

Science Progression of Skills

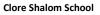
	EYFS	YEAR 1	YEAR 2`	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Working scientifically Plan	Questions why things happen Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world	Ask simple questions when prompted Suggest ways of answering a question	Ask simple questions Recognise that questions can be answered in different ways	Ask relevant questions when prompted Use different types of scientific enquiry to answer them. Set up simple and practical enquiries, comparative and fair tests with some support.	Ask relevant questions. Use different types of scientific enquiries to answer their questions Set up simple and practical enquiries, comparative and fair tests	Plan different types of scientific enquiries to answer questions. With prompting, recognise and control variables where necessary	Plan different types of scientific enquiries to answer questions Recognise and control variables where necessary
Working scientifically Do	Show curiosity about objects, events and people Find ways to solve problems / find new ways to do things / test their ideas Develop ideas of grouping, sequences, cause and effect Create simple representations of events, people and objects	Make relevant observations using simple equipment Conduct simple tests, with support Identify and classify with guidance	Observe closely, using simple equipment Perform simple tests Identify and classify	Make systematic and careful observations, using simple equipment Use standard units when taking measurements	Make systematic and careful observations using a range of equipment, including thermometers and data loggers Take accurate measurements using standard units, where appropriate	Select, with prompting, and use appropriate equipment to take readings Take precise measurements using standard units Begin to understand the need for repeat readings	Use a range of scientific equipment to take measurements Take measurements with increasing accuracy and precision Take repeat readings when appropriate



Working scientifically Record	Engage in open- ended activity Take a risk, engage in new experiences and learn by trial and error Find ways to solve problems / find new ways to do things / test their ideas	Gather and record data	Record and communicate their findings in a range of ways and begin to use simple scientific language Gather and record data to help answer questions	With modelling and guidance, gather, record, classify and present data in a variety of ways to help to answer questions With prompting, use various ways of recording,	Gather, record, classify and present data in a variety of ways to help to answer questions Record findings using simple scientific language, drawings and labelled diagrams	Take and process repeat readings Record data and results Record data using labelled diagrams, keys, tables and charts Use line graphs to record data	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar charts and line graphs
Working	Making tally charts Choose the	Recognise findings	Use their	grouping and displaying evidence and suggest how findings may be tabulated With prompting,	Record findings using keys, bar charts, and tables Report on findings	Report and present	Report and present
scientifically Review	resources they need for their chosen activities Handle equipment and tools effectively Answer how and why questions about their experiences Make observations Develop their own narratives and explanations by connecting ideas or events Explain why some	Use their observations and ideas to suggest answers to simple questions	observations and ideas to suggest answers to simple questions	suggest conclusions from enquiries Suggest how findings could be Reported Suggest possible improvements or further questions to investigate	from enquiries, including oral and written explanations, of results and conclusions Report on findings from enquiries using displays or presentations Identify differences, similarities or changes related to simple scientific ideas and	findings from enquiries, including conclusions and, with prompting, suggest causal relationships With support, present findings from enquiries orally and in writing Suggest further comparative or fair tests	findings from enquiries, including conclusions and causal relationships Report and present findings from enquiries, including explanations of, and degree of, trust in results Identify scientific evidence that has been used to support or refute ideas or arguments
	Explain why some things occur and				scientific ideas and processes		arguments



	talk about changes Build up vocabulary that reflects the breadth of their experience				Use straightforward scientific evidence to answer questions or to support their findings Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions Report and presents findings from enquiries in oral and written forms such as displays and other presentation		Use test results to make predictions to set up further comparative and fair tests
Animals including Humans	Know about the similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another.	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	Understand that animals, including humans, have offspring which grow into adults Describe the basic needs of animals, including humans, for survival (water, food and air)	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	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	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





	They make observations of animals and plants and explain why some things occur, and talk about changes.	omnivores Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) Identify, name,	Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene	other animals have skeletons and muscles for support, protection and movement	of food chains, identifying producers, predators and prey.		the way their bodies function. Describe the ways in which nutrients and water are transported within animals, including humans (see also Evolution and
		draw and label the basic parts of the human body and say which part of the body is associated with each sense					inheritance
Living Things and their habitats	Looking at life cycles	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			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	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.charact eristics and based on similarities and differences, including microorganisms, plants and animals. Give reasons for classifying



		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			sometimes pose dangers to living things.		plants and animals based on specific characteristics (see also Evolution and inheritance
		sources of food					
Plants	They make observations of animals and plants and explain why some things occur, and talk about changes.	Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees Identify and describe the basic structure of a variety 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	Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers Explore the requirements of plants for life and		Describe the life process of reproduction in some plants (living things and their habitats unit)	

