



Science Sequence of Learning

(Link to [MASTER Science Knowledge Progression \(2023\)](#))



EYFS : Science Learning					
	Area of Learning	Exploring the natural and physical world around them	Skills and Knowledge we want the children to have at end of EYFS	ELG The Natural World	FS vocabulary
FS	<p>Understanding the World involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension.</p>	<p>ES1 Notice changes in weather and wear appropriate clothing. Begin to understand the need to respect and care for the natural environment and all living things. Talk about the differences between materials and changes they notice.</p> <p>FS2 Autumn Term Explore the natural world around them. Describe what they see, hear and feel whilst outside. Changing season</p> <p>Spring Term Draw and make observation of the plants and animals Forces they can feel (magnets, water) Changing season Changing matter</p> <p>Summer Term Draw and make observation of the plants and animals Changing season Contrasting environments</p>	<p>We want the children to know for Understanding of the World by the time they leave EYFS and enter Y1:</p> <ol style="list-style-type: none"> 1. Know the town and country they live in (THIS IS GEOGRAPHY) 2. Know the parts of a plant or animal (Science) 3. Know the chronology of their life (HISTORY) 4. Know about a celebration in this country and another country (RE) 	<p>.ELG: The Natural World Children at the expected level of development will: - Explore the natural world around them, making observations and drawing pictures of animals and plants; 15 - 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.</p>	<p>weather seasons trees branches trunk bark alive dead minibeasts plant leaves bulb water sun stem root flower soil fruit blossom magnets attract and repel Materials - texture, appearance, change and strengths float/sink water pressure</p>

Sequence of Learning Y1 - Y6

Year	Working scientifically	Scientific discipline			Vocabulary (Tier 3)	
		Biology	Physics	Chemistry	Theme specific	Subject specific
Year 1	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	Body, head, hand, arm, foot, leg, chest, neck, face, shoulders, waist, elbow, knee, ankle, wrist, neck, abdomen, sense, sight, sound, touch, taste, smell, hear, see, eye, nose, mouth, tongue, fingers, ears, human, mammals, reptile, amphibian, birds, fish, habitat, claw, hoof, paw, flipper, antlers, horn, tusks, skin, fur, feathers, scales, wings, beak, gills, fin, tentacles, Carnivore, herbivore, omnivore,	KEY STAGE 1 identify describe observe question answer sort compare contrast classify equipment data measurement patterns enquiry
	Predict Observe Investigate Identify, classify and group	Plants Animals inc Humans Living things and their habitats	Electricity Forces Seasonal changes Light	Materials Rocks States of matter	wood, plastic, glass, metal, water, rock, hard, soft, stretchy,	

	<p>Measure Interpret and conclude Evaluate Research</p>	<p>Evolution and inheritance</p>	<p>Sound Earth and space</p>		<p>stiff, shiny, dull, rough, smooth, bendy, not bendy, waterproof, not waterproof, absorbent, not absorbent, opaque, transparent, properties.</p>
	<p>Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research</p>	<p>Plants Animals inc Humans Living things and their habitats Evolution and inheritance</p>	<p>Electricity Forces Seasonal changes Light Sound Earth and space</p>	<p>Materials Rocks States of matter</p>	<p>Plants, flowers, tree, vegetables, fruit, seeds, bulbs, roots, stem, petals, leaves, trunk, branches, deciduous, evergreen, light, water, soil, germinate, germination, seedling, young plant, adult plant.</p>
<p>Year 2</p>	<p>Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research</p>	<p>Plants Animals inc Humans Living things and their habitats Evolution and inheritance</p>	<p>Electricity Forces Seasonal changes Light Sound Earth and space</p>	<p>Materials Rocks States of matter</p>	<p>material, properties, absorbency, waterproof, strong, weak, hypothesis, pipette, permeable, impermeable, manmade, natural, melting, moulding, cooling, elastic, shape, changed, twist/twisting, squash/squashin g, bend/bending, stretch/stretching</p>

					, flexibility, fabric, fair, tear, rip, weight, grams, bar chart, results,
	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	clean, hygiene, food energy, gills, lungs, germs, babies, egg, live young, nutrition, healthy, egg, chick, chicken; egg, caterpillar, pupa, butterfly; spawn, tadpole, frog; lamb, sheep. Growing into adults can include reference to baby, toddler, child, teenager, Egg, caterpillar, pupa (Chrysalis) , adult. alter, pupate,
	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	habitat, environment, adaptation, grow, urban, natural, desert, forest, marine, fresh water, grassland, arctic, food chain, energy, bottom of the food chain, top of the food chain, ecosystem, micro habitat, evolve, experiment.

