



Ludgvan School Subject Progression Document 2024-2025

Subject: Science

	Y1	Y2	Y3	Y4	Y5	Y6
	▼ Working Scientifically ▼					
Bi ol og y	Plants	Plants	Plants			
	Animals, including humans	Animals, including humans	Animals, including humans	Animals, including humans	Animals, including humans	Animals, including humans
		Living things and their habitats		Living things and their habitats	Living things and their habitats	Living things and their habitats
						Evolution and inheritance
C h e m i s t r y	Everyday materials	Uses of everyday materials			Properties and changes of materials	
			Rocks			
				States of matter		
P h y s i c s	Seasonal Changes				Earth and Space	
			Light			Light
			Forces and Magnets		Forces	
				Sound		
				Electricity		Electricity



Skills and Knowledge Progression

Working Scientifically		EYFS	KS1	Y3/4	Y5/6
Working Scientifically					
Plan	Planning	<ul style="list-style-type: none"> Asks questions to find out more. Use new vocabulary in different contexts. 	<ul style="list-style-type: none"> Asking simple questions and recognising that they can be answered in different ways Use new vocabulary effectively. 	<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 	<ul style="list-style-type: none"> Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
	Do	<ul style="list-style-type: none"> Simple comparative vocabulary – bigger, smaller. General sensory observations of animals and plants. Ask questions to check what has been said to them. Looking at objects and pictures and discussing what they can see. 	<ul style="list-style-type: none"> Observing closely, using simple equipment Performing simple tests Identifying and classifying 	<ul style="list-style-type: none"> Making systematic and careful observations and where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers 	<ul style="list-style-type: none"> Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate
Review	Recording	<ul style="list-style-type: none"> Explain how things work and why they might happen. Talking about objects and events. Simple recording – pictures/images. 	<ul style="list-style-type: none"> Gathering and recording data to help in answering questions 	<ul style="list-style-type: none"> Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables 	<ul style="list-style-type: none"> Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
	Concluding	<ul style="list-style-type: none"> Noticing 'which worked best' – simple comparative statements. Answer initial question simply. Answer how and why questions about their experiences 	<ul style="list-style-type: none"> Using their observations and ideas to suggest answers to questions 	<ul style="list-style-type: none"> Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions Identifying differences, similarities or changes related to simple scientific ideas and processes Using straightforward scientific evidence to answer questions or to support their findings 	<ul style="list-style-type: none"> Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.
Evaluation	Evaluation			<ul style="list-style-type: none"> Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. 	<ul style="list-style-type: none"> Using test results to make predictions to set up further comparative and fair tests. Identifying scientific evidence that has been used to support or refute ideas or arguments
	Key Stage 1 Readiness	<ul style="list-style-type: none"> To feel confident to answer simple questions about observable properties of objects and people, animals and plants around them To compare objects in their environment and talk about similarities and differences To ask questions about the world around them, and seek to find their own answers 			



EYFS

	ELG	Key Stage 1 Readiness
Plants	ELG: The Natural World <ul style="list-style-type: none"> Explore the natural world around them, making observations and drawing pictures of plants and animals. 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. 	<ul style="list-style-type: none"> To know what a plant is To know what a flower is To know where you see plants
Animals including humans		<ul style="list-style-type: none"> To describe different plants and flowers To know what an animal is To recognise and name a variety of different animals
Everyday materials	ELG: The Natural World <ul style="list-style-type: none"> Understand some important processes and changes in the natural world, including the seasons and changing states of matter. 	<ul style="list-style-type: none"> To know the names of different body parts of humans and animals they have experience of To recognise that different everyday objects are made from different materials
Seasonal Change		<ul style="list-style-type: none"> To describe how different objects look and feel To know about different types of weather To observe changes in trees and plants as the seasons progress

KS1

		Y1	Y2
B i o l o g y	Plants	<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"> 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.
	Animals, including humans	<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) 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"> 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.
	Living things and their habitats		<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



			<p>different kinds of animals and plants, and how they depend on each other</p> <ul style="list-style-type: none"> Identify and name a variety of plants and animals in their habitats, including micro-habitats 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.
C h e m i s t r y	Everyday materials	<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. 	
	Uses of everyday materials		<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 particular uses Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.
P h y s i c s	Seasonal changes	<ul style="list-style-type: none"> Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies. 	

