Branton Primary School and Nursery

Cycle C Coverage

Branton Primary School and Nursery
Cycle C – Science Coverage KS2

LKS2 Topics			Living things: Clarification and Changing habitats	Making connections: Digestion and food	Materials: Sates of matter	Materials: Rocks and Soils	Energy: Light and Shadows	Energy – Electricity and circuits
UKS2 Topics			Living things: Classifying big and small	Living things: Life cycles and reproduction	Materials: Mixtures and separation	Materials: Properties and Changes	Energy: Light and reflection	Energy – Circuits, batteries and switches
Woking Scientifically	**LKS2**	Asking relevant questions and using different types of scientific enquiries to answer the		✔	✔	✔	✔	✔
		Setting up simple practical enquiries, comparative and fair tests		✔	✔	✔		✔
		Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers		✔	✔	✔		
		Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	✔	✔	✔	✔	✔	✔
		Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables		✔	✔	✔		✔
		Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions		✔	✔	✔		✔
		Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions		✔	✔	✔		

		Identifying differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific evidence to answer questions or to support their findings.	✔		✔	✔	✔	✔
	UKS2	Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary		✔	✔	✔	✔	✔
		Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate			✔	✔	✔	✔
		Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter			✔	✔	✔	✔
		Graphs, bar and line graph	✔	✔	✔	✔		
		Using test results to make predictions to set up further comparative and fair test reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations		✔	✔	✔	✔	✔
Animals Including Humans	LKS2	Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat		✔				
		Identify that humans and some other animals have skeletons and muscles for support, protection and movement.						
		Describe the simple functions of the basic parts of the digestive system in humans		✔				
		Identify the different types of teeth in humans and their simple functions		✔				

		Construct and interpret a variety of food chains, identifying producers, predators and prey.		✔				
		Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)		✔				
		Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.						
	UKS2	Describe the changes as humans develop to old age.		✔				
		Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function						
		Describe the ways in which nutrients and water are transported within animals, including humans.						
Living Things and their Habitats	LKS2	Recognise that living things can be grouped in a variety of ways	✔					
		Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment	✔					
		Recognise that environments can change and that this can sometimes pose dangers to living things.	✔					
	UKS2	Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird	✔					
		Describe the life process of reproduction in some plants and animals.	✔					
		Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals	✔					

		Give reasons for classifying plants and animals based on specific characteristics	✔					
Everyday materials/ Uses of everyday materials	LKS2	Compare and group materials together, according to whether they are solids, liquids or gases			✔			
		Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)			✔			
		Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.			✔			
	UKS2	Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets				✔		
		Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution			✔			
		Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating			✔			
		Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic				✔		
		Demonstrate that dissolving, mixing and changes of state are reversible changes			✔			
		Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.			✔			

Rocks	LKS2	Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties				✔		
		Describe in simple terms how fossils are formed when things that have lived are trapped within rock recognise that soils are made from rocks and organic matter.				✔		
Light	LKS2	Recognise that they need light in order to see things and that dark is the absence of light					✔	
		Notice that light is reflected from surfaces					✔	
		Recognise that light from the sun can be dangerous and that there are ways to protect their eyes recognise that shadows are formed when the light from a light source is blocked by an opaque object find patterns in the way that the size of shadows change					✔	
	UKS2	Recognise that light appears to travel in straight lines use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye					✔	
		Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes					✔	
		Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.					✔	
Energy -	LKS2	Identify common appliances that run on electricity construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers						✔
		Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery						✔

		Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit						✔
		Recognise some common conductors and insulators, and associate metals with being good conductors.						✔
	UKS2	Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit						✔
		Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches						✔
		Use recognised symbols when representing a simple circuit in a diagram.						✔

