

Science Progression

	EYFS	Y1-2	Y3-4	Y5-6
Observing Over Time	<p>Plan</p> <ul style="list-style-type: none"> I am curious about things that change With help I ask questions about things changing I talk about my ideas for finding out how things change <p>Do</p> <ul style="list-style-type: none"> I use all my senses to observe changes I look closely at how things change I make simple records of how things change (with help where necessary) I use simple equipment to observe and record changes <p>Review</p> <ul style="list-style-type: none"> I talk about what I have done and what I noticed 	<p>Plan</p> <ul style="list-style-type: none"> I ask questions about how and why things change With help, I identify changes to observe and measure and suggest how to do it <p>Do</p> <ul style="list-style-type: none"> I use non-standard units and simple equipment to record changes I record in words or pictures, or in simple prepared formats such as tables and charts <p>Review</p> <ul style="list-style-type: none"> I identify simple changes and talk about them I sequence the changes I begin to use scientific language to talk about changes I talk about whether the change was what I expected 	<p>Plan</p> <ul style="list-style-type: none"> I talk about things changing and decide when questions can be answered by observing over time I decide what observations to make, how often and what equipment to use <p>Do</p> <ul style="list-style-type: none"> I use a range of equipment to collect data using standard measures I make records using tables and bar charts I begin to use and interpret graphs produced by dataloggers <p>Review</p> <ul style="list-style-type: none"> I draw simple conclusions from the changes I observed I talk about changes using some scientific language I suggest improvements to the ways I observe 	<p>Plan</p> <ul style="list-style-type: none"> I recognise when observing changes over time will help to answer my questions I decide how detailed my observations need to be, and what equipment to use, to make my measurements as accurate as possible <p>Do</p> <ul style="list-style-type: none"> I use equipment accurately without support I record data appropriately I present data in line graphs I interpret changes in the data I recognise the effect of changing the time and number of observations <p>Review</p> <ul style="list-style-type: none"> I draw valid conclusions from data about changes I recognise the significance of things changing over time I talk about and explain changes using scientific knowledge and understanding I evaluate how well I observed over time
Identifying and Classifying	<p>Plan</p> <ul style="list-style-type: none"> I am curious about similarities and differences With help I ask questions about similarities and differences I talk about my ideas for sorting or matching things <p>Do</p> <ul style="list-style-type: none"> I use my senses to sort and match things I match things that are the same I find things that are similar or different I sort or group things in my own way I use simple equipment to help me sort things (e.g., boxes, hoops) <p>Review</p> <ul style="list-style-type: none"> I talk about how I sorted or matched things 	<p>Plan</p> <ul style="list-style-type: none"> I ask questions about how and why things are similar or different I decide what to observe to identify or sort things <p>Do</p> <ul style="list-style-type: none"> I make comparisons between simple features of objects, materials or living things I record my observations in words or pictures or simple tables I sort objects by observable and behavioural features I record my sorting in sorting circles or tables <p>Review</p> <ul style="list-style-type: none"> I identify similarities and differences and talk about them I begin to use simple scientific language to talk about how things are similar or different I try to use my records to help sort or identify other things 	<p>Plan</p> <ul style="list-style-type: none"> I talk about what criteria I will use to sort and classify things I decide what equipment to use to identify and classify things I talk about things that can be grouped and decide when questions can be answered by sorting and classifying <p>Do</p> <ul style="list-style-type: none"> I carry out simple tests to sort and classify according to properties or behaviour I use Carroll diagrams, Venn diagrams and more complex tables to sort things I use simple keys and branching databases to identify things I make simple branching databases (keys) for things that have clear differences <p>Review</p> <ul style="list-style-type: none"> I draw simple conclusions about the things I have sorted and classified I talk about the similarities and differences I identified using some scientific language I suggest improvements to the way I sort and identify things 	<p>Plan</p> <ul