KS2

		Y3	Y4	Y5	Y6
B i o l o g y	Plants	<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 			



		<ul style="list-style-type: none"> Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. 			
	Animals, including humans	<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"> 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, predators and prey. 	<ul style="list-style-type: none"> Describe the changes as humans develop to old age. 	<ul style="list-style-type: none"> 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 the way their bodies function Describe the ways in which nutrients and water are transported within animals, including humans.
	Living things and their habitats		<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"> 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. 	<ul style="list-style-type: none"> Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals Give reasons for classifying plants and animals based on specific characteristics.
	Evolution and inheritance				<ul style="list-style-type: none"> 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.



C h e m i s t r y	Properties and changes of materials			<ul style="list-style-type: none"> Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution Use knowledge of solids, liquids and 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 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	<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. 			
	States of matter		<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 ($^{\circ}\text{C}$) Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. 		



P h y s i c s	Earth and Space			<ul style="list-style-type: none"> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system 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. 	
	Light	<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"> Recognise that light appears to travel in straight lines 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 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 why shadows have the same shape as the objects that cast them.
	Sound		<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 Recognise that sounds get fainter as the distance from the sound source increases. 		
	Forces and magnets	<ul style="list-style-type: none"> Compare how things move on different surfaces 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 attract some materials and not others 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 two poles Predict whether two magnets will attract or repel each other, depending on which poles are facing. 		F o r c e s <ul style="list-style-type: none"> 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, that act between moving surfaces recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. 	



	Electricity	<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 part of a complete loop with a battery Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit Recognise some common conductors and insulators, and associate metals with being good conductors. 	<ul style="list-style-type: none"> Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the 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 Use recognised symbols when representing a simple circuit in a diagram.
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Vocabulary Progression

EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Check, describe, explain, observe, predict Tree, leaf, flower, stem, seed, living, dead, never alive, habitats, shelter, food chain, seashore, woodland Human, animal, fish, birds, insect, habitat, wings, legs Same, different	Question, answer, observe, equipment, sort, group, compare, differences, similarities, describe, test, results, predict, Record – diagram, chart Deciduous, evergreen, flower, blossom, petals, fruit, bulb, seed, roots, stem, trunk, branches Growth, germinate, light, temperature,	Question, answer, observe, observing, equipment, identify, sort, group, compare, differences, similarities, describe, measurements, test, results, predict, Record – diagram, chart Deciduous, evergreen, flower, blossom, petals, fruit, bulb, seed, roots, stem, trunk, branches	Oral and written explanations, conclusions, predictions, criteria, classify, changes, data, evidence, interpret, research, compare, identify, process Record – drawings, keys, bar charts, table Air, water, transportation, nutrients, soil, reproduction, seed	Oral and written explanations, conclusions, predictions, criteria, classify, changes, data, contrast, evidence, improve, guides, construct, interpret, research, compare, identify, process Record – drawings, annotated diagram, keys, bar charts, table, standard units Equipment – thermometer, scales, sound level meter	Plan, variables, measurements, accuracy, predictions, comparative and fair test, identify, classify, describe, patterns, hypothesis Record - report, scientific diagrams, labels, classification keys, scatter graphs, bar graph, line graph, Report and present - conclusions, Evidence – support, ideas, arguments	Plan, variables, measurements, accuracy, precision, repeat readings, predictions, comparative and fair test, identify, classify, describe, patterns, systematic, quantitative, hypothesis Record - report, scientific diagrams, labels, classification keys, scatter graphs, line of best fit, bar graph, line graph,



