

Working Scientifically KS1						
Objective	General	Observing changes over time	Comparative and fair tests	Identifying and classifying	Looking for naturally occurring patterns and relationships	Researching using secondary sources
	Demonstrate curiosity, e.g. ask 'why?' or 'how?' about the world around them.	Understand that we can gather information about the world through our senses.	When prompted, say what is happening/has happened to things or events.	Sort and match objects and living things in their own way.	Notice what has changed when observing things or events.	Use simple secondary sources, e.g. books, film, internet, to find information.
	Understand the concept of 'a question'.	Understand that observation involves all of the senses.	With help, make changes and say what has changed.	Sort and group objects and living things in different ways.	Talk about what they have found out or what they think may happen.	Use information from secondary sources to help answer a question.
	Be able to ask a question.	Use simple equipment provided, e.g. hand lenses, to make more accurate observations.	Be able to compare features of two objects.	Recognise similarities and differences.	Begin to recognise links between observations and answers to questions.	Be able to record their findings in charts.
	Be able to suggest one way of finding an answer to a question.	Recognise that some observable features may change over time, e.g. the size of a plant.	Be able to identify two variables in an investigation, e.g. water and light when investigating plant growth.	Use simple observable features to compare objects or living things.	With help, begin to notice patterns and relationships.	Gathering and recording data to help in answering questions.
	Understand that some questions can be answered by testing.	Observing closely, using simple equipment.	Suggest a practical way to find something out.	Be able to describe how they sorted objects.	Begin to use simple scientific language to talk about what they have found out.	Make some independent choices about appropriate ways to record data.
	With help, identify evidence that can be used to answer questions.	Use a range of equipment correctly to observe and measure.	Be able to identify things to measure and things to observe.	Use observable features of objects to identify them.	Be able to communicate their ideas to a range of audiences in a variety of ways.	Select the best way of presenting information from a range of options.
	Present evidence they have collected in simple tables, charts or diagrams.	Be able to select appropriate equipment to observe.	Be able to set up a comparative test.	Identifying and classifying.	Using their observations and ideas to suggest answers to questions.	



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Objective	Asking simple questions and recognising that they can be answered in different ways.		Performing simple tests.	Begin to classify and identify by linking observable features to already known objects or things.	Use evidence to suggest answers to questions and make predictions.	
	Be able to suggest more than one way of finding an answer to a question, e.g. by research, by testing.		Start to recognise when a test is not fair and suggest improvements.	Explain which observable features have led them to classify in a particular way.	Say whether what happened was what they expected.	
	Suggest 'testable questions' that can be answered in classroom investigations.					



Knowledge Year 2				
Objective	Biology			Chemistry
	Plants	Animals, including humans	Living things and their habitats	Uses of everyday materials
	Know that seeds and bulbs come from plants. Y2 GP L1, L5	Be able to distinguish living things from non-living things or things that were once alive. Y2 LT L1, L2	Understand that all living things share similar basic life processes (nutrition, growth, respiration, reproduction). Y2 LT L1; Y2 FAE L1	Identify the properties of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard. Y2 UOM L1, L2
Recognise that seeds from different plants are different from each other. Y2 GP L1, L3	Understand that humans and other living things grow. Y2 LT L2	Know that living things can die. Y2 LT L3, L4, L5	Identify and name a variety of different materials. Y2 UOM L1	
Be able to sort seeds from non-seeds. Y2 GP L1	Know that humans and other animals change in appearance as they grow. Y2 LT L3	Know that some non-living things may once have been alive. Y2 LT L1	Know that some objects are made from more than one material and identify the different materials. Y2 UOM L1	
Understand that seeds and bulbs have the potential to grow into plants that are the same as their parent plant. Y2 GP L4, L6	Know that baby animals grow to resemble their adult parents. Y2 LT L4	Explore and compare the differences between things that are living, dead, and things that have never been alive. Y2 LT L1, L2, L6	Understand that similarities in physical properties of different materials can make them suitable for use in the same type of object. Y2 UOM L2, L6	
Understand that plant growth is a long process and that plants change their appearance over time as they grow. Y2 GP L1, L3	Recognise typical characteristics of and name distinct phases of human growth (baby, toddler, child, teenager and adult). Y2 LT L3, L4, L5	Know that most living things live within particular environments which best provide for their basic needs, e.g. food, shelter, safety. Y2 H L1	Explain why a certain material is suitable for an object. Y2 UOM L2, L4, L5	
Observe and describe how seeds and bulbs grow into mature plants. Y2 GP L1, L4, L5, L6	Notice that animals, including humans, have offspring which grow into adults. Y2 LT L3, L4, L5, L6	Know that the scientific name for the 'home' of a living thing is habitat. Y2 H L1	Explain why a certain material is unsuitable for an object. Y2 UOM L2, L5	



	Plants	Animals, including humans	Living things and their habitats	Uses of everyday materials
Objective	Understand that plants can produce seeds and new plants without human intervention. Y2 GP L1, L2, L3	Understand that all living things have the same basic needs to stay alive. Y2 FAE L1	Recognise that there are many different habitats. Y2 HL2	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Y1 UOM L1, L2, L3, L4, L5, L6
	Know that when people grow plants from seeds they need to provide particular conditions. Y2 GP L2	Know that animals, including humans, need to eat, drink and breathe to stay alive. Y2 FAE L1	Recognise that different plants and animals live in different habitats. Y2 HL2	Understand that physical forces can make materials change shape. Y2 CS L1, L2, L3, L4, L5, L6
	Be able to name basic plant needs. Y2 GP L2	Understand that different animals eat different food. Y2 FAE L2, L3	Understand that living things can be dependent on each other, e.g. for food. Y2 HL2, L6	Identify materials that can be squashed and those which cannot. Y2 CS L5
	Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. Y2 GP L2, L3	Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Y2 FAE L1, L2	Recognise that some animals and plants have features that best suit them to a particular habitat, e.g. that fish have gills, polar bears have white fur. Y2 HL1	Compare the stretchiness of different materials. Y2 CS L2
		Understand the importance for humans of eating the right amount of different types of food. Y2 FAE L5	Know that it would be difficult for some living things to survive in habitats to which they are not suited. Y2 HL2, L6	Understand that bending can change the shape of some materials. Y2 CS L3
		Understand the consequences of insufficient exercise, poor diet and poor personal hygiene. Y2 FAE L6	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. Y2 HL1, L2, L3, L5, L6	Classify materials according to their ability to bend. Y2 CS L3
		Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. Y2 FAE L5, L6	Understand that within habitats there may be smaller habitats called micro-habitats. Y2 HL2, L3, L4, L5	Recognise that some materials can be twisted together. Y2 CS L4
			Identify and name a variety of plants and animals in their habitats, including micro-habitats. Y2 HL4	Recognise that twisting materials together can increase the strength of the material. Y2 CS L4



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Objective			Know that food can be of plant origin or animal origin. Y2 FAE L2	Compare materials that change their shape by squashing, bending, twisting or stretching. Y2 CS L1, L6
			Understand that some animals eat plants, that some eat other animals and that some eat both plants and animals. Y2 FAE L3	Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. Y2 CS L1, L2, L3, L4, L5, L6
			Know that animals depend on plants and animals in their environment for food. Y2 FAE L3	
			Know the term 'food chain' and recognise its sequential nature starting with green plants. Y2 FAE L3	
			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. Y2 FAE L3, L4	

