



Green Lea First School Science Progression (Two Year Rolling Programme)

Year 1 (Key Stage 1)

Working Scientifically Year 1	Biology			Chemistry	Physics
	Living things and their habitats	Animals, including Humans	Plants	Everyday Materials	Seasonal Changes
<ul style="list-style-type: none">• Asking simple questions• observing closely• performing simple tests• identifying and classifying• using their observations and ideas to suggest answers to questions• gathering and recording data to help in answering questions.	<ul style="list-style-type: none">• 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 omnivores• describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)	<ul style="list-style-type: none">• Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• distinguish between an object and the material from which it is made• identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock• describe the simple physical properties of a variety of everyday materials• compare and group together a variety of everyday materials on the basis of their simple physical properties	<ul style="list-style-type: none">• observe changes across the 4 seasons• observe and describe weather associated with the seasons and how day length varies.

Year 2 (Key Stage 1)

Working Scientifically Year 2	Biology			Chemistry	Physics
	Living things and their habitats	Animals, including Humans	Plants	Everyday Materials	Seasonal Changes
<ul style="list-style-type: none"> • asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying in different ways • gathering and recording data to help in answering questions 	<ul style="list-style-type: none"> • 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 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 <p>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</p>	<ul style="list-style-type: none"> • notice that animals, including humans, have offspring which grow into adults • find out about 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. 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for different uses • compare how things move on different surfaces. • find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching 	

Year 3 (Lower Key Stage 2)

Working Scientifically Year 3	Biology		Chemistry	Physics	
	Animals, including Humans	Plants	Materials (Rocks)	Light	Forces and Magnets
<ul style="list-style-type: none"> • asking relevant questions • setting up simple practical enquiries, comparative tests • making systematic and careful observations • gathering, recording, classifying and presenting data to help in answering questions • recording findings using simple scientific language, drawings, labelled diagrams and tables • reporting on findings from enquiries, 	<ul style="list-style-type: none"> • 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 other animals have skeletons and muscles for support, protection and movement. 	<ul style="list-style-type: none"> • 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 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 	<ul style="list-style-type: none"> • 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 are made from rocks and organic matter. 	<ul style="list-style-type: none"> • recognise that they need light in order to see things and that dark is the absence of light • notice that light is reflected from surfaces • recognise that light from the sun can be dangerous and that there are ways to protect their eyes • recognise that shadows are formed when the light from a light source is blocked by a solid object • find patterns in the way that the size of shadows change. 	<ul style="list-style-type: none"> • compare how things move on different surfaces • notice that some forces need contact between 2 objects, but magnetic forces can act at a distance • observe how magnets attract or repel each other and attract some materials and not others

<p>including oral and written explanations, displays</p> <ul style="list-style-type: none"> • using results to draw simple conclusions, make predictions for new values, suggest improvements • identifying differences and similarities to simple scientific ideas and processes • using straightforward scientific evidence to answer questions 					<ul style="list-style-type: none"> • compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials • describe magnets as having 2 poles <ul style="list-style-type: none"> • predict whether 2 magnets will attract or repel each other, depending on which poles are facing.
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Year 4 (Lower Key Stage 2)

Working Scientifically	Biology		Chemistry	Physics	
	Animals, including Humans	All Living Things	States of Matter	Sound	Electricity
Year 4					
<ul style="list-style-type: none"> asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including 	<ul style="list-style-type: none"> 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 of food chains, identifying producers, 	<ul style="list-style-type: none"> 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 sometimes pose dangers to living things. 	<ul style="list-style-type: none"> compare and group materials together, according to whether they are solids, liquids or gases observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) <p>identify the part played by evaporation and condensation in the water cycle and associate the rate of</p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> identify common appliances that run on electricity construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is

<p>thermometers and data loggers</p> <ul style="list-style-type: none">• gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	<p>predators and prey.</p>		<p>evaporation with temperature.</p>		<p>part of a complete loop with a battery</p>
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Early Years Foundation Stage Links - Science

By the end of Reception we will have learnt how to:

- Explore the natural world around them, making observations and drawing pictures of animals and plants
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

These early skills prepare the children so that in KS1 they can:

- Ask simple questions and recognise that they can be answered in different ways
- Observing closely, using simple equipment
- Perform simple tests
- Identify and classify
- Use their observations and ideas to suggest answers to questions
- Gather and record data to help when answering scientific questions