style="list-style-type: none"> I recognise when identifying and classifying will be helpful to answer my questions I decide what equipment, tests and secondary sources of information to use to identify and classify things <p>Do</p> <ul style="list-style-type: none"> I use a series of tests to sort and classify materials I use secondary sources to identify and classify things I make my own keys and branching databases with 4 or more items I use more than one piece of scientific evidence to identify and classify things <p>Review</p> <ul style="list-style-type: none"> I draw valid conclusions when sorting and classifying I recognise the significance of sorting and classifying I talk about and explain what I have done using scientific knowledge I evaluate how well my keys worked

	EYFS	Y1-2	Y3-4	Y5-6
Pattern Seeking	<p>Plan</p> <ul style="list-style-type: none"> I am curious about patterns With help I ask questions about patterns I talk about my ideas for finding out about patterns <p>Do</p> <ul style="list-style-type: none"> I use my senses to look closely for patterns I observe more than one thing at a time I make simple records of what I notice (with help where necessary) I use simple equipment to observe and record patterns <p>Review</p> <ul style="list-style-type: none"> I talk about what I have done and the patterns I noticed 	<p>Plan</p> <ul style="list-style-type: none"> I ask questions about why and how things are linked With help, I decide what patterns to observe and measure and suggest how to do it <p>Do</p> <ul style="list-style-type: none"> I use non-standard units and simple equipment to record events that might be related I record in words or pictures, or in simple prepared formats such as tables, tally charts and maps <p>Review</p> <ul style="list-style-type: none"> I identify simple patterns and talk about them I make links between two sets of observations I begin to use scientific language to talk about patterns I talk about whether the pattern was what I expected 	<p>Plan</p> <ul style="list-style-type: none"> I talk about where patterns might be found and decide when questions can be investigated by pattern seeking I decide on which sets of data to collect, what observations to make and what equipment to use <p>Do</p> <ul style="list-style-type: none"> I use a range of equipment to collect data using standard measures I make records using tables, bar charts or simple scatter graphs I begin to use and interpret data collected through dataloggers <p>Review</p> <ul style="list-style-type: none"> I draw conclusions about simple patterns between two sets of data I talk about patterns using some scientific language I suggest improvements to the way I looked for patterns 	<p>Plan</p> <ul style="list-style-type: none"> I recognise when variables cannot be controlled and when pattern seeking will help to answer my question I decide how detailed my data needs to be, and which equipment to use, to make my measurements as accurate as possible <p>Do</p> <ul style="list-style-type: none"> I use equipment accurately to collect observations I record data appropriately and accurately I present data in scatter graphs and frequency charts I recognise patterns in results I recognise the effect of sample size on reliability <p>Review</p> <ul style="list-style-type: none"> I draw valid conclusions from data about patterns and recognise their limitations I recognise the significance of relationships between sets of data I talk about and explain cause and effect patterns using scientific knowledge and understanding I evaluate how well I looked for patterns
Research	<p>Plan</p> <ul style="list-style-type: none"> I am curious about things in my surroundings With help I ask questions that I can answer using secondary sources <p>Do</p> <ul style="list-style-type: none"> I listen carefully I know that information in books and electronic media can be used to answer questions I find pictures of things I talk to people about what they do and how things work <p>Review</p> <ul style="list-style-type: none"> I talk about things I found out 	<p>Plan</p> <ul style="list-style-type: none"> I ask questions about how things are and the way they work With help, I make suggestions about how to find things out <p>Do</p> <ul style="list-style-type: none"> I use simple books and electronic media to find things out I ask questions to find out what people do and how things work I record in words and pictures what I found out <p>Review</p> <ul style="list-style-type: none"> I begin to use scientific language to talk about what I found out I talk about whether the information source was useful I give an opinion about some things I found out 	<p>Plan</p> <ul style="list-style-type: none"> I talk about how things are and the way they work and decide when questions can be answered