

Science School Overview

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
--	--------	--------	--------	--------	--------	--------

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
EYFS	Development Matters Explore the natural world around them. Describe what they see, hear and feel whilst outside. Recognise some environments that are different from the one in which they live. Understand the effect of changing seasons on the natural world around them. Scientific Enquiry (also linked to CofETL) <u>Questioning, prediction and fair testing</u> • Provide children with have frequent opportunities for outdoor play and exploration (including noticing and creating patterns in a range of environments). • Encourage interactions with the outdoors to foster curiosity and give children freedom to touch, smell and hear the natural world around them during hands-on experiences (and quality and diverse stories) • Encourage focused observation of the natural world (including planting of seeds, drawings of animals and plants) such as caring for caterpillars and observing change • Listen to children describing and commenting on things they have seen whilst outside, including plants and animals (including seasonal change). Learning new vocabulary, asking questions, using talk to work out problems, describing events and sequencing. • ☑ Encourage positive interaction with the outside world, offering children a chance to take supported risks, appropriate to themselves and the environment within which they are in (investigating ingredients, cooking etc)					
EYFS Vocabulary	World, environment, predict, fair test, investigation, noticing, patterns, the senses, seasons, weather, nocturnal, hibernation, wildlife, animals, plants and vegetables / seeds, digging, diet, tools (spade, trowel) food, compost, soil, minibeasts, creatures,					
1		Everyday Materials 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	Seasonal Change (in books) Observe changes across the 4 seasons Observe and describe weather associated with the seasons and how day length varies	Plants 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	Animals including humans 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
Cross year links		<u>Anchoring:</u> EYFS - Similarities and differences of materials	<u>Anchoring:</u> EYFS - Features of environments and how they can vary	<u>Anchoring:</u> EYFS - Observations of plants and changes	<u>Anchoring:</u> EYFS - Observations of animals and changes
		<u>Preparing:</u> Names and properties of everyday materials Suitability of materials 'What type of paper makes the best paper aeroplane?' 'Can you keep an Inuit's hand dry?' 'How long can you keep your ice-pop frozen for?'	<u>Preparing:</u> Seasons wheel in relation to months of the year Observed changes in school and at The Grove Identified signs of spring and colour matched to chart Weather chart	<u>Preparing:</u> Observational drawings of flowers Identifying different parts of a plant and what plants need Planting flowers and observing their growth and change Planting flowers in The Grove Observing plants and soil at the Ashdown Forest Deciduous and evergreen trees Identify common garden and wild plants	<u>Preparing:</u> Classify animals (mammals, birds, fish, amphibians, reptiles) Understanding carnivores, omnivores and herbivores Analyse human body and parts.
Vocabulary		Object, material, wood, plastic, glass, metal, water, rock, brick, fabric, sand, paper, rubber, sponge, hard, soft, stretchy, not stretchy, shiny, dull, rough, smooth, bendy, not bendy, transparent, not transparent	Seasons, months of the year, hot, warm, mild, cold, sunny, cloudy, rain, sleet, snow, hail, thunder, lightning, rainbow, windy, temperature, degrees Celsius, thermometer, day length, equator	Deciduous, evergreen, wild plant, garden plant, roots, branch, stem, trunk, leaf, flower, petal, seeds, bulbs.	Birds, fish, amphibians, reptiles, mammals and invertebrates Feathers, scales, gills, fins, hair, land, water, backbone, skeleton Carnivores, herbivores, omnivores Meat, plants (Common parts/structures of animals) (Names of animals that can be found in the school grounds)

