

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 <b>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</b> – 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 <b>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.</b></p>	<p><b>ES1</b> 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><b>ES2</b> <u>Autumn Term</u> Explore the natural world around them. Describe what they see, hear and feel whilst outside. Changing season</p> <p><u>Spring Term</u> Draw and make observation of the plants and animals Forces they can feel (magnets, water) Changing season Changing matter</p> <p><u>Summer Term</u> 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"> <li>1. Know the town and country they live in (THIS IS GEOGRAPHY)</li> <li>2. Know the parts of a plant or animal (Science)</li> <li>3. Know the chronology of their life (HISTORY)</li> <li>4. Know about a celebration in this country and another country (RE)</li> </ol>	<p><b>.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.</b></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>



## Science Sequence of Learning



Domains		
Working scientifically	Scientific discipline	Communicate
<u>SCIENCE Coverage of Domains: Progression of Knowledge and Skills</u>		(Tier 3 vocabulary)

Year group	Strands					
		Biology	Physics	Chemistry	Theme specific	Subject specific
Year 1	<b>Ask questions</b> Predict Observe <b>Investigate</b> <b>Identify, classify and group</b> Measure <b>Record and Present</b> Interpret and conclude Evaluate <b>Research</b>	<b>Plants</b> 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	leaf/leaves flower/blossom trunk branch stem stalk petal root soil fruit berry seed bulb food	<b>KEY STAGE 1</b> identify describe observe question answer sort compare contrast classify equipment data measurement patterns enquiry
	<b>Ask questions</b> Predict Observe Investigate <b>Identify, classify and group</b> Measure <b>Record and Present</b> Interpret and conclude Evaluate <b>Research</b>	Plants <b>Animals inc Humans</b> Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	common animals wild tame pets fish bird reptile baby cub pup nest family egg mouth	

## Science Sequence of Learning

					neck eyes teeth wing claw tail beak fur feather fin scales
	<p><b>Ask questions</b>            Predict  <b>Observe</b>            Investigate  <b>Identify, classify and group</b>            Measure            Record and Present  <b>Interpret and conclude</b>  <b>Evaluate</b>            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><b>Materials</b>            Rocks            States of matter</p>	<p>object            material            wood            plastic            glass            metal            water            rock            rough/smooth            bright/shiny            cloudy            dim/dull            strong/weak            waterproof            bendy/stiff            soft/hard            see-through            melt            freeze            boil            burn</p>
	<p><b>Ask questions</b>            Predict  <b>Observe</b>            Investigate  <b>Identify, classify and group</b>            Measure            Record and Present  <b>Interpret and conclude</b>            Evaluate            Research</p>	<p>Plants            Animals inc Humans            Living things and their habitats            Evolution and inheritance</p>	<p>Electricity            Forces  <b>Seasonal changes</b>            Light            Sound            Earth and space</p>	<p>Materials            Rocks            States of matter</p>	<p>seasons            spring            summer            autumn            winter            temperature            rain            snow            sleet            hailstone</p>

## Science Sequence of Learning

					sunshine breeze wind ice climate difference
Year 2	<b>Ask questions</b> Predict <b>Observe</b> Investigate Identify, classify and group Measure <b>Record and Present</b> <b>Interpret and conclude</b> Evaluate <b>Research</b>	<b>Plants</b> 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	growth seedling shoot mature healthy wither healthy (i.e soil) nutrients structure function germinate pollination seed dispersal
	<b>Ask questions</b> Predict Observe <b>Investigate</b> <b>Identify, classify and group</b> Measure Record and Present <b>Interpret and conclude</b> Evaluate Research	Plants <b>Animals inc Humans</b> Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	amphibian mammal adult young toddler child teenager develop insect live young brain heart lungs skeleton bones eyebrows wrist ear lobe etc
	<b>Ask questions</b> Predict	Plants Animals inc Humans	Electricity Forces	<b>Materials</b> Rocks	man-made natural

## Science Sequence of Learning

	<p>Observe Investigate Identify, classify and group Measure Record and Present Interpret and conclude Evaluate Research</p>	<p>Living things and their habitats Evolution and inheritance</p>	<p>Seasonal changes Light Sound Earth and space</p>	<p>States of matter</p>	<p>suitable useful function purpose property rust transparent reflection rigid flexible solid liquid molten gas boiling point Heat pressure</p>	
	<p>Ask questions Predict Observe Investigate Identify, classify and group Measure Record and Present 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>living dead never been alive habitat woodland forest desert ocean rainforest microhabitat food chain food source</p>	<p>(micro) habitat microscopic environment surroundings conditions life cycle food chain predator prey variety produce reproduce Suited adapted</p>
Year 3	<p>Ask questions Predict Observe Investigate Identify, classify and group Measure Record and Present 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>absorb fertiliser transported pollination seed formation carpel stigma style ovary stamen anther</p>	<p><b>KEY STAGE 2</b> prediction conclusion evidence explanation diagram systematic comparative test fair test</p>