	<p>Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research</p>	<p>Plants Animals inc Humans Living things and their habitats Evolution and inheritance</p>	<p>Electricity Forces Seasonal changes Light Sound Earth and space</p>	<p>Materials Rocks States of matter</p>	<p>water, light, suitable, temperature, grow, healthy, germination, reproduction, seed, bulbs, healthy, soil, nutrients, leaves, flowers, blossom, petals, fruit, roots, trunk, branches, stem</p>	
Year 3	<p>Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research</p>	<p>Plants Animals inc Humans Living things and their habitats Evolution and inheritance</p>	<p>Electricity Forces Seasonal changes Light Sound Earth and space</p>	<p>Materials Rocks States of matter</p>	<p>rock, granite, sandstone, chalk, limestone, marble, slate, soft, crumbly, hard, strong, fair test, acid, geologist, fossil. organism, sediment, sedimentary, igneous, metamorphic, extinct, minerals, crust, core.</p>	<p>KEY STAGE 2 prediction conclusion evidence explanation diagram systematic comparative test fair test construct interpret accurate variables causal relationships improve precision quantitative</p>
	<p>Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research</p>	<p>Plants Animals inc Humans Living things and their habitats Evolution and inheritance</p>	<p>Electricity Forces Seasonal changes Light Sound Earth and space</p>	<p>Materials Rocks States of matter</p>	<p>photosynthesis, chlorophyll, chloroplasts, carbon dioxide, grains, vegetables, fruits, protein, oils, nutrients, vitamins, minerals, fibre, saturated fats, unsaturated fats,</p>	

					carbohydrates, skeleton, vertebrates, invertebrates, exoskeleton, endoskeleton, hydrostatic skeleton, bones, joints, muscles, tendons, voluntary and involuntary movement.
	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	force, push, pull, friction, motion, magnet, compass, magnetic field, north pole, south pole, repel, electrons, neutrons, iron, steel, nickel, cobalt, protons, atoms, attract, electromagnet.
	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	stem, flower, leaves, roots, anchor, seeds, food, transport, holds, carries, water, flowers, nutrients, leaves, absorb, sunlight, prediction, conclusion, movement, respiration, growth, reproduction, excretion, nutrition,

					sensitivity, water transportation, investigation, germination, growing and flowering, fertilisation and seed formation, seed dispersal.
	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	Summer- light, darkness, white light, UV rays, sclera, iris, cornea, pupil, lens, conjunctiva, vitreous, choroid, optic nerve, macula, retina, light reflection, refraction, ozone layer, shadows, reflections, equator, infrared, ultraviolet, transparent, opaque, translucent.
Year 4	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	Producer, unique, vertebrate, mammal, habitat, ecosystem, food chain, energy, consumer, snails, fish, birds, worms, movement, respiration, sensitivity, growth, reproduction

	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	vibrate, vibration, vibrating, air, medium, ear, hear, sound, volume, pitch, faint, fainter, high, low
	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	solid liquid gas state melting boiling evaporation condensation water cycle temperature thermometer degrees celsius
	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	Circuit Wires Bulbs Buzzer Series Battery Insulator Conductor Metals Brightness Voltage Cells Components Symbols
	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	human digestive system mouth tongue-mixes, moistens, saliva teeth: incisors- cutting, slicing canines- ripping, tearing molars-chewing,

					grinding oesophagus transports stomach acid enzymes small intestine large intestine carnivore herbivore omnivore brush floss food chain Sun producers prey predators
	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	Invention, inventor, electricity, paleontologists, fossils, astronomer, scientist, experiment, audiometer aeronautics hydrofoil, telephone, telescope, telegraph, morse code, patent
Year 5	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	support, fall, Earth, gravity, air resistance, friction, balancing force, weight, newtons, resistance force, moving surfaces, accuracy, precision, casual relationships, mechanisms, levers, pulleys,

