

Working Scientifically						
EYFS	Y1	Y2	Y3	Y4	Y5	Y6
<p>I can talk about what I see</p> <p>I can talk about how things change</p> <p>I can use my knowledge to explain how things work</p> <p>I can talk about what is the similar and what is different.</p> <p>I can ask simple questions</p>	<p>I can ask simple questions and recognise that they can be answered in different ways</p> <p>I can observe closely, using simple equipment.</p> <p>I can perform simple tests.</p> <p>I can identify and classify different groups.</p> <p>I can use observations and ideas to suggest answers to questions.</p> <p>I can gather and record data to help in answering questions.</p>	<p>I can ask relevant questions and using different types of scientific enquiries to answer them</p> <p>I can set up simple practical enquiries, comparative and fair tests</p> <p>I make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</p> <p>I can gather, record, classify and present data in a variety of ways to help in answering questions</p> <p>I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>I can report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>I can use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p>I can identify differences, similarities or changes related to simple scientific ideas and processes</p> <p>I can use straightforward scientific evidence to answer questions or to support their findings.</p>	<p>I can plan different types of scientific enquiry.</p> <p>I can control variables in an enquiry.</p> <p>I can measure accurately and precisely using a range of equipment.</p> <p>I can record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>I can use the outcome of test results to make predictions and set up a further comparative fair test.</p> <p>I can report findings from enquiries in a range of ways.</p> <p>I can explain a conclusion from an enquiry.</p> <p>I can explain causal relationships in an enquiry.</p> <p>I can relate the outcome from an enquiry to scientific knowledge in order to state whether evidence supports or refutes an argument or theory.</p> <p>I can read, spell and pronounce scientific vocabulary accurately.</p>			
<p>change, see, similar, different, draw, what, why, how, where</p>	<p>similarities, differences, question, test, answer, observe, equipment, identify, classify, describe, sort, group, record, method, fair test, pattern, diagram, predict, chart, map, data, labels, change, measure, compare, contrast, describe, biology chemistry, physics</p>	<p>practical, relevant questions, scientific enquiry, comparative test, plan, systematic, observation accurate measurements, improvements, thermometer, data logger, gather, present, key, bar chart, table, explanation, conclusion, prediction, evidence, improve, secondary sources, guides, construct,</p>	<p>Variables, classification outcome, report, causal relationships, theory, debate. Support, refute, argument, accuracy, precision, scientific diagrams scatter graphs, line graph, display, presentation evidence, support, refute, debate, systematic quantitative measurements, interpret</p>			

Living Things and their Habitats - Biology

EYFS	Y1	Y2	Y3	Y4	Y5	Y6
<p>I know about similarities and differences in relation to living things</p> <p>I can make observations of animals and plants and explain why some things occur and talk about changes</p>	<p>Not taught</p>	<p>I can explore and compare the differences between things that are living, dead, and things that have never been alive.</p> <p>I can identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.</p> <p>I can identify and name a variety of plants and animals in their habitats, including micro-habitats.</p> <p>I can 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.</p>	<p>Not taught</p>	<p>I can recognise that living things can be grouped in a variety of ways.</p> <p>I can explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</p> <p>I can recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</p> <p>I can describe the life process of reproduction in some plants and animals.</p>	<p>I can 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.</p> <p>I can give reasons for classifying plants and animals based on specific characteristics.</p>
<p>farm, forest, seaside, jungle, zoo, minibeasts</p>		<p>Living, Dead, Habitat, Energy, Food chain, Predator, Prey, Woodland, Pond, Desert</p>		<p>classify, vertebrate, invertebrate, cold-blooded, warm-blooded, sample, exoskeleton, creature</p>	<p>naturalist, metamorphosis, endangered, documentary, asexual, reproduction,</p>	<p>Classify, Vertebrate, Invertebrate, Micro-organism, species, kingdom, prokaryote, fungi</p>