by research using secondary sources <p>Do</p> <ul style="list-style-type: none"> I use information sources to find the information I need I use someone else's data I record what I found out in my own words I present information in different ways <p>Review</p> <ul style="list-style-type: none"> I draw conclusions from what I found out from different sources I talk about what the information and data means using some scientific language I suggest ways to improve how I find out and use information 	<p>Plan</p> <ul style="list-style-type: none"> I recognise when research using secondary sources will help to answer my questions I decide which sources of information might answer my questions <p>Do</p> <ul style="list-style-type: none"> I use relevant information and data from a range of secondary sources I recognise how data has been obtained I start to notice when information and data is biased or based on opinions rather than facts I present my findings in suitable formats <p>Review</p> <ul style="list-style-type: none"> I draw valid conclusions from my research I talk about and explain my research using scientific knowledge and understanding I evaluate how well my research has answered my questions I recognise that some scientific questions may not have been answered definitively

	EYFS	Y1-2	Y3-4	Y5-6
Fair Testing	<p>Plan</p> <ul style="list-style-type: none"> I am curious about how things behave With help, I ask questions about things I can test I talk about my ideas for testing how things behave <p>Do</p> <ul style="list-style-type: none"> I use my senses to look closely at how things behave I carry out simple tests I make simple records of what I notice (with help where necessary) I use simple equipment to observe and record <p>Review</p> <ul style="list-style-type: none"> I talk about what I have done and what I noticed I talk about whether something makes a difference 	<p>Plan</p> <ul style="list-style-type: none"> I ask questions about why and how With help, I notice links between cause and effect With help, I identify simple variables to change and measure <p>Do</p> <ul style="list-style-type: none"> I use non-standard units and simple equipment to record data I record in words or pictures, or in simple prepared formats such as tables and tally charts <p>Review</p> <ul style="list-style-type: none"> I interpret and talk about my data I begin to use simple scientific language to identify and describe simple causal relationships With help, I can say if my test was fair I say if the relationship was what I expected 	<p>Plan</p> <ul style="list-style-type: none"> I talk about links between cause and effect and (with help) pose a fair test question I help to plan a fair test I decide what data to collect I decide what equipment to use and how to make observations <p>Do</p> <ul style="list-style-type: none"> I use a range of equipment to collect data using standard measures I make records using tables and bar charts I begin to use and interpret data through dataloggers <p>Review</p> <ul style="list-style-type: none"> I draw simple conclusions from my fair tests I talk about, and explain, simple causal relationships using some scientific language I suggest ways that I can improve my fair tests 	<p>Plan</p> <ul style="list-style-type: none"> I recognise when variables need to be controlled and when a fair test is the best way to answer my question I plan a fair test, selecting the most suitable variables to measure, change and keep the same I decide what equipment to use to make my measurements as accurate as possible <p>Do</p> <ul style="list-style-type: none"> I use equipment accurately to collect observations I record data appropriately and accurately I present data in line graphs I identify causal relationships <p>Review</p> <ul style="list-style-type: none"> I draw valid conclusions based on the data I recognise the significance of the results of fair tests I talk about and explain causal relationships using scientific knowledge and understanding I evaluate the effectiveness of my fair testing, recognising variables that were difficult to control
<p>Curriculum coverage (Cornerstones)</p> <p>Year A</p>	<p>EYFS Development Matters Early Learning Goals</p> <ul style="list-style-type: none"> Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes. Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. 	<ul style="list-style-type: none"> Animals, including humans; Basic needs of animals; Everyday materials; Food chains; Habitats; Identifying and classifying; Living and non-living things; Plants and animals; Seasonal Changes Working scientifically; 	<ul style="list-style-type: none"> Animals, including humans; Food chains; Fossils; Living things and their habitats; Nutrition Plant parts and functions; Rocks Teeth types; The digestive system; Tooth decay and hygiene; Water transportation in plants; Skeletal systems; Working scientifically 	<ul style="list-style-type: none"> Classification; Families and inheritance; Electricity Forces; Light; Living things and their habitats; Mechanisms; Properties and changes of materials; Working scientifically
