



Chambersbury Science Progression Map

EYFS to Year 6 Aligned with the National Curriculum, Including EYFS Statements, Tier 3 Vocabulary, and Working Scientifically Skills for Each Year Group

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Plants	<p>Plant seeds and care for growing plants (UW)</p> <p>Understand the key features of the life cycle of a plant (UW)</p> <p>Begin to understand the need to respect and care for the natural environment and all living things (UW)</p> <p>Understand the effect of changing seasons on the natural world around them (UW)</p> <p>Explore the natural world around them, making observations and drawing pictures of animals and plants. (ELG)</p>	<p>Identify and name a variety of common wild and garden plants.</p> <p>Identify and describe the basic structure of a variety of common flowering plants, including trees.</p>	<p>Observe and describe how seeds and bulbs grow into mature plants</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>	<p><u>What plants do and what they need</u></p> <p>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>Explore the requirements of plants for life and growth and how they vary from plant to plant</p> <p>Investigate the way in which water is transported within plants</p> <p>Explore the part that flowers play in the lifecycle of flowering plants, including pollination, seed formation and seed dispersal</p>			
Vocabulary	<p>plant</p> <p>seed</p> <p>bulb</p> <p>leaf</p> <p>flower</p> <p>stem</p> <p>root</p> <p>soil</p> <p>water</p> <p>sun / sunlight</p> <p>grow</p>	<p>plant</p> <p>leaf / leaves</p> <p>flower</p> <p>blossom</p> <p>petal</p> <p>fruit</p> <p>stem</p> <p>trunk</p> <p>branch</p> <p>root</p> <p>bulb</p>	<p>germination</p> <p>seedling</p> <p>bulb</p> <p>shoot</p> <p>stem</p> <p>root</p> <p>leaf / leaves</p> <p>flower</p> <p>petal</p> <p>stamen</p> <p>stigma</p>	<p>Plants, conditions, requirements, plant, leaf, function, carbon dioxide, photosynthesis, roots, function, absorb, nutrient, soils, flower, life cycle, reproduce, pollination, petals, stamen, anther, stigma, ovary, pollen, stigma, pollinator, fertilisation, seed formation, seed dispersal, germination,</p>			



	shoot	seed deciduous evergreen	seed dispersal pollination reproduction (in plants) deciduous evergreen			
Working Scientifically Skills	<p>Water seeds and bulbs and observe changes daily/weekly. Look closely at leaves, stems, roots, and flowers using magnifying glasses.</p> <p>Draw or label simple pictures of plants and their parts.</p> <p>Talk about what plants need to grow (water, sunlight, soil).</p> <p>Notice and discuss differences in growth between plants in different places.</p>	<p>Observe plants closely using simple equipment</p> <p>Identify and sort plants based on observable features</p> <p>Describe changes (e.g., tree seasons) over time</p>	<p>Perform simple tests (e.g., what plants need to grow)</p> <p>Set up simple observations over time (growth of seeds/bulbs)</p> <p>Record findings using tables/pictures</p>	<p>Set up comparative tests (e.g., water/light requirements)</p> <p>Use measuring equipment (ruler, thermometer) accurately</p> <p>Draw labelled diagrams</p>		