					transfers, gears, friction resistance force, support/refute, water resistance
	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	Earth, Sun, Moon, moon, planets, star, solar system, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, dwarf planet, movement, rotate, orbit, axis, celestial body, spherical, sphere, day, night, light, heat, eclipse, satellite, universe, solar, astronomer, shadow clock, sundial, geocentric model, heliocentric model, revolve, spin, atmosphere, Alhazen, Copernicus, first quarter, full moon, Galileo, illuminate, new moon, phase, third quarter
	Predict Observe Investigate Identify, classify and group	Plants Animals inc Humans Living things and their habitats	Electricity Forces Seasonal changes Light	Materials Rocks States of matter	Properties, materials, grouping, classifying,

	<p>Measure Interpret and conclude Evaluate Research</p>	<p>Evolution and inheritance</p>	<p>Sound Earth and space</p>		<p>permeability, absorbency, hardness, solubility, transparency, conductivity (electrical & thermal), magnets, Insulator, conductor, thermal, heat, temperature, fair test, variables, solid, liquid, gas, dissolve, mixture, soluble, reversible, irreversible, chemical changes, reactant, product, carbon dioxide, solution, evaporation, magnetism, filtration, sieving</p>	
	<p>Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research</p>	<p>Plants Animals inc Humans Living things and their habitats Evolution and inheritance</p>	<p>Electricity Forces Seasonal changes Light Sound Earth and space</p>	<p>Materials Rocks States of matter</p>	<p>Scatter & line graphs, bar charts, causal relationships, support/refute, gestation, life cycle, sperm, egg, foetus, correlation, scientific diagram, support/refute, foetus, development, nutrition, uterus, baby, child,</p>	

					<p>growth, comparison, development, centile, healthy, adolescence, adolescent, puberty, teenager, reproduction, penis, scrotum, sperm tune, testicles, genitals, childhood, erection, babyhood, period, wet dream, pubic hair, ejaculation, menarche, pregnancy, uterus/womb, masturbation, sperm, clitoris, foreskin, contraception, vagina, menstruation</p>	
	<p>Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research</p>	<p>Plants Animals inc Humans Living things and their habitats Evolution and inheritance</p>	<p>Electricity Forces Seasonal changes Light Sound Earth and space</p>	<p>Materials Rocks States of matter</p>	<p>Sexual, asexual, reproduction, gamete, cell, pollen, ovule, fusion, fertilisation, pollination, cuttings, roots, male, female, sperm, ovum, penis, vagina, fertilise, pregnancy, gestation, montreme,</p>	

					marsupials, placentals, young, family tree, chimpanzee, life cycle, endangered, extinct, metamorphosis, amphibian, insect, transform, larvae, pupa, nymph, egg, albumen, germinal disc, chalaza, shall membranes, shell, yolk, embryo, reproduce	
Year 6	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	Carl Linnaeus Kingdoms Multi-cellular Animals Plants Fungi Protists Prokaryotes Phylum Class Order Family Genus Species	
	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	Circulatory Oxygenated blood Deoxygenated blood Atria Left atrium Right atrium	

					Left ventricle Right ventricle Valves Red blood cells White blood cells Platelets Plasma Pulmonary artery Pulmonary veins Arteries Veins Capillaries Diffusion Osmosis Recreational drugs Cigarettes Alcohol Ethanol Nutrients
	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	Evolution Charles Darwin Alfred Wallace Mary Anning Environment Adaptation Offspring Characteristics Fossils Adaptive traits Inherited traits Habitats Variation Natural selection Human intervention
	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	Voltage Battery Cell Switch Circuit Series circuit

	Evaluate Research				Motor Bulb Buzzer Symbol Component Resistance Electrons Amps Current Thomas Edison Nikola Tesla
	Predict Observe Investigate Identify, classify and group Measure Interpret and conclude Evaluate Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	Shadows Sun Colours Rainbows Light sources Surfaces Reflect Incident ray Reflected ray The law of reflection Refraction Visible spectrum Prism Transparent Translucent Opaque Isaac Newton