Branton St-Wilfrid's C of E Primary - Science Whole school progression map

Intent

We focus on fostering **curiosity** and developing **critical thinking skills** among children. We recognise and value the importance of science and **scientific enquiry** and the designing of **investigations.** Science at our school is practical that inspires children to be scientists.
We encourage children to ask and answer scientific questions using a range of scientific **vocabulary.** Throughout the programmes of study, the children will acquire and develop the key knowledge that has been identified within each unit and across each year group and are given opportunities to read and respect a range of scientists and their work.

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
TOPICS	ELG Understanding the World Around us Similarities and differences, places, objects, materials, and living things, talk about the environment, make observations and explain changes. 3 and 4 year olds Reception ELG	Animals, Including Humans	Animals, Including Humans	Animals, Including Humans	Animals, Including Humans	Animals, Including Humans	Animals, Including Humans
			Living things and their habitats		Living things and their habitats	Living things and their habitats	Living things and their habitats
		Materials	Materials			Properties and changes of Materials	
		Plants	Plants	Plants			
				Forces and Magnets		Forces	
				Light			Light
					Electricity		Electricity
		Seasonal Changes					
				Rocks			
					States of Matter		
					Sound		
						Earth and Space	

							Evolution and Inheritance
Programmes of study **Substantive**							

Animals Including humans	Children make observations of animals and plants and explain why some things occur and talk about changes. Make healthy choice about food, drink and tooth brushing Use all their senses in hands on exploration of natural materials. Explore the natural world around them, making observations and drawing pictures of animals and plants. Know and talk about the different factors that support their overall health and well being Manage their own basic hygiene and personal needs. Understanding the importance of healthy food choices	Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. 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 (fish, amphibians, reptiles, birds, and mammals, including pets). Identify, name, draw, label the basic parts of the human body, and say which part of the body is associated with each sense.	Notice that animal, including humans, have offspring, which grow into adults. Find out about and describe the basic needs of animals including humans, for survival (water food and air) Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene.	Identify that animals including humans, need the right types of nutrition, and that they cannot make their own food-they get nutrition from what they eat. Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	Describe 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.	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.

Living things and their habitats	Plant seeds and care for growing plants Understand the key features of the life cycle of a plant and an animal Explore the natural world around them RECOGNISE SOME ENVIRONMENTS THAT ARE DIFFERENT TO THE ONE IN WHICH THEY LIVE. Explore the natural world around them making obs and drawing pictures of animals and plants.		Explore and compare the differences between things that are living, dead and things that have never been alive Identify that most living in habitats to which they are suited and describe how different habitants provide for the basic needs of different kinds of animals and plants, and how they depend on each other. Identify and name a variety of plants and animals in their habitats, including microhabitats. Describe how animals obtain their food from plants and other animals, using the idea of simple food chain, and identify and name different sources of food.		Recognise that living things can be grouped in a variety of ways. Explore and use classification keys to help group, identify and name a variety of things in their local and wider environment. Recognise that environments can change and this can sometimes pose danger s to living things.	Describe the differences in the life cycle of a mammal, an amphibian, an insect and a bird. Describe the life process of reproduction in some plants and animals.	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. Give reasons for classifying plants and animals based on similar characteristics.

.Materials	Explore collections of materials with similar and or different properties. Talk about the differences between the materials and changes they notice Learn new vocabulary	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 a variety of everyday materials based on their simple physical properties.	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.			Compare and group together everyday materials based on 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 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 metal, 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.	

Electricity	Understand some important process and changes in the natural world				Identify common appliances that run on electricity. Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. 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. Recognise that a switch opens and closes a circuit and associate this with whether not a lamp lights in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors.		Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. 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. Use recognised symbols when representing a simple circuit in a diagram.

Plants	Covered in living things	Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Identify and describe the basic structure of a variety of common flowering plants, including trees.	Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	Identify and describe functions of different parts of flowering plants: roots stem/trunk, leaves and flowers. 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. Investigate the way in which water is transported within plants. Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersion.			
Light	Understand some important process and changes in the natural world			Recognise that they need light in order to see things. Notice that light is reflected on surface. Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. Recognise that shadows are formed when an opaque object blocks the light from a light source. Find patterns in the way that the size of shadows change.			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.