	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Animals, including humans	Explore the natural world around them, making observations and drawing pictures of animals and plants. (ELG) 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. (ELG)	Identify and name a variety of common animals. 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. Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	Notice that animals, including humans, have offspring, which grow into adults. Find out about and describe the basic needs of animals (Inc. Humans) for survival. Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	Healthy Eating Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. Introduction to the skeleton and muscles Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	Describe the simple functions of the basic parts of the digestive system in humans Identify the different types of teeth in humans and their simple functions Construct and interpret a variety of food chains, identifying producers, predators and prey.	Describe the changes as humans develop to old age.	The human circulatory system Identify and name the main parts of the human circulatory system and describe the functions of the heart, blood vessels and blood Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function Describe the ways in which nutrients and water are transported within animals including humans.
Vocabulary	animal mammal bird fish reptile amphibian insect baby	amphibian reptile bird fish mammal carnivore herbivore omnivore	offspring reproduce / reproduction life cycle survival habitat diet nutrition	Healthy Eating Basic needs, food, wild, habitat, captivity, nutrient, vitamin, carbohydrate, protein, calcium, dietician,	Teeth and Digestion Teeth, observe, incisors, canines, molars, enamel, plaque, digestive system, omnivore,	Human, mammal, womb, develop, baby, toddler, develop, child, childhood, adolescence, adolescent, puberty,	Organ, Function, heart, Blood, Oxygen, Function Nutrients. Carbon dioxide, Blood vessels, Arteries Veins, Oxygenated



	<p>adult life cycle fur / feathers / scales wings / legs / tail habitat (introduced simply as "home" for animals) eat / food / drink</p>	<p>classification (introduced simply) body parts (scientific terms): head neck torso limbs</p>	<p>herbivore carnivore omnivore skeleton organs (heart, lungs, brain) senses hygiene</p>	<p>nutrition, amount, diet, food group, nutritional information, calorie <u>Introduction to the skeleton and muscle</u> Skeleton, bones, x-ray, support, protection, organs, skull, rib cage, spine, adult, endoskeleton, vertebrate, invertebrates, exoskeleton, fluid, muscle, movement, direction, joint, strength, athlete, fitness circuits, stretches</p>	<p>herbivore, carnivore, saliva, mouth, oesophagus, stomach, small intestine, large intestine, rectum, anus <u>Food chains</u> Animal, plant, basic needs, depend, food chain, plant, absorb, photosynthesis, producer, consumer, herbivore, carnivore, omnivore, predator, prey</p>	<p>reproduce, adult, elder, elderly, adulthood, chronological order, population, sample, puberty, growth rate,</p>	<p>Deoxygenated, nutrients, digest, intestines, bloodstream, circulatory system,</p>
<p>Working Scientifically Skills</p>	<p>Observe pets, classroom animals, or local wildlife (birds, insects). Compare sizes, colours, and features of different animals. Sort animals into groups (e.g., birds, mammals,</p>	<p>Classify animals into basic groups Observe similarities and differences Use simple charts/pictograms to record animal types</p>	<p>Observe offspring growing into adults Group animals by diet Ask simple questions and record answers</p>	<p>Classify skeleton types Collect and present data on nutrients/diets Use research to answer simple scientific questions</p>	<p>Measure changes over time (e.g., pulse rate after exercise) Use scientific diagrams (digestive system) Explain results using evidence</p>	<p>Take accurate measurements (e.g., pulse, lung capacity) Use repeat readings to ensure accuracy Draw conclusions using controlled variables</p>	<p>Plan enquiries with multiple variables Take precise measurements (data loggers, heart rate monitors) Analyse results using scatter graphs and line graphs</p>



