

Whole School Curriculum Overview – Science (Biology)

	Milestone 1 (Year 1 & 2)	Milestone 2 (Year 3 & 4)	Milestone 3 (Year 5 & 6)
To work scientifically	Ask simple questions.	Ask relevant questions.	Plan enquiries, including recognising and controlling variables where necessary.
	Observe closely, using equipment.	Set up practical enquiries and comparative and fair tests.	Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work.
	Perform simple tests.	Make accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers.	Take measurements, using a range of scientific equipment, with increasing accuracy and precision.
	Identify and classify.	Gather, record, classify and present data in a variety of ways to help in answering questions.	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs and models.
	Use observations and ideas to suggest answers to questions.	Record findings using simple scientific language, drawings. Labelled diagrams, bar charts and tables.	Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships and conclusions.
	Gather and record data to help in answering questions.	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.	Present findings in written forms, displays and other presentations.
		Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests.	Use test results to make predictions to set up further comparative and fair tests.
		Identify differences, similarities or changes related to simple, scientific ideas and processes.	Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments.
		Use straightforward, scientific evidence to answer questions or to support their findings.	
To understand plants	Identify and name a variety of common plants, including garden plants, wild plants and trees and those classified as deciduous and evergreen.	Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers.	Relate knowledge of plants to studies of evolution and inheritance.
	Identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers.	Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.	Relate knowledge of plants to studies of all living things.
	Observe and describe how seeds and bulbs grow into mature plants.	Investigate the ways in which water is transported within plants.	
	Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	Explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	
To understand animals and humans	Identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates.	Identify that animals, including humans, need the right types and amounts of nutrition, that they cannot make their own food and they get nutrition from what they eat.	Identify and name the main parts of the human circulatory system, and explain the functions of the heart, blood vessels and blood (including the pulse and clotting).
	Identify and name a variety of common animals that are carnivores, herbivores and omnivores.	Describe the ways in which nutrition's and water are transported within animals, including humans.	
	Describe and compare the structure of a variety of common animals (birds, fish, amphibians, reptiles, mammals and invertebrates, including pets).	Identify that humans and some animals have skeletons and muscles for support, protection and movement.	
	Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	Describe the simple functions of the basic parts of the digestive system in humans.	
	Notice that animals, including humans, have offspring which grow into adults.	Identify the different types of teeth in humans and their simple functions.	
	Investigate 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.		
To investigate living things	Explore and compare the differences between things that are living, that are dead and that have never been alive.	Identify and name a variety of living things (plants and animals) in the local and wider environment, using classification keys to assign them to groups.	Describe the life cycles common to a variety of animals, including humans (birth, growth, development, reproduction, death) and to a variety of plants (growth, reproduction and death).
	Identify that most living things live in habitats to which they are suited and describe how different habitats provide for	Give reasons for classifying plants and animals based on specific characteristics.	Explain the classification of living things into broad groups according to common, observable characteristics and based on

	the basic needs of different kinds of animals and plants and how they depend on each other.		similarities and differences, including plants, animals and micro-organisms.
		Recognise that environments are constantly changing and that this can sometimes pose dangers to specific habitats.	Describe the life process of reproduction in some plants and animals.
			Describe the changes as humans develop from birth to old age.
			Recognise the impact of diet, exercise, drugs and lifestyle on the way human bodies function.
To understand evolution and inheritance	Identify how humans resemble their parents in many features.	Identify how plants and animals, including humans, resemble their parents in many features.	Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.
		Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.	Describe how adaptation leads to evolution.
		Identify how animals and plants are suited to and adapt to their environment in different ways.	Recognise how and why the human skeleton has changed over time.