

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.	



	General	Observing changes over time	Comparative and fair tests	Identifying and classifying	Looking for naturally occurring patterns and relationships	Researching using secondary sources
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 1				
Objective	Biology		Chemistry	Physics
	Plants	Animals, including humans	Everyday materials	Seasonal changes
	Understand that some things are living and others are not living and be able to distinguish between these. Y1 P L1	Identify what an animal is. Y1 TOA L1	Identify a variety of different objects. Y1 IM L2, L4, L6	Name the four seasons. Y1 CS L1
Know that plants are living things and be able to distinguish plants from other living things. Y1 P L1	Name some animals, e.g. pets, farm and zoo animals such as cats, dogs and fish. Y1 TOA L1	Understand that the same object can be made from different materials. Y1 IM L4	Observe and describe the appearance of an evergreen and deciduous tree across the seasons. Y1 CS L1, L5	
Recognise that trees and grasses are plants. Y1 P L3	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Y1 TOA L1, L2, L3, L4, L6	Distinguish between an object and the material from which it is made. Y1 IM L1, L4, L6	Identify local plants and animals found across the seasons. Y1 CS L1, L5	
Know the differences between deciduous and evergreen trees (by observation). Y1 P L3	Recognise external features of animals, e.g. fur, feathers, wings, fins etc. Y1 TOA L1	Match objects made out of the same material. Y1 IM L2	Compare differences between local plants and animals across the four seasons. Y1 CS L6	
Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Y1 P L1, L3, L5, L6	Identify differences and similarities between animals, including pets that belong to different animal groups. Y1 POA L6; Y1 TOA L3	List some common materials including solids and liquids. Y1 IM L2, L3, L6	Observe changes across the four seasons. Y1 CS L1, L2, L3, L4, L5, L6	
Know that plants have features in common. Y1 P L2	Be able to sort animals by observable features (scales, wings, beaks). Y1 TOA L4	Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock. Y1 IM L1, L2, L3, L4, L5, L6	List the different types of weather. Y1 CS L1	



	Plants	Animals, including humans	Everyday materials	Seasonal changes
Objective	Identify and name the leaf, flower, root, and stem in plant specimens, diagrams and photographs. Y1 P L2	Compare external features of humans with other animals. Y1 POA L5, L6	Recall and understand the terms hard/soft, stretchy/stiff, shiny/dull, rough/smooth and bendy/not bendy. Y1 CM L1, L2, L3, L6	Understand weather can be recorded using symbols and recognise these. Y1 CS L1
	Know that some trees have special names for plant parts, e.g. blossom, branch, trunk. Y1 P L4	Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). Y1 POA L5, L6	Identify materials that feel soft, hard, flexible, rough, smooth, cold, warm, brittle, blunt, sharp, stretchy, squashy, sticky and/or transparent. Y1 CM L1, L3, L6	Record observations of the daily weather using symbols on a weather chart. Y1 CS L2
	Identify and describe the basic structure of a variety of common flowering plants, including trees. Y1 P L2, L4	Know that different animals eat different things. Y1 TOA L5	Choose the correct material from a selection matching a description outlining its physical properties. Y1 CM L1	Describe changes in the weather across the seasons. Y1 CS L4, L6
		Distinguish between the diets of carnivores, herbivores and omnivores. Y1 TOA L5	Describe the simple physical properties of a variety of everyday materials. Y1 CM L1, L2, L4, L5, L6	Compare how dark or light it is at bed time and in the morning throughout the seasons. Y1 CS L3, L6
		Know that animals can be sorted into groups by what they eat, e.g. herbivores, carnivores and omnivores. Y1 TOA L5	Outline differences between two different materials. Y1 CM L1, L3	Understand that day length refers to the length of daylight. Y1 CS L3
		Identify and name a variety of common animals that are carnivores, herbivores and omnivores. Y1 TOA L2, L5, L6	Outline similarities between two different materials. Y1 CM L1, L3	Observe and describe weather associated with the seasons and how day length varies. Y1 CS L1, L2, L3, L4, L5, L6
		Name and identify the main human body parts (arms, legs, chest, head etc.). Y1 POA L1	Sort materials into two groups using opposites or by whether something does or does not have a certain property. Y1 CM L3	



	Plants	Animals, including humans	Everyday materials	Seasonal changes
Objective		Name the five senses. Y1 POA L3	Compare and group together a variety of everyday materials on the basis of their simple physical properties. Y1 CM L1, L2, L3, L4, L5, L6	
		Identify which body part is associated with each sense (for touch, skin rather than hands/fingers). Y1 POA L3, L4, L5		
		Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. Y1 POA L1, L2, L3, L4		