Branton Primary School and Nursery
Cycle C – Science Coverage EYFS and KS1

EYFS/KS1 Topics				Forces and Space: Seasonal changes	Living things: Habitats	Animals inc Humans: Life cycles and health	Making connections: Ocean protectors	Plants: introduction to plants	Plants: Plant growth
EYFS	0 to 3	**Communication and Language**	Understand simple questions about 'who', 'what' and 'where' (but generally not 'why').	✔	✔	✔	✔	✔	✔
		Physical Development	Show an increasing desire to be independent, such as wanting to feed themselves and dress or undress.	✔	✔	✔	✔	✔	✔
		Understanding the World	Repeat actions that have an effect. Explore materials with different properties. Explore natural materials, indoors and outside. Explore and respond to different natural phenomena in their setting and on trips.	✔	✔	✔	✔	✔	✔
	3 to 4	**Communication and Language**	Understand 'why' questions, like: "Why do you think the caterpillar got so fat?"	✔	✔	✔	✔	✔	✔
		Physical Development	Make healthy choices about food, drink, activity and tooth brushing.	✔	✔	✔	✔	✔	✔

		Understanding the World	Use all their senses in hands-on exploration of natural materials. Explore collections of materials with similar and/or different properties. Talk about what they see, using a wide vocabulary. Begin to make sense of their own life-story and family's history. Explore how things work. Plant seeds and care for growing plants. Understand the key features of the life cycle of a plant and an animal. Begin to understand the need to respect and care for the natural environment and all living things. Explore and talk about different forces they can feel. Talk about the differences between materials and changes they notice.	✔	✔	✔	✔	✔	✔
	Rec	**Communication and Language**	Learn new vocabulary. Ask questions to find out more and to check what has been said to them. Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail. Use talk to work out problems and organise thinking and activities. Explain how things work and why they might happen. Use new vocabulary in different contexts.	✔	✔	✔	✔	✔	✔
		Physical Development	Know and talk about the different factors that support their overall health and wellbeing: -regular physical activity - healthy eating	✔	✔	✔	✔	✔	✔

				-tooth brushing -sensible amounts of 'screen time' - having a good sleep routine - being a safe pedestrian						
		Understanding the World		Explore the natural world around them. Describe what they see, hear and feel while they are outside. Recognise some environments that are different to the one in which they live. Understand the effect of changing seasons on the natural world around them.	✔	✔	✔	✔	✔	✔
	ELG	**Communication and Language**	**Listening, Attention and Understanding**	Make comments about what they have heard and ask questions to clarify their understanding.	✔	✔	✔	✔	✔	✔
		Personal, Social and Emotional Development	**Managing Self**	Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.	✔	✔	✔	✔	✔	✔
		Understanding the World	**The Natural World**	Explore the natural world around them, making observations and drawing pictures of animals and plants.	✔	✔	✔	✔	✔	✔

EYFS/KS1 Topics			Forces and Space: Seasonal changes	Living things: Habitats	Animals inc Humans: Life cycles and health	Making connections: Ocean protectors	Plants: introduction to plants	Plants: Plant growth
Working Scientifically	KS1	Asking simple questions and recognising that they can be answered in different ways	✔		✔		✔	✔
		Observing closely, using simple equipment	✔				✔	✔
		Performing simple tests					✔	✔
		Identifying and classifying		✔	✔		✔	
		Using their observations and ideas to suggest answers to questions	✔				✔	✔
Seasonal Changes	KS1	Observe changes across the four seasons	✔					
		Observe and describe weather associated with the seasons and how day length varies.	✔					
Living Things and Their	KS1	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, and how they depend on each other		✔				
		Identify and name a variety of plants and animals in their habitats, including microhabitats		✔				

		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.		✔				
Animals including Humans	KS1	Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with which sense.			✔			
		Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals			✔			
		Identify and name a variety of common animals that are carnivores, herbivores and omnivores			✔			
		Describe and compare the structure of a range of common animals (fish, amphibians, reptiles, birds and mammals, including pets)			✔			
		Notice that animals, including humans, have offspring which grow into adults			✔			
		Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)			✔			
		Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.			✔			
Plants	KS!	Identify and name a variety of common, wild and garden plants, including deciduous and evergreen.					✔	
		Identify the basic structure of a range of common flowering plants, including trees.					✔	
		Observe and describe how seeds and bulbs grow into mature plants					✔	✔

		Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy**.**						✔