Forces	Understand some important process and changes in the natural world			Compare how things move on different surfaces. Notice that some forces need contact between two objects, but magnetic forces can act at a distance. Observe how magnets attract or repel each other and attract some materials and not others. Compare and group together a variety of everyday materials based on whether they are attracted to a magnet and identify some magnetic materials. Describe magnets as having two poles. Predict whether two magnets will attract or repel each other depending on which poles are facing.		Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Identify the effects of air resistance, water resistance and friction that act between moving surfaces. Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	
Seasonal Changes	Understand the effect of changing seasons in the natural world around them Understand some important processes and changes in the natural world around them including the seasons.	Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.					

Rocks	Understand some important process and changes in the natural world			Compare and group together different kinds of rocks based on 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.			
Sound	Understand some important process and changes in the natural world				Identify how sounds are made, associating some of them with 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.		
States of Matter	Understand some important process and changes in the natural world including change of states of matter				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 (0C). Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.		

Earth and Space	Understand some important process and changes in the natural world					Describe the movement of the Earth and other planets in the solar system. Describe the movement of the Moon relative to the Earth. Describe the Sun, Earth and Moon as approximately spherical bodies. Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky.	
Evolution and Inheritance							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 adaption leads to evolution.

Working Scientifically specific skills **disciplinary**							
Planning – Asking Questions	Has a curious disposition and asks questions about objects and events they experience. Using the vocabulary taught and modelled	Recognises the differences between a statement and a question. Begins to shape questions using different question stems.	With support, suggests own questions that they might investigate.	Asks questions independently and generate own ideas to explore through scientific enquiry.	Asks questions and offers ideas for a range of scientific enquiry. With support, improves focus of question to clarify its scientific purpose.	Independently asks questions and offers ideas for scientific enquiry, which have a clear scientific purpose.	Recognises scientific questions that do not yet have definitive answers.
Planning – Planning detail	Tries out different practical methods suggested to them. Sometimes suggests what to do next. Using the vocabulary taught and modelled	Decides which questions can be answered practically and which cannot. Suggests next step, or a sequence of steps, in a plan	Decides independently simple questions that could be answered practically and some that cannot.	Recognises when to answer a question by using a fair test method and when other methods might be needed. In a fair test, identifies what to keep the same and sometimes what to change and measure	Knows when to answer a question by using a fair test method and when better evidence could be generated in other ways, e.g. through a survey, diary / log or research. Sets up a fair test controlling variables, what to keep the same, what to change, measure or observe.	Identifies the most appropriate enquiry methods to use to generate evidence needed to solve problems and answer scientific questions. Plan familiar enquiry types in appropriate detail.	Selects methods to use to solve problems or answer questions, including a full range of enquiry methods, which are planned in detail.
Using Equipment	Follows instructions for using simple equipment, usually under adult supervision. Using the vocabulary taught and modelled	Begins to choose appropriate equipment to use to make observations and follows simple instructions for using it correctly and safely.	Chooses appropriate equipment from a selection and follows instructions for using it, sometimes working independently of adult support.	Selects from a wider range of equipment what to use in an investigation. Uses basic equipment correctly, safely and with increasing accuracy.	Uses a wide range of equipment, for example thermometers and data loggers, correctly, safely and accurately. Deals with most equipment difficulties independently before asking for help if necessary	Selects the most appropriate equipment to use in a range of contexts and enquiries. Takes measurements, using a range of science equipment with increasing accuracy and	Explains why particular pieces of equipment or information sources will provide better quality evidence.