## Science Sequence of Learning

<p><b>Ask questions</b>          Predict  <b>Observe</b>          Investigate  <b>Identify, classify and group</b>          Measure  <b>Record and Present</b>          Interpret and conclude  <b>Evaluate</b>  <b>Research</b></p>	<p>Plants  <b>Animals inc Humans</b>          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>pollen sepal</p>	<p>construct          interpret          accurate          variables          causal          relationships          improve          precision          quantitative</p>
	<p>Plants          Animals inc Humans          Living things and their habitats          Evolution and inheritance</p>	<p>Electricity          Forces          Seasonal changes  <b>Light</b>          Sound          Earth and space</p>	<p>Materials          Rocks          States of matter</p>	<p>light beam          speed of light          reflect          shadow          prism          opaque          block/absorb</p>	
	<p>Plants          Animals inc Humans          Living things and their habitats          Evolution and inheritance</p>	<p>Electricity  <b>Forces</b>          Seasonal changes          Light          Sound          Earth and space</p>	<p>Materials          Rocks          States of matter</p>	<p>gravity          friction          streamlined          magnet          attract/ repel          air-resistance          Newton Metre          brass/aluminium/          copper          North/South Pole</p>	

## Science Sequence of Learning

	<p><b>Ask questions</b>          Predict  <b>Observe</b>          Investigate  <b>Identify, classify and group</b>          Measure  <b>Record and Present</b>  <b>Interpret and conclude</b>          Evaluate  <b>Research</b></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  <b>Rocks</b>          States of matter</p>	<p>sedimentary          igneous          metamorphic          fossils          organic          grains          crystals          boulder          granule          quartz          characteristic          impermeable          lava/magma</p>
Year 4	<p><b>Ask questions</b>          Predict  <b>Observe</b>          Investigate  <b>Identify, classify and group</b>          Measure  <b>Record and Present</b>  <b>Interpret and conclude</b>          Evaluate  <b>Research</b></p>	<p>Plants  <b>Animals inc Humans</b>          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>digestive system          digestion          saliva          oesophagus          stomach          small/large          intestine          rectum          anus          faeces          excrete          chemical          breakdown          gastric juices          reabsorb          reabsorption          endoskeleton          exoskeleton          dentin          plaque          pulp-cavity          fluoride          tooth decay          gums          nerves          enamel          canines          incisors          premolars          molars</p>

## Science Sequence of Learning

					cavities decay
	<p><b>Ask questions</b>            Predict            Observe            Investigate  <b>Identify, classify and group</b>            Measure  <b>Record and Present</b>  <b>Interpret and conclude</b>            Evaluate  <b>Research</b></p>	Plants Animals inc Humans <b>Living things and their habitats</b> Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	classification key (in)vertebrates mould fungus organism population deforestation pollution positive/negative human impact variation biome vegetation region dominant environmental anemometer barometer
	<p>Ask questions  <b>Predict</b>  <b>Observe</b>  <b>Investigate</b>            Identify, classify and group  <b>Measure</b>  <b>Record and Present</b>  <b>Interpret and conclude</b>            Evaluate  <b>Research</b></p>	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	<b>Electricity</b> Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	electrical device appliances circuit components conductor resistor symbol cell battery wire bulb switch buzzer motor connection complete/open /closed circuit positive/negative crocodile clip alligator clip



## Science Sequence of Learning

	Ask questions <b>Predict</b> <b>Observe</b> Investigate <b>Identify, classify and group</b> <b>Measure</b> <b>Record and Present</b> Interpret and conclude Evaluate <b>Research</b>	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks <b>States of matter</b>	manufactured oxygen change of state solidify gaseous water vapour water cycle precipitation evaporation condensation degree Celsius waste sewage
	<b>Ask questions</b> <b>Predict</b> Observe <b>Investigate</b> Identify, classify and group <b>Measure</b> <b>Record and Present</b> Interpret and conclude Evaluate <b>Research</b>	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light <b>Sound</b> Earth and space	Materials Rocks States of matter	sound source wave noise vibrate/vibration pollution pitch volume dynamic echo tuning fork tone muffle mute soundproof drum guitar instrument families percussion timpani string brass woodwind soprano alto tenor bass
Year 5	Ask questions	Plants	Electricity	Materials	fertilisation