	<p>fish) using pictures or toys. Discuss what animals eat and where they live. Compare baby animals with adult animals and notice growth changes.</p>						
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	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Living things and their habitats	<p>Begin to understand the need to respect and care for the natural environment and all living things.</p> <p>Explore the natural world around them.</p> <p>Describe what they see, hear and feel whilst outside.</p> <p>Recognise some environments that are different to the one in which they live</p> <p>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. (ELG)</p>		<p>Explore and compare the difference between things that are living, dead and things that have never been alive.</p> <p>Identify that most living things live in habitats to which they are suited and describe how different habitats provide the basic needs of different kinds of animals and plants, and how they depend on each other.</p> <p>Identify and name a variety of plants and animals in their habitats, including micro-habitats</p> <p>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>Recognise that living things can be grouped in a variety of ways</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>Describe the differences in the lifecycles of a mammal, an amphibian, an insect and a bird.</p> <p>Describe the life process of reproduction in some plants and animals.</p>	<p>Why we classify and group living things</p> <p>Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals</p> <p>Give reasons for classifying plants and animals based on specific characteristics</p>
Vocabulary	<p>living</p> <p>dead</p> <p>never alive</p> <p>habitat (simple: "home" for plants or animals)</p> <p>microhabitat (small, observable areas: under a log, in a pond, soil)</p>		<p>living</p> <p>dead</p> <p>never alive</p> <p>habitat</p> <p>microhabitat</p> <p>ecosystem (introduced simply)</p> <p>food chain</p>		<p>Observable</p> <p>characteristic,</p> <p>classification key,</p> <p>zoologist,</p> <p>botanist</p>	<p><u>Reproduction and life cycle: animals</u></p> <p>Mammal, fish, reptile, amphibian, bird, insect, antennae,</p>	<p>Characteristic,</p> <p>vertebrate,</p> <p>invertebrate,</p> <p>classification key,</p> <p>flowering, non-flowering, seeds, spores, living thing, organism,</p>



	<p>environment pond woodland garden tree / bush / flower minibeast / insect nest / home</p>		<p>producer consumer predator prey adaptation environment conditions (light, moisture, temperature)</p>		<p>segmented, invertebrate, exoskeleton, life cycle, bird, egg, hatchling, fledging, reproduce, difference, larva, reproduce, metamorphosis, species, extinct, reproduce, animal, offspring, gestation period,</p> <p><u>Reproduction and life cycle: plants</u> Reproduce, offspring, parent plant, asexual, clone, anther, stigma, ovary, pollination, life cycle, germination, pollination, fertilisation, seed dispersal</p>	<p>micro-organism, microbe, microscope, bacteria, fungus, virus</p>
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<p>Working Scientifically Skills</p>	<p>Explore a garden, playground, or local park to find different plants, insects, and habitats. Collect natural objects (leaves, sticks) and sort by size, colour, or texture. Use magnifying glasses to look at minibeasts. Compare two habitats (e.g., sunny vs shady area) and notice which animals or plants live there. Draw simple representations of habitats and label living things.</p>		<p>Use simple equipment to explore microhabitats Collect data (e.g., minibeast counts) Identify and classify using tables</p>		<p>Use classification keys Survey habitats and gather data systematically Present findings using charts and graphs</p>	<p>Use more detailed classification keys Research life cycles from reliable sources Present findings formally</p>	<p>Classify using complex keys Justify classifications using scientific evidence Research microorganisms carefully and record findings</p>
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	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Seasonal change Evolution and Inheritance	Use all their senses in hands-on exploration of natural materials Talk about what they see, using a wide vocabulary. Explore the natural world around them. Describe what they see, hear and feel whilst outside. Understand the effect of changing seasons on the natural world around them	Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.					<u>Evolution and inheritance</u> Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
Vocabulary	season spring summer autumn winter weather rain / snow / wind / sun / cloudy frost temperature day / night leaf / flower (for seasonal observation)	season spring summer autumn winter weather temperature rainfall sunlight wind cloudy storm snow observe measure thermometer					Fossil, fossil record, palaeontologist, sedimentary rock, geologist, offspring, similar, vary, identical, variation, generation, characteristic, inheritance, inherited characteristics, environmental characteristics, similarity, appearance, physical, ancestor, Charles Darwin, survive, reproduce, adaptation, survive