						(Names of animals that the children keep as pets) Basic human body parts
2	Everyday Materials Identifying everyday materials Suitability of materials How materials can change shape Which materials are waterproof? Which materials are bouncy?		Living things and their habitats Things that are living, dead and never been alive Identify a range of animals and plants Why are some animals suited to particular habitats and microhabitats? Case study – pond habitat Case study – woodland Food chain	Plants Observe how seeds and bulbs grow into plants What do plants need to grow? How are different seeds dispersed?	Animals including humans Basic needs of animals and humans Identifying a range of animals' offspring The importance of exercise Personal hygiene The importance of a balanced diet	
Cross year links	Anchoring: Year 1 – identifying the names of a range of everyday materials and objects which are made from these		Anchoring: Year 1 – studying a range of plants and animals and understanding where these grow and live	Anchoring: Year 1 – growing a range of plants as well as identifying plants and trees around the local area	Anchoring: Year 1 – identifying a range of animals consisting of herbivores, carnivores, omnivores and detritivores.	
	Preparing: Year 3 – whether everyday materials are transparent, translucent and opaque (linked to light)		Preparing: N/A	Preparing: Year 3 - growing a range of plants to help children to recognise the various parts of a plant	Preparing: Year 3 – Understanding the different types of nutrition and how to create a balanced diet Types of skeletons	
Vocabulary	stretchy stiff shiny dull rough smooth bendy waterproof absorbent opaque transparent squash twist stretch foil brick paper fabrics		living dead habitat energy predator prey woodland desert	seeds bulb water light temperature growth	survival water air food adult baby exercise hygiene	
3	Light and Shadow: Recognise the following: light is needed to see things; dark is the absence of light; light is reflected from surfaces; light from the sun can be	Friction and Forces: Identify forces are pushes and pulls; investigate friction on different surfaces; explore how magnets work; identify	Rocks: Find out about different kinds of rocks and what they can be used for; explore a variety of soils and find out how they are	Animals including humans: Know how animals, including humans, need specific nutrition to help them move and grow, and how humans and	Plants: Identify the functions of the different parts of a plant; find out what plants need in order to grow well; explore how plants reproduce	

	dangerous; ways to protect their eyes; shadows are formed when the light from a light source is blocked by an opaque object. Find patterns in the way that the size of shadows change.	magnetic materials; know uses of magnets	formed; learn about how fossils are formed	some other animals have skeletons and muscles to help their bodies move	
Cross year links	<u>Anchoring:</u> Y2: properties of everyday materials (particularly the transparency of glass / being able to 'see through' it and what this has to do with light / how we see things in general)	<u>Anchoring:</u> Y2: find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	<u>Anchoring:</u> Y1: compare and group together a variety of everyday materials on the basis of their simple physical properties	<u>Anchoring:</u> Y1 & Y2: describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene; describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)	<u>Anchoring:</u> Y2: 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
	<u>Preparing:</u> Y6: use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them	<u>Preparing:</u> Y5: other forces in addition to friction and magnetism	<u>Preparing:</u> Y6: recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago	<u>Preparing:</u> Y6: recognise the impact of diet, exercise, drugs and lifestyle	<u>Preparing:</u> Y5: describe the life process of reproduction in some plants and animals
Vocabulary	light source; transparent, translucent, opaque, angle, beam, Spellingframe: light, mirror, reflect, reflection, reflective, shadow	twist, magnetism, steel, (other common metals), compass Spellingframe: attract, contact, force, friction, magnet, magnetic, poles, pull, push, repel	natural, man-made, erode, erosion, permeable, porous, decay, organic, rock cycle, igneous, metamorphic, sedimentary Spellingframe: crystal, fossil, granite, marble, pumice, sandstone, soil	(balanced) diet, herbivore, carnivore, omnivore, (in)vertebrates, tendons, ligaments Spellingframe: movement, muscles, bones, nutrition, nutrients, skeleton	roots, stem, capillary action, carbon-dioxide, oxygen, sunlight, leaves, germination, pollinator, stamen, anther, filament, carpel, stigma, style, ovary, ovule, seed, petal, fertilization, seed dispersal Spellingframe: air, dispersal, flowers, light, nutrients, pollination, reproduction, soil, transportation, water

