Long Lawford Primary School
Love, Learn, Persevere and Succeed

Science Assessment Grid

Highlight the statements that most of the class have achieved as you teach them.

Working Scientifically					
Y1 with guidance	**Y2 with guidance**	**Y3 with guidance**	**Y4 with increasing independence**	**Y5 with guidance**	**Y6 with increasing independence**
Ask questions stimulated by their exploration of their world.	Ask questions stimulated by their exploration of their world.	Ask relevant questions and use supported scientific enquiry to answer them.	Ask relevant questions and use different types of scientific enquiries to answer them.	Plan enquiries, including recognising and controlling variables where necessary.	Plan enquiries, identifying control, dependent and independent variables.
Use their senses and simple equipment to make observations.	Identifying things to measure or observe.	Carry out simple practical enquiries, comparative and fair tests	Carry out simple practical enquiries, comparative and fair tests	Take accurate and precise measurements, selecting and using a range of scientific equipment.	Take accurate and precise measurements, selecting and using a range of scientific equipment.
Recognise basic features of objects, living things or events.	Make comparisons between basic features or components of objects, living things or events.	Make systematic and careful observations	Make systematic and careful observations	Record data using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models.	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models.
Say what has changed when observing objects, living things or events.	Correctly use equipment provided to make observations and measurements.	Take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.	Take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.	Use patterns and trends in data to identify investigation outcomes in oral forms.	Report findings from enquiries within oral explanations of results, explanations identifying causal relationships, and conclusions. (e.g. the greater the___the _____.)
Perform simple tests.	Perform simple tests.	Gather, record, classify and present data in a variety of ways to help in answering questions.	Gather, record, classify and present data in a variety of ways to help in answering questions.	Use patterns and trends in data to identify investigation outcomes in written forms.	Report findings from enquiries within written explanations of results, explanations identifying causal relationships, and conclusions. (e.g. the greater the___the _____.)
Identify a link to science in familiar objects or real world contexts.	Identify difference, similarities or changes.	Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables, using appropriate models from staff.	Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	Present findings in written form, displays and other presentations.	Use test results to suggest and inform future comparative tests.
	Sort and group objects, living things or events on the basis of what they have observed.	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Identify how test results can be used to make predictions when setting up further comparative and fair tests.	Present findings in written form, displays and other presentations.
Draw on their everyday experience to help answer questions.	Draw on their observations and ideas to offer answers to questions.	Use collected results to draw simple conclusions.	Use results to draw simple conclusions.	Use simple models to describe scientific ideas.	Use simple models to describe scientific ideas.
Use everyday terms to describe simple features or actions of objects, living things or events they observe.	Use simple scientific vocabulary to describe their ideas and observations.	Begin to use collected data to make predictions for future values.	Use results to make predictions for new values.	Use scientific evidence to support or refute ideas or arguments.	Identify scientific evidence that has been used to support or refute ideas or arguments.
Respond to prompts to say what happened.	Say what happened in their experiment or investigation.	Use results to suggest improvements and raise further questions.	Use results to suggest improvements and raise further questions.	Use relevant, precise and specific scientific vocabulary within feedback and discussions.	Use relevant, precise and specific scientific vocabulary within feedback and discussions.
	Present ideas and evidence in appropriate ways.	Identify differences, similarities or changes related to simple scientific ideas and processes.	Identify differences, similarities or changes related to simple scientific ideas and processes.		
	Gather data by using simple texts and electronic media to find information.	Use straightforward scientific evidence (e.g. from whole class investigation) to answer questions or to support findings.	Use straightforward scientific evidence to answer questions or to support findings.		
	Make some suggestions about how to collect data to answer a question.				

Long Lawford Primary School
Love, Learn, Persevere and Succeed

Science Assessment Grid

Plants					
Y1 with guidance	Y2 with guidance	Y3	Y4	Y5	Y6
Identify and name a variety of common wild and garden plants, including trees.					
Identify and describe the basic structure of common flowering plants.	Observe and describe how seeds and bulbs grow into mature plants.	Identify and describe the functions of different parts of flowering plants (roots, stem, leaves, and flowers).			
	Find out and describe how plants need water, light and suitable temperature to grow and stay healthy.	Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, 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.			

Animals, including humans					
Y1 with guidance	Y2 with guidance	Y3	Y4	Y5	Y6
Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.					
Describe and compare the structure of a variety of common animals including fish, amphibians, reptiles, birds, mammals and pets.					
Identify and name a variety of common animals that are carnivores, herbivores and omnivores.			Construct and interpret a variety of food chains, identifying producers, predators and prey.		
Identify, name, draw and label the basic parts of the human body, including the senses.		Identify that humans and some animals have skeletons and muscles for support, protections and movement.	Describe the simple functions of the basic parts of the digestive system in humans.		Identify and name the main parts of the human circulatory system.
					Describe the functions of the heart, blood vessels and blood.
	Notice that animals and humans have offspring which grow into adults.			Describe the changes as humans develop to old age.	
	Find out about and describe the basic needs of animals and humans, for survival (water, food, air).				Describe the way in which nutrients and water are transported within animals and humans.
	Describe the importance of exercise, balanced diet and hygiene, in relation to humans.	Identify that animals, including humans, need the right types and amount of nutrition from what they eat.	Identify the different types of teeth in humans and their simple functions.		Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.