Making observations	Observes simple features of things they see and events they experience. Using the vocabulary taught and modelled	Makes relevant observations in familiar contexts. With support take some non-standard measurements	Makes relevant observations. Takes non-standard measurements. Begins to use basic equipment for measuring length or mass, in standard units.	Makes relevant observations throughout an investigation. Uses standard measuring equipment for quantities, such as volume and temperature.	Chooses to make a series of observations that will add to the evidence they collect while investigating. With support, takes accurate readings on measuring equipment, recognising when to repeat them.	Chooses to make a series of observations or measurements that will add to the quality of the evidence collected while investigating.	Repeats sets of observations or measurements, where appropriate, selecting suitable ranges and intervals, to give sufficient depth of evidence.
Recording – Presenting evidence	Uses drawings to present evidence and, with support, uses prepared simple tables and charts, including ICT forms Using the vocabulary taught and modelled	Use drawings and labels to present evidence. With support, uses prepared simple tables and charts, including ICT forms	Uses drawings and labels to present evidence. Uses prepared tables and block graphs, including ICT forms	Gathers, records, classifies and presents data in a variety of ways to help in answering questions. Sometimes creates own tables and bar charts, using ICT where appropriate. Interprets a line graph with support.	Selects the most appropriate way to present evidence they have collected. Records findings using drawings, labelled diagrams, bar charts, tables and graphs, using ICT where appropriate Uses simple scientific language effectively to communicate outcomes.	Records data and results of increasing complexity using scientific diagrams, classification keys, tables, bar and line graphs and models. Communicates findings in written form, displays and uses other forms of presentation. Uses scientific language to communicate increasingly detailed analysis.	Decides on the most appropriate formats to present sets of scientific data, such as using line graphs for continuous variables. Communicates findings in written form, across a range of genre, and uses multi-media and other forms of presentation.
Drawing Conclusions	With support, describes a simple observation of an object or objects or of an event. Using the vocabulary taught and modelled	Describes simple observations of an object or objects or of an event and with support, makes a simple comparison.	Describes what has happened, making comparisons where appropriate. With support, sequences results, e.g. from smallest to largest	Reports on findings from enquiries, including oral and written, displays or presentations of results and conclusions. Makes a general statement about simple patterns they notice in a set of results.	Makes a comparative statement, sometimes referring to the factors under investigation. Identifies differences, similarities, or changes related to simple scientific ideas and processes. Uses straightforward scientific evidence to answer questions or to support their findings.	Where appropriate, makes a comparative statement, describing relationships between factors being investigated. Uses simple models to help describe scientific ideas.	Uses scientific evidence to answer questions or support findings. Draws valid conclusions that utilise more than one piece of supporting evidence.

Explaining Evidence	Responds to question prompts from an adult about cause and effect in simple, familiar situations. Using the vocabulary taught and modelled	With support, recognises the links between cause and effect in simple, familiar situations.	Recognises the link between cause and effect in simple, familiar situations. Begins to notice simple patterns in results.	Provides explanations for simple patterns in results, referring to everyday experiences when explaining reasoning.	Relates explanations of patterns in results to scientific knowledge and understanding when explaining reasoning.	Relates explanations of evidence gathered to scientific knowledge and understanding. Makes generalisations about what that evidence seems to indicate.	Provides explanations for differences in repeated observations or measurements, identifying reasons for any anomalies noticed.
Evaluating Outcomes	Reviews their work and with support, recognise some of the difficulties encountered. Using the vocabulary taught and modelled	Reviews their work and with support, recognises some of the difficulties encountered.	Reviews their work and recognises some of the difficulties encountered. With support, suggests how these might have been avoided.	Suggests how an enquiry might be improved. With support, recognises some of the limitations and significance of evidence.	Suggests how much to trust results, identifying some of the limitations of evidence. Suggests new questions and predictions for setting up further tests.	Recognises some of the limitations of their evidence and can suggest why it should not be trusted. Uses test results to set up further comparative tests.	Evaluate the effectiveness of their working methods, making practical suggestions for improving them. Identifies scientific evidence that has been used to support or refute ideas or arguments.
Vocabulary							
Animals Including humans		Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves. Names of animals experienced first-hand from each vertebrate group. Parts of the body including those linked to PSHE	Offspring, reproduction, growth, child, young/old stages (examples- chicken/hen, baby/child/adult, caterpillar/butterfly), exercise, heartbeat, breathing, hygiene, germs, disease, food types(examples – meat, fish, vegetables, bread, rice pasta)	Nutrition, nutrients, carbohydrates, sugars, protein, minerals, vitamins, fibre, fat, water, skeleton, bones, muscles, support, protect, move, skull, ribs, spine, muscles, joints	Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, predator, prey, food chain	Puberty-the vocabulary to describe sexual characteristics	Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs, lifestyle
Living things and their habitats			Living, dead, never been alive, suitable, suited, basic needs, food, food chain, shelter, move, and feed. Names of local habitats e.g. pond, woodland etc. Names of micro-habitats e.g. under logs, in bushes etc.		Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate	Life cycle, reproduce, sexual, sperm, fertilises, egg, live young, metamorphosis, asexual plantlets, runners, bulbs, cuttings	Vertebrate, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering, non - flowering