Animals Including Humans - Biology

EYFS	Y1	Y2	Y3	Y4	Y5	Y6
<p>I know about similarities and differences in relation to living things</p> <p>I can make observations of animals and plants and explain why some things occur and talk about changes</p>	<p>I can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <p>I can identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>I can describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)</p> <p>I can identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</p>	<p>I can notice that animals, including humans, have offspring which grow into adults</p> <p>I can find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</p> <p>I can describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>	<p>I can notice that animals, including humans, have offspring which grow into adults</p> <p>I can find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</p> <p>I can describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>	<p>I can describe the simple functions of the basic parts of the digestive system in humans.</p> <p>I can identify the different types of teeth in humans and their simple functions.</p>	<p>I can describe the changes as humans develop to old age.</p>	<p>I can identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</p> <p>I can recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</p> <p>I can describe the ways in which nutrients and water are transported within animals, including humans.</p>
<p>animal, farm animal, wild animal, butterfly, caterpillar, cocoon, change, baby, tadpole, frog, family</p>	<p>pet, offspring, care, bird, fish, reptile, amphibian, mammal, herbivore, carnivore, omnivore</p> <p>Sight, smell hearing, taste, exercise, healthy, design, baby, grow, bones</p>	<p>birth, growth, reproduction, death, lifecycle, generation, child, adult</p> <p>exercise, hygiene, healthy, nutrition, portion, balanced diet, measuring, temperature</p> <p>digestive system, circulatory system, nervous system, infection, vaccine, skeleton, muscles, germ</p>	<p>movement, involuntary muscles, voluntary muscles, tendon, bone, skull, brain, limbs, spine, ribcage, skeleton, pelvis</p>	<p>mouth, tongue, teeth, oesophagus, stomach, intestines, digest, canine, incisor, molar, nutrient, vitamin, food pyramid, decomposer</p>	<p>foetus, uterus, gestation, fertilisation, dormant, hormone, memory, adolescence reproduce, puberty</p>	<p>circulatory, heart, blood vessels, veins, arteries, oxygenated, deoxygenated, valve, exercise, respiration</p>

Plants - Biology						
EYFS	Y1	Y2	Y3	Y4	Y5	Y6
<p>I know about similarities and differences in relation to living things</p> <p>I can make observations of animals and plants and explain why some things occur and talk about changes</p>	<p>I can identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</p> <p>I can identify and describe the basic structure of a variety of common flowering plants, including trees.</p>	<p>I can observe and describe how seeds and bulbs grow into mature plants</p> <p>I can find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>	<p>I can identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>I can 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</p> <p>I can investigate the way in which water is transported within plants</p> <p>I can explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>	Not taught	<p>Not taught</p> <p>Links to Living things and their Habitats</p>	Not taught
<p>plant, grow, flower, seed, vegetable, fruit, food, soil,, water</p>	<p>seed, root, flower, stem, bud leaf, evergreen, deciduous, plant, tree</p>	<p>germinate, nutrient, produce, bulb, seed, fertilised, dormant, pollen</p>	<p>transpiration, photosynthesis, carbon dioxide, pollinations, dispersal, xylem, phloem, glucose germination, flowering, non-vascular, asexual reproduction, fungi, insectivorous, deforestation, biodiversity, fertilisation</p>			

Evolution and Inheritance - Biology

EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Not taught	Not taught	Not taught	Not taught	Not taught	Not taught	<p>I can recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</p> <p>I can recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</p> <p>I can identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</p>
						<p>fossilisation, generation, , inheritance, adaptation, evolution, characteristics, DNA, genetics, natural selection, ancestor</p>

Materials - Chemistry						
EYFS	Y1	Y2	Y3	Y4	Y5	Y6
<p>I know about similarities and differences in relation to places and objects</p> <p>I can talk about features of my own immediate environment and how environments might vary from one to another</p>	<p>I can distinguish between an object and the material from which it is made</p> <p>I can identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</p> <p>I can describe the simple physical properties of a variety of everyday materials</p> <p>I can compare and group together a variety of everyday materials on the basis of their simple physical properties</p>	<p>I can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p> <p>I can find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>	<p>Not taught – however links with forces and magnets (See below)</p>	<p>I can compare and group materials together, according to whether they are solids, liquids or gases</p> <p>I can 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 (°C)</p> <p>I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</p>	<p>I can compare and group materials based on their properties (e.g. hardness, solubility, transparency, conductivity, [electrical & thermal], and response to magnets).</p> <p>I can recognise how some material will dissolve in liquid to form a solution.</p> <p>I can describe how to recover a substance from a solution.</p> <p>I can describe how some materials can be separated.</p>	<p>Not taught</p>
<p>wood, glass, plastic, paper, wool, house, build</p>	<p>magnet, metal, man-made, natural, recycle, bendy, hard, soft, rough, smooth</p> <p>rigid, flexible, transparent, translucent, opaque, waterproof, absorbent, strong,, brittle,</p>	<p>absorbent, properties, stretch, repel, squash, durable, dull, shiny, stiff, bend, twist</p>	<p>Rocks metamorphic rock, igneous rock, sedimentary rock, fossils, soil types, acid rain, weathering, mineral</p>	<p>States of Matter Solid, Liquid, Gas, Evaporation, Condensation, Particles, Temperature, Freezing, Heating</p>	<p>Hardness, Solubility, Transparency, Conductivity, strength, Filter, Evaporation, Dissolving, absorbency</p> <p>separate, solution, solute, solvent, irreversible, compound physical change chemical change,</p>	