Seasonal changes					
Y1 with guidance	Y2 with guidance	Y3	Y4	Y5	Y6
Observe changes across the four seasons.					
Observe and describe weather associated with seasons.					
Observe and describe how day length varies across the seasons.					

Long Lawford Primary School
Love, Learn, Persevere and Succeed

Science Assessment Grid

Living things and their habitats					
Y1 with guidance	**Y2** with guidance	**Y3**	**Y4**	**Y5**	**Y6** Evolution and inheritance
	Explore and compare the differences between things that are living, dead, and things that have never been alive.		Recognise that living things can be grouped in a variety of ways.		Recognise that living things have changed over time.
			Use classification keys to help group, identify and name a variety of living things.		
	Identify that most living things live in habitats to which they are suited.				
	Describe how different habitats provide for the basic needs of different kinds of animals and plants.		Recognise that environments can change and this can pose dangers to living things.		Identify how animals and plants are adapted to suit their environment in different ways and that adaption may lead to evolution.
	Identify and name a variety of plants and animals in their habitats, including micro-habitats.			Describe the differences in the life cycle of a mammal, amphibian, insect and bird.	
	Using the idea of a simple food chain, describe how animals obtain their food from plants and other animals.				
	Identify and name different sources of food.				
				Describe the life process of reproduction in some plants and animals.	Recognise that living things produce offspring of the same kind, but that the offspring vary and are not identical to their parents.
					Recognise that fossils provide information about living things that inhabited the earth millions of years ago.

Light					
Y1 with guidance	**Y2** with guidance	**Y3**	**Y4**	**Y5**	**Y6**
		Recognise that light is needed to see things and that dark is the absence of light.			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 that objects are seen because they give out or reflect light into the eye.
		Notice that light is reflected from surfaces.			Recognise that light appears to travel in straight lines.
		Recognise that light from the sun can be dangerous.			
		Recognise how shadows are formed.			Use the idea that light travels in straight lines to explain why shadows have the same shape as the object cast.
		Find patterns in the way that the size of shadows change.			

Long Lawford Primary School
Love, Learn, Persevere and Succeed

Science Assessment Grid

Everyday materials					
Y1 with guidance	**Y2** with guidance	**Y3** Rocks	**Y4** States of matter	**Y5** Properties and changes of materials	**Y6**
Distinguish between an object and the material from which it is made.				Give reasons for the particular uses of everyday materials, based on evidence from comparative and fair tests.	
Identify and name a variety of everyday materials; including wood, plastic, glass, metal, water and rock.		Compare and group different kinds of rocks on the basis of their appearance and simple physical properties.			
		Describe in simple terms how fossils are formed.			
		Recognise that soils are made from rocks and other organic matter.			
Describe the simple physical properties of everyday materials.	Identify and compare the suitability of a variety of everyday materials (including wood, metal, platic, glass, brick, rock, paper and cardboard) for particular uses.				
Based on their simple physical properties, compare and group together everyday materials.	Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.		Compare and group materials together, according to whether they are solids, liquids or gases.	Compare and group materials based on their properties, including hardness, solubility, transparency, conductivity, response to magnets.	
			Observe that some materials change state when they are heated or cooled.	Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.	
			Measure (in Celsius) or research the temperature at which materials change state when heated or cooled.	Use knowledge of solids, liquids and gases to decide how mixtures might be separated (filtering, sieving, and evaporating).	
			Identify the part played by evaporation and condensation in the water cycle.	Demonstrate that dissolving, mixing and changes of state are reversible changes.	
			Associate the rate of evaporation with temperature.	Explain that some changes result in the formation of new materials, a change that is usually not reversible.	

Sound					
Y1 with guidance	**Y2** with guidance	**Y3**	**Y4**	**Y5**	**Y6**
			Identify how sounds are made, associate 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.		

Long Lawford Primary School
Love, Learn, Persevere and Succeed

Science Assessment Grid

Forces and magnets

Y1 with guidance	Y2 with guidance	Y3	Y4	Y5	Y6
		Compare how things move on different surfaces.		Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	
				Explain that unsupported objects fall towards the earth because of the force of gravity acting between the earth and the falling object.	
				Identify the effects of air resistance, water resistance and friction.	
		Notice that some forces need contact between two objects, but magnetic forces can act at a distance.			
		Observe how magnets attract or repel each other and some materials.			
		Identify magnetic materials.			
		Compare and group everyday magnetic materials.			
		Describe magnets as having two poles.			
		Predict whether two magnets will attract or repel each other.			

Electricity

Y1 with guidance	Y2 with guidance	Y3	Y4	Y5	Y6
			Identify common appliances that run on electricity.		
			Identify and name the basic parts of a simple series electrical circuit (cells, wires, bulbs, switches and buzzers).		
			Construct a simple series electrical circuit (cells, wires, bulbs, switches and buzzers).		Use recognised symbols when representing a simple circuit in a diagram.
			Identify whether or not a lamp will light a simple series circuit.		Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.
			Recognise that a switch opens and closes a 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.
			Recognise some common conductors and insulators, associate metals with being good conductors.		

Earth and Space

Y1 with guidance	Y2 with guidance	Y3	Y4	Y5	Y6
				Describe the movement of earth, and other plants, relative to the sun.	
				Describe the movement of the moon relative to the earth.	
				Describe the sun, earth and 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.	