Materials		Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see through.	Names of materials-wood, metal, plastic, glass, brick, rock, paper, cardboard Properties of materials-as for Year 1 plus opaque, transparent and translucent, reflective, non-reflective, flexible, rigid Shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, and stretch/stretching.			Thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non reversible change, burning, rusting, new material	
Electricity					Electricity, electrical appliance/device, mains, plug, electrical 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		Circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage N.B. Children do not need to understand what voltage is but will use volts and voltage to describe different batteries. The word “cells” and “batteries” are now used interchangeably.
Plants		Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud. Names of trees in local area. Names of garden and wild flowering plants in the local area.	As for year 1 plus light, shade, sun, warm, cool, water, grow, healthy	Photosynthesis, pollen, insect/wind pollination, seed formation, speed dispersal(wind dispersal, animal dispersal, water dispersal)			
Light				Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight dangerous			As for year 3-Light, plus straight lines, light rays

Forces				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		Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears	
Seasonal Changes		Weather (sunny, rainy, windy, snowy etc.) Seasons (winter, summer, spring, autumn) Sun, sunrise, sunset, day length.					
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			
Sound					Sound, source, vibrate, vibration, travel, pitch(high, low) volume, faint, loud, insulation		
States of Matter					Solid, liquid, gas, state change, melting, freezing, melting point, boiling point, evaporation, temperature, and water cycle.		
Earth and Space						Earth, Sun, Moon, (Mercury, Jupiter, Saturn, Venus, Mrs, Uranus, Neptune) spherical, solar system, rotates, star, orbit, planets	

Evolution and Inheritance							Offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited species, fossils

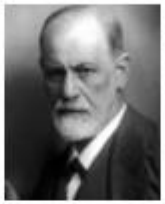
Scientists across each year group

Year 1			
Plants	**Animals, including humans**	**Everyday materials**	**Seasonal changes**
Scientists			
 Beatrix Potter (Author and Botanist) Arit Anderson (Garden Designer and presenter of Gardeners World)	 Chris Packham (Animal Conservationist, Wildlife photographer, ASD) Malaika Vaz (Wildlife Videographer and National Geographic Explorer)	 William Addis (Inventor of the toothbrush) Dr Pearl Agyakwa (Materials scientist)	 Liam Dutton (Weatherperson/Meteorologist) John Dalton (British Weather pioneer)
Careers			
Arborist (cares for and manages trees) Botanist (studies plants)	Zoologist (studies animals) Wildlife photographer (takes pictures of animals and plants)	Materials scientist (researches structures and properties of materials)	Meteorologist (studies the atmosphere and weather) Climatologist (studies climate patterns)
Working scientifically skills			
I'm observing closely like an arborist. I'm identifying and classifying like a botanist.	I'm asking questions like a zoologist. I'm observing closely, using simple equipment, like a wildlife photographer.	I'm performing simple tests like a materials scientist.	I'm using my observations to suggest answers to questions like a meteorologist. I'm gathering and recording data like a climatologist.