Working Scientifically Skills	<p>Observe the weather each day and talk about sun, rain, wind, snow, clouds. Collect simple weather data using symbols, colours, or drawings. Compare trees or plants at different times of the year (e.g., leaves falling in autumn). Discuss how clothes or activities change with the seasons. Notice how daylight hours change over the year.</p>		<p>Observe and record weather over time Measure temperature and daylight hours (simple tools) Identify seasonal patterns</p>						<p>Use fossil evidence to support ideas Evaluate sources for reliability Construct scientific arguments from evidence</p>
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6		
Materials	<p>Use all their senses in hands-on exploration of natural materials. Explore collections of materials with similar and/or different properties. Talk about what they see, using a wide vocabulary. Talk about the differences between materials and changes they notice. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p>	<p>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</p>	<p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>	<p><u>Rocks and soils</u> Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. Describe in simple terms how fossils are formed when things that have lived are trapped within rock. Recognise that soils are made from rocks and organic matter.</p>	<p><u>States of matter</u> Compare and group materials together, according to whether they are solids, liquids or gases. 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. Identify the part played by evaporation and condensation in the water cycle</p>	<p>Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets Know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution Use knowledge of solids, liquids and gases to decide how mixtures might be</p>			



		<p>a variety of every day materials by their simple physical properties.</p>			<p>and associate the rate of evaporation with temperature.</p>	<p>separated, including through filtering, sieving and evaporating Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic Demonstrate that dissolving, mixing and changes of state are reversible changes Explain that some changes result in the formation of new materials and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.</p>	
<p>Vocabulary</p>	<p>material wood metal plastic fabric glass rock / stone hard / soft</p>	<p>material wood plastic metal glass rock fabric paper</p>	<p>material property opaque transparent translucent waterproof absorbent flexible</p>	<p>Material, rock, earth, natural, quarry, appearance, physical properties, hardness, permeability,</p>	<p>Solids, liquids, gas, states of matter, materials, properties, heat, melt, freeze, degrees celcius, evaporation, condensation,</p>	<p>Material, physical properties, transparent, electrical conductor, magnetic, suitable, thermal insulator, thermal conductor, dissolve, solid, liquid, soluble,</p>	



	rough / smooth waterproof absorbent wet / dry melt / freeze	properties hard soft rough smooth shiny dull waterproof absorbent opaque transparent flexible rigid	rigid durable strong weak rough smooth man-made natural suitability squashing bending twisting stretching	impermeable permeable, suitability, fossil, decay, sediment, pressure, imprint, soil, silt, organic matter	precipitation, water vapour, water cycle,	insoluble, separate, filter, sieve, solution, evaporate, state, substance, change of state, reversible, bicarbonate of soda, acids, observe, carbon dioxide, irreversible change	
Working Scientifically Skills	Feel and describe materials using words like hard, soft, rough, smooth. Sort objects by material type (wood, plastic, metal, fabric, rock). Test simple properties: which objects float/sink, which are waterproof/absorbent. Observe ice melting or chocolate melting and describe the change. Record findings using drawings, simple marks, or checklists.	Test materials by simple comparative tests (e.g., waterproof) Sort materials by properties Use simple language to describe what they observe	Compare the uses of materials Carry out simple experiments to test material properties Record results in simple charts	Observe and compare rocks using hand lenses Group rocks based on tests (hardness, permeability) Record findings using tables	Measure temperature accurately Observe changes over time (freezing/melting) Record observations in tables/graphs	Conduct fair tests with controlled variables Accurately measure temperature, mass, time Record results using line graphs	



Earth and Space						<p>Describe the movement of the Earth and other planets, relative to the Sun in the solar system</p> <p>Describe the movement of the Moon relative to the Earth.</p> <p>Describe the Sun, Earth and Moon as approximately spherical bodies.</p> <p>Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</p>	
Vocabulary						<p>Earth, spherical, globe, horizon, Earth, Sun, Moon, rotate, axis, model, rotating, shadow, solar system, planets, orbit, light source, reflect, satellite</p>	
Working Scientifically Skills						<p>Model scientific concepts (orbits, rotation)</p> <p>Use secondary sources and evaluate reliability</p> <p>Record data over time (e.g. moon phases)</p>	