4	Sound: how sound travels, altering pitch and volume, effect of distance on sound	Living things including humans: digestive system, teeth and food chains	States of matter: solids, liquids and gases and changing state. Heating and cooling	Electricity: constructing simple circuits and making torches	Living things and their habitats – classifying living things using classification keys, environmental damage	N/A
Cross year links	Anchoring: N/A	Anchoring: Y3: human body	Anchoring: Y1: Properties of everyday materials Year 2 properties of everyday materials	Anchoring: N/A	Anchoring: Y1: classification of animals, observation of plants Y2: why some animals are suited to particular habitats Y3: plants	
	Preparing: N/A	Preparing: Y6: circulatory system	Preparing: Y5: Properties and chemical changes	Preparing: Y5: Earth, space, and forces Y6: electricity	Preparing: Y5: rainforest habitat Y6: evolution and inheritance	
Vocabulary	Vibration, sound source, pitch, volume, waves, ammeter, decibels, ear canal, ear drum, travel	Digestion, digestive system, mouth, oesophagus, stomach, small and large intestine, teeth, incisors, canines, premolars, molars, enzymes, food chain, primary, secondary, and tertiary producer, consumer, predator, prey, flow of energy	Solids, liquids, gases, molecules, fixed shape, volume, viscosity, compress, force, changing states, heating, colling, evaporation, water cycle, precipitation, condensation, evaporation, run off	Appliance, mains, battery, simple circuit, cell, wire, bulb, open and closed switch, buzzer, conductor, insulator	Organisms, classification, classification key, group, mammal, amphibian, reptile, invertebrate, flowering and non- flowering plants, environmental changes, nature	
5	Earth and Space – movement of the Earth, moon and other planets, spherical body and the heliocentric model	Forces – gravity, air resistance, water resistance and friction, and mechanisms	N/A	Living things and their habitats – life cycles of a mammal, an amphibian, an insect and a bird reproduction in plants and animals	Properties and changes of materials – properties of everyday materials, dissolving, solids, liquids and gases, separation, reversible and irreversible changes	Animals including humans – changes as humans develop to old age (inc. puberty and gestation)
Cross year links	Anchoring: Y3: Light and Shadow	Anchoring: Y3: Forces (friction and magnetism), Year 4 Electricity (insulators and conductors)		Anchoring: Y3: Plants (life cycle of flowering plants)	Anchoring: Y4: States of Matter (heating and cooling, evaporation and condensation)	Anchoring: Y5: RHE (puberty and menstruation)

	Preparing: Y6: Light/Electricity			Preparing: Y6: Living Things and their Habitats / Evolution	Preparing: Y6: Light/Electricity	Preparing: Y6: RHE (puberty, conception and menstruation)
Vocabulary (Spellingframe words + extras)	axis, heliocentric , geocentric , moon, night, phases, rotation, sun	Newton, friction, gears, gravity, pulley, resistance		amphibian, bird, insect, mammal, offspring, reproduction	conductivity, conductor, dissolving, evaporation, filter, insulator , magnetic, mixing, separating , solubility	baby, development, elderly, embryo, foetus, gestation, growth, puberty, teenager, toddler, womb
6	Light: travels in straight lines, reflection of light into eyes, light source to object to eyes, how shadows are formed	Living things and their Habitats: classifying plants and animals including reasons based on specific characteristics	Evolution and inheritance: recognise how living things have changed over time using fossils for evidence, recognise living things produce offspring, identify how living things adapt to suit environments	Electricity: brightness and volume linked to number of cells, compare and reason how components function, use symbols in circuit diagrams.	Animals including humans: the heart, role of blood and blood vessels, impact of diet, drugs, lifestyle and alcohol on the body, nutrients and water transporting around the body	N/A
Cross year links	Anchoring: Y3: Light and shadow	Anchoring: Y4: classification of animals	Anchoring: Y3: rocks and fossils Y5: living things and habitats	Anchoring: Y4: Electricity	Anchoring: Y4: living things and habitats	
Vocabulary	Absorb, dull, beam, reflect, opaque, transparent, translucent, straight, natural, artificial	classification, vertebrate, invertebrate, kingdom, class, amphibian, reptile	species, habitat, evolve, evolution, survival, reproduction, environment, variation, fossil, classification, speciation	electricity voltage, volts, series circuit, parallel circuit, component, conductor, insulator, resistance, volume	circulatory, heart, blood, vein, artery, pulse, vitamins, minerals, protein, fats, carbohydrates, alcohol	