Material, wood, glass, paper, hard, soft	water, reproduce, lifecycle	Growth, germinate, light, temperature, water, reproduce, lifecycle	formation, seed dispersal, pollination	Skeleton, skull, bones, muscles, movement, support, protection, nutrition	Baby, toddler, teenager, elderly, growth, development, puberty	Report and present - conclusions, Evidence – support, refute, ideas, arguments
Push, pull, move	Amphibians, water, fish, reptiles, mammals, birds, herbivore, carnivore, head, nose, ear, neck, shoulder, arm, elbow, wrist, hand, back, chest, hip, leg, knee, ankle, foot, wing, beak, tail, fin, sight, smell, touch, taste, hearing	Amphibians, water, fish, reptiles, mammals, birds, herbivore, carnivore, Survival, water, air, food, reproduce, adult, baby, offspring, kitten, calf, puppy, food chain, prey, predator, camouflage, protection, exercise, hygiene, balanced diet	Skeleton, skull, bones, muscles, movement, support, protection, nutrition	Mouth, tongue, teeth, oesophagus, stomach, small intestine, large intestine, nutrients, absorb, canine, incisor, molar, producer, consumer, predator	Function, lifestyle, drugs, medicine	Womb, foetus, embryo, gestation, baby, toddler, teenager, elderly, growth, development, puberty
Loud, quiet, sound, volume	Wood, plastic, glass, paper, metal, rock, hard, soft, rough, smooth, shiny, dull, bendy.	Wood, plastic, glass, paper, metal, rock, hard, soft, rough, smooth, shiny, dull, bendy, stiff	Oesophagus, stomach, small intestine, large intestine, nutrients, absorb, producer, consumer, predator	intestine, large intestine, nutrients, absorb, canine, incisor, molar, producer, consumer, predator	Life process, reproduction, offspring, life cycle	Function, circulatory system, heart, valve, blood vessel, vein, artery transport, oxygenated, deoxygenated, lifestyle, drugs, medicine
Electric, electricity, plug, wire	Brick, fabric, elastic, foil, property, solid, squash, bend, stretch, push, pull	Brick, fabric, elastic, foil, property, solid, waterproof, absorbent, opaque, transparent, squash, bend, flexible, twist, stretch, push, pull	Rocks and soils: Soils, organic matter, fossil, crystal, sandstone, granite, marble, pumice, absorbent, crumble, sedimentary, layer, sediment, igneous, magma, lava, (tiny holes / spaces) metamorphic, change, squeeze, pressure	incisor, molar, producer, consumer, predator	Hardness, transparency, conductivity, electrical, thermal, solubility, solution, dissolve, filter, evaporate, sieve, reversible, irreversible	Life process, reproduction, offspring, life cycle
Seasonal changes: Summer, autumn, winter, spring, season, sun, day, night, light, dark, moon, earth, star, planet, space	Seasonal changes: Season, spring, summer, autumn, winter, month, day, year, night, sun, moon, light, dark, weather	Seasonal changes: Season, spring, summer, autumn, winter, month, day, year, night, sun, moon, light, dark, weather	Force, contact, surface, magnetic, attract, repel, poles	Vertebrates, invertebrates, environment, habitat, classification key	Air resistance, water resistance, friction, gravity, lever, gear, pulley, Newtons	Characteristics, classifications, organism, micro-organism
			Force, contact, surface, magnetic, attract, repel, poles	States of matter: Solid, liquid, gas, evaporation, condensation, particle, temperature, freezing, heating	Magnets, poles, attract, repel Forces Gravity, drag forces, air resistance, water resistance, friction, motion, gears, pulleys, levers and	Adaptation, evolution, characteristics, reproduction, genetics, survival
			Force, contact, surface, magnetic, attract, repel, poles	Vibration, wave, volume, pitch, tone, insulation		



			Light source, mirror, reflect, reflective, reflection, shadow, blocked transparent, translucent, opaque	Appliance, battery, power, main power, circuit, series, cell, wire, bulb, switch, break in circuit, conductor, insulator, buzzers, loop,	springs, levers, pulleys. Movement, Sun, solar system, Moon, rotation, revolution, orbit,	Reflection, spectrum, rainbow Circuit, series parallel, voltage, volts, amps
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Subject Content Coverage and Timeline

	Autumn 1- Wellbeing	Autumn 2- Diversity and inclusion	Spring 1- Local citizens	Spring 2- Global citizens	Summer 1- Planet Earth	Summer 2- Aspirations
Y1	Everyday Materials	Seasonal Change	Animals including humans	Seasonal change	Plants	Seasonal Change
Y2	Plants	Materials	Living things and their habitats	Plants	Animals including humans	
Y3	Animals including humans	Rocks	Light	Plants	Forces and magnets	
Y4	Animals, including humans	Electricity	States of Matter	Sound	Living things and their habitats	
Y5	Living things and habitats		Properties and changes of material	Forces	Earth and Space	Animals Inc humans
Y6	Animals including humans	Electricity	Living things and their habitats	Evolution		Light