<p>Curriculum coverage (Cornerstones)</p> <p>Year B</p>	<p>N/A – Reception is single year group.</p>	<ul style="list-style-type: none"> Everyday materials; Plants Plants and animals; Properties of everyday materials; Seasonal Changes Working scientifically; 	<ul style="list-style-type: none"> Electricity Forces and magnets; Light; Plants; Soil; States of matter Working scientifically 	<ul style="list-style-type: none"> Animals, including humans; Electricity Life cycles of animals and plants; Light and shadows Living things and their habitats; Working scientifically

EYFS	Year 1 & Year 2	Year 3 & Year 4	Year 5 & Year 6			
Tree, leaf, fruit	<p>Plants Deciduous, evergreen, flower, blossom, petal, fruit, berry, root, seed, bulb, trunk, branch, stem, bark, stalk, bud</p>	<p>Plants Light, shade, warm, cool, grow, healthy</p>	<p>Plants Photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal – wind dispersal, animal dispersal, water dispersal</p>	<p>Living things and their habitats Classification, classification keys, environment, human impact, positive, negative, migrate, hibernate</p>	<p>Living things and their habitats Life cycle, sexual, sperm, fertilises, egg, live young, metamorphosis, asexual, plantlets, runners, cuttings</p>	<p>Living things and their habitats Vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering and non-flowering</p>
Bird, fish, animal (horse, sheep, pig, cow, lion), head, body, eyes, ears, mouth, teeth, wing, feathers, hear, eyes, nose, ear, tongue	<p>Animals, including humans Leg, tail, claw, fin, scales, fur, beak, paws, hooves, Senses, touch, see, smell, taste, fingers, skin</p>	<p>Animals, including humans Offspring, reproduction, growth, child, young/old stages (chick/hen, baby/child/adult, caterpillar/butterfly), exercise, heartbeat, breathing, hygiene, germs, disease, food types (meat, fish, vegetables, bread, rice, pasta), herbivore, carnivore, omnivore</p>	<p>Animals including humans Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, support, protect, move, skull, ribs, spine, muscles, joints</p>	<p>Animals, including humans Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, incisor, canine, molar, premolars, producer, predator, prey</p>	<p>Animals, including humans Puberty</p>	<p>Animals, including humans Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, drugs and lifestyle</p>
Wood, water, rock, hard, soft, mud, sand,	<p>Everyday materials Object, material, plastic, glass, metal, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see through, not see through</p>	<p>Uses of everyday materials opaque, transparent and translucent, reflective, non-reflective, flexible, rigid, Shape, push/pushing, pull/puling, twist/twisting, squash/squashing. Bend/bending, stretch/stretching</p>	<p>Rocks Rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb water, soil, fossil, marble, chalk, granite, sandstone, slate, soil, peat, sandy/chalk/clay soil</p>	<p>States of matter Solid, liquid, gas, state change, melting, freezing, melting point, boiling point, evaporation, temperature, water cycle</p>	<p>Properties and changes of materials Thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve reversible/non-reversible change, burning, rusting, new material</p>	<p>Evolution and inheritance Offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species</p>
Hot, cold, day, night, dark, sun, wet, dry, hard, soft, loud, quiet,	<p>Seasonal changes Weather (sunny, rainy, windy, snowy etc.), seasons (Winter, Summer, Spring, Autumn), sun, sunrise, sunset, day length</p>	<p>Living things and their habitats Living, dead, never alive, suited, suitable, basic needs, food, food chain, shelter, move, feed, local habitats pond, woodland., micro-habitats under logs, in bushes</p>	<p>Light Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous</p> <p>Forces and magnets Force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole</p>	<p>Sound Sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, loud, insulation</p>	<p>Earth and space Earth, Sun, Moon, (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune) spherical, solar system, rotates, star, orbit, planets</p> <p>Forces Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears</p>	<p>Light Straight lines, light rays.</p>
Push				<p>Electricity Electricity, electrical appliance/device, mains, plug, circuit, complete circuit, component, cell, battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol</p>	<p>Electricity Circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage</p>	