Earth & Space - Physics

EYFS	Y1	Y2	Y3	Y4	Y5	Y6
<p>I know about similarities and differences in relation to places and objects</p> <p>I can talk about features of my own immediate environment and how environments might vary from one to another</p>	<p>I can observe changes across the four seasons</p> <p>I can observe and describe weather associated with the seasons and how day length varies.</p>	<p>Links to Cornerstones topic – Moon Zoom</p>	<p>Not taught</p>	<p>Not taught</p>	<p>I can describe and explain the movement of the Earth and other planets relative to the Sun.</p> <p>I can describe and explain the movement of the Moon relative to the Earth.</p> <p>I can explain and demonstrate how night and day are created.</p> <p>I can describe the Sun, Earth and Moon (using the term spherical).</p>	<p>Not taught</p>
<p>Autumn, Winter, Spring, Summer, night, day, snowing, raining, sunny, warm, cold</p>	<p>weather, sun, heat, light, freezing, dark, rain, snowflake, ice, fog, mist, moon, seasons</p>				<p>orbit, solar system axis, rotation, waxing moon, waning moon, star, constellation, Saturn, Mercury, Mars, Venus, Earth, Jupiter, Saturn Uranus, Neptune, gravitational force</p>	

Electricity - Physics						
EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Not taught	Not taught	Not taught	Not taught	<p>I can identify common appliances that run on electricity</p> <p>I can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</p> <p>I can 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</p> <p>I can recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</p> <p>I can recognise some common conductors and insulators, and associate metals with being good conductors.</p>	Not taught	<p>I can associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</p> <p>I can 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</p> <p>I can use recognised symbols when representing a simple circuit in a diagram.</p>
				cell, wire, bulb, switch, buzzer, battery, circuit diagram, series circuit, conductor, insulator, parallel circuit, loop, resistance		static electricity, filament, voltage, insulator, conductor, fuse, component, variable resistor amp,

Forces - Physics						
EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Not taught	Not taught	Not taught	<p>I can compare how things move on different surfaces</p> <p>I can notice that some forces need contact between two objects, but magnetic forces can act at a distance</p> <p>I can observe how magnets attract or repel each other and attract some materials and not others describe magnets as having two poles</p> <p>I can predict whether two magnets will attract or repel each other, depending on which poles are facing.</p> <p>I can 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</p>	Not taught	<p>I can explain what gravity is and its impact on our lives.</p> <p>I can identify and explain the effect of air resistance.</p> <p>I can identify and explain the effect of water resistance.</p> <p>I can identify and explain the effect of friction.</p> <p>I can explain how levers, pulleys and gears allow a smaller force to have a greater effect.</p>	Not taught
			lodestone, horse magnet, bar magnet, magnetic needle, Force, compass, , attract, repel, pendulum		resistance, friction, gravity, lever, gear, pulley, mass Newton,	

Sounds– Physics						
EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Not taught	Not taught	Not taught	Not taught.	<p>I can identify how sounds are made, associating some of them with something vibrating</p> <p>I can recognise that vibrations from sounds travel through a medium to the ear</p> <p>I can find patterns between the pitch of a sound and features of the object that produced it</p> <p>I can find patterns between the volume of a sound and the strength of the vibrations that produced it</p> <p>I can recognise that sounds get fainter as the distance from the sound source increases.</p>	Not taught	I Not taught
				<p>volume, vibration, soundproof, pitch, sound wave, eardrum, frequency, decibel</p>		

KS2 - Light – Physics						
EYFS	Y1	Y2	Y3	Y4	Y5	Y6
I can talk about features of my own immediate environment and how environments might vary from one to another	Not taught	Not taught	<p>I can recognise that they need light in order to see things and that dark is the absence of light</p> <p>I can notice that light is reflected from surfaces</p> <p>I can recognise that light from the sun can be dangerous and that there are ways to protect their eyes</p> <p>I can recognise that shadows are formed when the light from a light source is blocked by a solid object</p> <p>I can find patterns in the way that the size of a shadow changes.</p>	Not taught	Not taught	<p>I can 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</p> <p>I can 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</p>
rainbow, sky, torch, light, dark, night, day			transparent, opaque, reflection, fluorescent, UV rays, periscope, shadow, sun protection, ultraviolet			Refraction, Spectrum, transparent, opaque, translucent, magnify, lens, angle of incidence, angle of reflection