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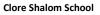
Seasonal Change	Look at the	Observe changes		growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. Investigate the way in which water is transported within plants Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.			
Seasonal Change	weather outside. Noticing the changing seasons.	across the four seasons - observe and describe weather associated with the seasons and how day length varies.					
Materials	Use senses to explore the world around them Make links and notice patterns in their experiences They will observe and manipulate objects and	(Everyday materials) Distinguish between an object and the material from which it is made. Identify and name a variety of	(Uses of everyday materials) Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick,		(States of Matter) Compare and group materials together, according to whether they are solids, liquids or gases. Observe that some materials	Properties and Changes of materials) Compare and group together everyday materials on the basis of their properties, including their	



materials to	everyday materials,	rock, paper and	change state when	hardness, solubility,	
identify differences	including	cardboard for	they are	transparency,	
and similarities.	wood, plastic, glass,	particular uses find	heated or cooled,	conductivity	
	metal,	out how the	and measure or	(electrical and	
	water, and rock.	shapes of solid	research the	thermal), and	
	Describe the simple	objects made	temperature at	response to	
	physical	from some	which this happens	magnets.	
	properties of a	materials can be	in degrees	Know that some	
	variety of	changed by	Celsius (°C).	materials will	
	everyday materials.	squashing, bending,	Identify the part	dissolve in liquid to	
	Compare and group	twisting and	played by	form a solution,	
	together a	stretching.	evaporation and	and describe how	
	variety of everyday		condensation in	to recover a	
	materials on		the water cycle and	substance from a	
	the basis of their		associate the	solution	
	simple physical		rate of evaporation	Use knowledge of	
	properties.		with	solids, liquids and	
			temperature	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.	
				μιαδιίς.	



			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		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		
1		are made from		
		rocks and		





Light	Investigations using	Recognise that they		Recognise that light
0	torches.	need light		appears to
		in order to see		travel in straight
		things and that		lines
		dark is the absence		use the idea that
		of light.		light travels in
		Notice that light is		straight lines to
		reflected		explain that
		from surfaces.		objects are seen
		Recognise that light		because they
		from the		give out or reflect
		sun can be		light into the
		dangerous and that		eye
		there are ways to		explain that we see
		protect their		things
		eyes.		because light
		Recognise that		travels from light
		shadows are		sources to our eyes
		formed when the		or from light
		light from a		sources to objects
		light source is		and then to
		blocked by a solid		our eyes
		object.		use the idea that
		Find patterns in the		light travels in
		way that		straight lines to
		the size of shadows		explain why
		change		shadows have the
				same shape as
				the objects that
				cast them.
Sound			Identify how	
			sounds are made,	
			associating some of	
			them with	
			something	
			vibrating.	



				Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of a sound and features of the object that produced it.		
				Find patterns between the		
				volume of a sound and the		
				strength of the vibrations that		
				produced it.		
				Recognise that		
				sounds get fainter		
				as the distance		
				from the sound		
				source increases.		
Forces and	Investigating with		compare how		explain that	
magnets	water and magnets.		things move on		unsupported	
			different surfaces		objects fall towards	
			 notice that some 		the Earth because	
			forces need contact		of the force of	
			between		gravity acting	
			two objects, but		between the Earth	
			magnetic forces		and the falling	
			can act at a		object - identify	
			distance - observe		the effects of air	
			how magnets		resistance, water	
			attract or repel		resistance and	

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		and athe		futation at 1	[]
		each other and		friction, that act	
		attract some		between moving	
		materials and not		surfaces -	
		others - compare		recognise that	
		and group together		some mechanisms,	
		a variety of		including	
		everyday materials		levers, pulleys and	
		on the basis of		gears, allow a	
		whether they		smaller force to	
		are attracted to a		have a greater	
		magnet, and		effect.	
		identify some			
		magnetic materials			
		- describe magnets			
		as having			
		two poles - predict			
		whether two			
		magnets will			
		attract or repel			
		each other,			
		depending on			
		which			
		poles are facing			
Electricity		poles are racing	Identify common		- associate the
Licenterty			appliances that run		brightness of a
			on electricity.		lamp or the volume
			Construct a simple		of
			series electrical		a buzzer with the
			circuit,		number and
			identifying and		voltage of cells used in
			naming its basic		
			parts, including		the circuit -
			cells,		compare and give
			wires, bulbs,		reasons for
			switches and		variations
			buzzers.		





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Moon relative to The Earth - describe The Sun, Earth and					system -	
Moon relative to the Earth - describe the Sun, Earth and					describe the	
the Earth - describe the Sun, Earth and					movement of the	
the Sun, Earth and					Moon relative to	
the Sun, Earth and					the Earth - describe	
					Moon as	



			approximately spherical bodies - use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	
Evolution and inheritance				Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago - recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents - identify how animals and plants are adapted to suit their environment in



			different ways and
			that adaptation
			may lead to
			evolution.