Year 2			
Living things and their habitats	**Plants**	**Animals, including humans**	**Uses of everyday materials**
Scientists			
  Rachel Carson (Marine Biologist) Tanesha Aleen (Zoologist)	  George Washington Carver (Botanist) Agnes Arber (1879-1960) Botanist	  Dr Donald Palmer (researches the ageing of the immune system) Bear Grylls (Survival Expert)	  Charles Macintosh (Inventor of waterproof material) Danial Azahan (Mechanical engineer)
Careers			
Taxonomist (classifies animals and plants) Wildlife Filmmaker (creates films and documentaries about wildlife)	Gardener (creates and maintains gardens and green spaces) Tree surgeon (plants, maintains and manages trees)	Animal behaviourist (studies animal interactions) Exercise physiologist (a doctor who helps people improve their fitness)	Builder (builds structures) Mechanical engineer (designs, analyses and manufactures mechanical systems)
Working scientifically skills			
I'm identifying and classifying like a taxonomist. I'm observing closely, using simple equipment, like a wildlife filmmaker.	I'm observing closely like a tree surgeon.	I'm asking questions like an animal behaviourist. I'm gathering and recording data like an exercise physiologist.	I'm performing simple tests like a builder. I'm using my observations to suggest answers to question like a mechanical engineer.

Year 3				
Plants	**Animals, including humans**	**Rocks**	**Light**	**Forces and magnets**
Scientists				
  Ahmed Mumin Warfa (Somali Botanist) Maria Sibylla Merian (1647-1717) (Documented the relationship between plants and insects)	  Willhelm Röntgen (Invented the X-Ray) Zubair Haleem (Academy physio at Arsenal)	  Mary Anning (Fossilist) Christopher Jackson (geologist)	  Ibn al-Haytham (Mathematician and astronomer) Patricia Bath (Ophthalmologist and inventor)	  William Gilbert (Magnetism and electricity) Jyoti Sehdev (Senior civil engineer)
Careers				
Horticulturist (an expert in garden cultivation and management) Irrigation engineer (creates and develops water systems)	Physiologist (a scientist who studies how plants and animals function) Dietician (developes nutrition advice to improve people's diets)	Geologist (studies the Earth and what it is made of, including rocks) Volcanologist (studies volcanoes)	Astronomer (studies space) Optician (a doctor specialising in vision and eye health)	Architect (designs buildings) Seismologist (studies earthquakes)
Working scientifically skills				
I'm taking accurate measurements using equipment like a horticulturist. I'm using scientific enquiries to answer questions like an irrigation engineer. .	I'm making systematic and careful observations like a physiologist. I'm using results to make predictions and draw conclusions like a dietician.	I'm performing comparative and fair tests like a geologist. I'm using scientific evidence to answer questions like a volcanologist.	I'm identifying differences and similarities like an astronomer. I'm presenting my findings using my oracy skills like an optician.	I'm recording findings using diagrams, charts and tables like an architect. I'm gathering, recording and presenting data like a seismologist.

Year 4				
Living things and their habitats	**Animals, including humans**	**States of matter**	**Sound**	**Electricity**
Scientists				
  Prem Singh Gill (Polar scientist) Gladys West (Mathematician/GPS - link to Hampstead Heath topic)	  Ivan Pavlov (Physiologist) Charlotte Armah (nutritional biochemist - looking at the effect of diet on human health)	  Daniel Farenheit (Inventor of the thermometer) Dr Fangxian Fang (Earth scientist)	  Evelyn Glennie (Deaf percussionist) Karrie Keyes (Audio engineer)	  Michael Faraday (Physicist) Hertha Ayrton (Electrical engineer and sufragette)
Careers				
Conservationist (works for the protection and preservation of living things and the environment) Ecologist (studies interactions between living things and their environments)	Orthodontist (a doctor who looks after people's teeth and gums) Nutritionist (studies nutrition in food and how it affects our bodies)	Nanoscientist (studies incredibly small things such as atoms) Science teacher (teaches others about science)	Audiologist (studies sound and its properties) Sound engineer (deals with sound for broadcasts or musical performances)	Electrical engineer (works with equipment that uses electricity) Physicist (studies physics)
Working scientifically skills				
I'm gathering, recording and presenting data like an ecologist. I'm presenting my findings using my oracy skills like a conservationist.	I'm making systematic and careful observations like an orthodontist. I'm using results to make predictions and draw conclusions like a nutritionist.	I'm taking accurate measurements using equipment like a nanoscientist. I'm using scientific evidence to answer questions like a science teacher.	I'm identifying differences and similarities like an audiologist. I'm using scientific enquiries to answer questions like a sound engineer.	I'm performing comparative and fair tests like an electrical engineer. I'm recording findings using diagrams, charts and tables like a physicist.