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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<p>Light and Sound</p>				<p><u>Introduction to light and shadows</u> Recognise that they need light in order to see things and that dark is the absence of light Notice that light is reflected from surfaces Recognise that light from the sun can be dangerous and there are ways to protect their eyes Recognise that shadows are formed when the light from a light source is blocked by a solid object. Find patterns in the way that the size of shadows change.</p>	<p><u>Sound</u> Identify how sounds are made, associating some of them with something vibrating Recognise that vibrations from sounds travel through a medium to the ear Find patterns between the pitch of a sound and features of the object that produced it Find patterns between the volume of a sound and the strength of the vibrations that produced it Recognise that sounds get fainter as the distance from the sound source increases.</p>	<p><u>Light and how it travels</u> Recognise that light appears to travel in straight lines 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 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. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>
<p>Vocabulary</p>				<p>Eye, see, light, dark, light source, human-made, natural, sun, protect, damage, ultraviolet (UV), exposed, review, opaque, transparent, translucent, shadow, object, light source, distance, reflect, reflective, surface, lux</p>	<p>Sounds, object, vibrations, medium, diagram, sound waves, solid, taut, loud, quiet, volume, data logger, decibels, sound source, fair test, pitch</p>	<p>Light, light sources, enter, pupil, reflect, surface, light ray, reflected, direction, angle, periscope, angle, normal lines, shadow, light source, opaque, features, reflection, shadow, cast, outline</p>
<p>Working Scientifically Skills</p>				<p>Investigate shadows changing in size Record findings as bar charts Use scientific vocabulary (opaque, translucent, etc.)</p>	<p>Investigate how sound travels Identify variables (what to change and measure) Use data to compare sound levels</p>	<p>Plan and carry out controlled experiments Measure angles, distances, and light intensity Explain results using scientific principles</p>



	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Forces and Magnets				<p>Simple forces including magnets</p> <p>Compare how things move on different surfaces</p> <p>Notice that some forces need contact between two objects, but magnetic forces can act at a distance</p> <p>Observe how magnets attract or repel each other and attract some materials and not others</p> <p>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> <p>Describe magnets as having two poles</p> <p>–Predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>		<p>Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</p> <p>Identify the effects of air resistance, water resistance and friction that act between moving surfaces</p> <p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect</p>	
Vocabulary				<p>Surface, rough, smooth, friction forces, grip, properties, force, push, pull, contact force, magnet, metal, attract, magnetic force, lodestone, non-contact force, distance, poles, north-seeking, south-seeking, material, magnetic, non-magnetic, metal, repel, opposite, block, non-contact force</p>		<p>Earth, force, pull, gravity, unsupported, force, force meter, pull, push, newtons (N), surface, force, friction, air resistance, water resistance, lever, load, effort, pivot, pulley, gear, cogs, axel</p>	
Working Scientifically Skills				<p>Observe patterns (magnetic attraction)</p> <p>Carry out simple comparative testing</p> <p>Draw conclusions based on evidence</p>		<p>Identify independent/dependent/controlled variables</p> <p>Explain conclusions with scientific reasoning</p> <p>Use newton meters accurately</p>	



	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Electricity					<p>Identify common appliances that run on electricity</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</p> <p>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>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>Recognise some common conductors and insulators, and associate metals with being good conductors.</p>		<p>Changing circuits</p> <p>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>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>Use recognised symbols when representing a simple circuit in a diagram</p>
Vocabulary					<p>Electricity, electrical, appliance, circuit, component, device, complete, incomplete, connectors, switch, control variable, electrical conductor, electrical insulator, minerals</p>		<p>Circuit, component, cell, battery, terminal, circuit symbol, circuit, , cell, battery, voltage, affect, brightness, lux, buzzer, decibel, switch, control variable, appliance, complete</p>
Working Scientifically Skills					<p>Construct circuits safely</p> <p>Draw circuit diagrams with symbols</p> <p>Test components and record results</p>		<p>Create circuit diagrams using correct symbols</p> <p>Explore variable changes in circuits (voltage, components)</p> <p>Present results mathematically</p>