring 2</p>	<p>I can observe and record the changes in plants in my local Environment over the course of the year.</p> <p>Spring 2</p>	<p>I know that plants need water and light to grow</p> <p>Spring 2</p>	<p>I can observe and describe the differences between plants grown in light and dark places.</p> <p>Spring 2</p>	
Animals including Humans	<p>I can name and draw and label the basic parts of the human body. I know the 5 senses and which part of the body is linked with which sense.</p>	<p>I can identify and name some animals.</p> <p>Summer 1</p>	<p>I can describe and compare the main body parts of different animals.</p> <p>Autumn 1</p>	<p>I know about common animal's diets and can identify if they are herbivore, carnivore or omnivore.</p>	<p>I can group animals by their body parts and what they eat. I can explain how I sorted the groups.</p>	<p>I am starting to recognise and use the words fish, amphibian, reptile, bird, and mammal when grouping animals.</p> <p>Summer 1</p>

	Autumn 1		Summer 1	Summer 1	Summer 1	
Everyday Materials	<p>I know the difference between an object and the material it is made from.</p> <p>Summer 2 Autumn 2</p>	<p>I can identify and name different everyday materials such as; wood, plastic, glass, metal, water and rock.</p> <p>I know that some materials are natural and some are man made.</p> <p>Summer 2 Autumn 2</p>	<p>I can explore and test different materials and can name the different properties; hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy, not bendy, waterproof, not waterproof, absorbent, not absorbent, transparent, translucent and opaque.</p> <p>Summer 2 Autumn 2</p>	<p>I know we chose the materials we use to make things because of their properties. I can group materials by their properties.</p> <p>Summer 2 Autumn 2</p>	<p>I can investigate how the shapes of solid objects can be changed by twisting, squashing, bending and stretching.</p> <p>Summer 2 Autumn 2</p>	<p>I can find out about scientists who have discovered and made new and useful materials.</p> <p>Summer 2 Autumn 2</p>
Seasonal Changes	<p>I can name the four seasons</p> <p>Aut 1 Spring 1 and 2</p>	<p>I can observe and record the changes in my environment over the seasons.</p>	<p>I can tell you what weather we have with each season.</p>	<p>I can see and describe how the length of the day changes with the seasons.</p>		

	Summer 1	Aut 1 Spring 1 and 2 Summer 1	Aut 1 Spring 1 and 2 Summer 1	Aut 1 Spring 1 and 2 Summer 1		
Skills	<p>Asking questions. Children should ask questions and recognise that they can be answered in different ways.</p> <p>Scientific enquiries. They should be able to do the following types of enquiry:</p> <ul style="list-style-type: none"> • Observations. They should observe closely, using equipment. • Simple tests • Identifying and classifying • Secondary sources. They should use secondary sources to find answers. <p>Recording. They should gather and record data to suggest answers to their questions. With help, they should record in a range of ways and begin to use scientific language.</p> <p>Analysing observations. They should use their observations and ideas to suggest answers to questions. They should notice patterns and relationships in their observations. They should talk about what they have found out and how they found out.</p>					
Working Scientifically Ideas and evidence	I can ask questions and recognise that they can be answered in different ways.	I can ask relevant questions and using different types of scientific enquiries to answer them.				
W S Planning Experimental Work	I can identify and classify. I can perform tests using equipment, observing closely.	I can set up practical enquiries, comparative and fair tests making				

		accurate and careful observations.				
W S Obtaining and Presenting Evidence	I can gather and record data to help in answering questions.	I can gather, record, classify and present data in a variety of ways to help in answering questions.				
W S Considering Evidence and Evaluating	I can use my observations and ideas to suggest answers to questions	I can use results to draw conclusions and suggest improvements				