Year 5				
Living things and their habitats	**Animals, including humans**	**Properties and changes of materials**	**Earth and space**	**Forces**
Scientists				
  Malaika Vaz (National Geographic explorer) Carl Linneus (botanist and zoologist)	  Sigmund Freud (Created psychoanalysis) Olive Guthrie Smith (physiotherapist)	  Becky Schroeder (Inventor of the glow sheet) Dr Nira Chamberlain (polymath/mathematician who studies applied mathematics in science)	  Mai Jemison (Astronaut) Dr Helen Mason (Solar scientist)	  Isaac Newton (Discovered gravity) Rafsan Chowdhury (Mechanical Engineer)
Careers				
Farmer (grows crops and raises animals for food) Oceanographer (studies the physical and biological aspects of the ocean)	Physiotherapist (helps people affected by illness, injury or disability thorough movement and exercise) Psychiatrist (a doctor who specialists in mental health)	Chemical engineer (solves problems involving chemicals) Biochemist (investigates chemical processes that take place inside living things)	Astronaut (travels to space to carry out research) Astronautical engineer (develops spacecraft) Astrophysicist (studies the physics of space and objects in space)	Aeronautical engineer (designs, develops, manufactures and maintains aircraft) Builder (builds structures) Mechanical engineer (designs, analysis and manufactures mechanical systems)
Working scientifically skills				
I'm recognising and controlling variables like a farmer. I'm recording data like an oceanographer	I'm identifying scientific evidence to support ideas like a physiotherapist. Him reporting causal relationships like a psychiatrist.	I'm setting up comparative and fair tests like a biochemist. I'm planning different types of scientific enquiries like a chemical engineer.	I'm presenting findings and conclusions like an astrophysicist. I'm using scientific diagrams and labels like an astronautical engineer.	I'm taking measurements like an aeronautical engineer. I'm using test results to make predictions like a mechanical engineer.

Year 6				
Living things and their habitats	**Animals, including humans**	**Evolution and inheritance**	**Light**	**Electricity**
Scientists				
  Carl Linneus (Naturalist and botanist) Nazifa Tabassum (Microbiologist and Science Communicator)	   Elizabeth Anionwu (Sickle cell and thalassemia specialist) Barouh Berkovits (invented the pacemaker and defibrillator) William Harvey (Discovered how blood moves through the body)	  Rosalind Franklin (Discovered the structure of DNA) Charles Darwin (Naturalist, developed the theory of evolution)	  CV Raman (Physicist) Professor Colin Webb (Professor of Laser Physics)	  Mo Ibrahim (Pioneer in the mobile phone industry) Hertha Ayrton (Engineer, physicist, mathematician and inventor)
Careers				
Microbiologist (studies tiny living things) Plant geneticist (studies genetics in plants - many work on developing crops to be more robust or provide more nutrition)	Cardiologist (a doctor specialising in the heart and circulatory system) Haematologist (studies blood and its diseases)	Archeologist (studies history using artefacts) Geneticist (studies genes) Palaeontologist (studies fossils)	Architect (designs buildings) Ophthalmologist (a doctor specialising in vision and eye health)	Electrician (installs and maintains electrical equipment) Renewable energy engineer (works on environmentally conscious energy production)
Working scientifically skills				
I'm using test results to make predictions like a microbiologist. I'm reporting causal relationships like a plant geneticist.	I'm recording data like a cardiologist. I'm using scientific diagrams and labels like a haematologist.	I'm identifying scientific evidence to support ideas like a palaeontologist. I'm presenting findings and conclusions like an archeologist.	I'm recognising and controlling variables like an ophthalmologist. I'm taking measurements like an architect.	I'm planning different types of scientific enquiries like a renewable energy engineer. I'm setting up comparative and fair tests like an electrician.