## Science Sequence of Learning

	Predict <b>Observe</b> Investigate <b>Identify, classify and group</b> Measure <b>Record and Present</b> Interpret and conclude Evaluate Research	<b>Animals inc Humans</b> Living things and their habitats Evolution and inheritance	Forces Seasonal changes Light Sound Earth and space	Rocks States of matter	birth uterus embryo ovary placenta chromosomes ovum zygote fallopian tubes gestation infancy arachnid mollusc crustacean sponge	
	Ask questions <b>Predict</b> <b>Observe</b> <b>Investigate</b> Identify, classify and group <b>Measure</b> Record and Present <b>Interpret and conclude</b> <b>Evaluate</b> Research	Plants Animals inc Humans Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	<b>Materials</b> Rocks States of matter	soluble solution solute solvent suspension filter mixture residue filtrate separation (ir)reversible changes condutor thermal insulator insulation combustion reaction	
	<b>Ask questions</b> Predict Observe Investigate Identify, classify and group Measure Record and Present Interpret and conclude Evaluate	Plants Animals inc Humans <b>Living things and their habitats</b> Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	sexual and asexual reproduction interdependence topography erosion seed formation plantlets clone	

## Science Sequence of Learning

	<p><b>Research</b></p>				runners transpiration
	<p>Ask questions  <b>Predict</b>          Observe  <b>Investigate</b>          Identify, classify and group  <b>Measure</b>  <b>Record and Present</b>          Interpret and conclude          Evaluate  <b>Research</b></p>	<p>Plants          Animals inc Humans          Living things and their habitats          Evolution and inheritance</p>	<p>Electricity  <b>Forces</b>          Seasonal changes          Light          Sound          Earth and space</p>	<p>Materials          Rocks          States of matter</p>	<p>mechanisms          air &amp; water resistance          levers          pulleys          gears          cams          drag forces          Transference          buoyancy</p>
	<p><b>Ask questions</b>          Predict  <b>Observe</b>          Investigate          Identify, classify and group          Measure          Record and Present          Interpret and conclude          Evaluate  <b>Research</b></p>	<p>Plants          Animals inc Humans          Living things and their habitats          Evolution and inheritance</p>	<p>Electricity          Forces          Seasonal changes          Light          Sound  <b>Earth and space</b></p>	<p>Materials          Rocks          States of matter</p>	<p>axis/axes          Mercury          Venus          Earth          Mars          Jupiter          Saturn          Uranus          Neptune          Pluto          celestial body          spin          sphere/spherical          rotation          elliptical orbit          revolve          asteroid          meteor(ite)          comet          galaxy          light year          latitude          longitude          equator          hemisphere          prime          /Green which          Meridian          time zone</p>

## Science Sequence of Learning

Year 6	<p><b>Ask questions</b>            Predict  <b>Observe</b>            Investigate  <b>Identify, classify and group</b>            Measure            Record and Present            Interpret and conclude            Evaluate            Research</p>	<p>Plants            Animals inc Humans  <b>Living things and their habitats</b>            Evolution and inheritance</p>	<p>Electricity            Forces            Seasonal changes            Light            Sound            Earth and space</p>	<p>Materials            Rocks            States of matter</p>	<p>microorganisms            invertebrates            vertebrates            classification             (revisit vocabulary from previous year group)</p>
	<p>Ask questions            Predict  <b>Observe</b>  <b>Investigate</b>            Identify, classify and group  <b>Measure</b>            Record and Present  <b>Interpret and conclude</b>  <b>Evaluate</b>            Research</p>	<p>Plants            Animals inc Humans            Living things and their habitats            Evolution and inheritance</p>	<p>Electricity            Forces            Seasonal changes  <b>Light</b>            Sound            Earth and space</p>	<p>Materials            Rocks            States of matter</p>	<p>refraction            transmission            optics             (revisit vocabulary from previous year group)</p>
	<p>Ask questions  <b>Predict</b>            Observe  <b>Investigate</b>            Identify, classify and group            Measure  <b>Record and Present</b>            Interpret and conclude  <b>Evaluate</b>            Research</p>	<p>Plants            Animals inc Humans            Living things and their habitats            Evolution and inheritance</p>	<p><b>Electricity</b>            Forces            Seasonal changes            Light            Sound            Earth and space</p>	<p>Materials            Rocks            States of matter</p>	<p>(revisit vocabulary from previous year group)</p>
	<p>Ask questions            Predict  <b>Observe</b>            Investigate            Identify, classify and group            Measure            Record and Present  <b>Interpret and conclude</b>            Evaluate</p>	<p>Plants            Animals inc Humans            Living things and their habitats  <b>Evolution and inheritance</b></p>	<p>Electricity            Forces            Seasonal changes            Light            Sound            Earth and space</p>	<p>Materials            Rocks            States of matter</p>	<p>fossils            inhabited            offspring            adaptation            evolution            inheritance            variation            species            natural selection</p>



## Science Sequence of Learning



	Research				genes survival of the fittest chromosomes	
	Ask questions Predict Observe Investigate Identify, classify and group Measure Record and Present Interpret and conclude Evaluate Research	Plants <b>Animals inc Humans</b> Living things and their habitats Evolution and inheritance	Electricity Forces Seasonal changes Light Sound Earth and space	Materials Rocks States of matter	bronchi diaphragm trachea gaseous exchange aorta pulmonary carbon dioxide air sac (de) oxygenated plasma red/white blood cells respiratory system clotting capillaries circulatory system blood vessels	