

Science skills, knowledge and vocabulary progress ladder

Purpose of Study

The Bridge School's Science curriculum is designed to reflect the key aspirations of the Welcome Report 2013. We believe the teaching of Science should develop pupils' understanding of the world, nurture their curiosity and teach essential skills, including enquiry, observation, prediction, analysis, reasoning and explanation. It is essential that all Bridge school pupils experience inspiring science that builds their understanding of the value and place of science in their lives.

A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Key areas of learning include: working scientifically, plants, animals including humans, materials, states of matter, properties and changes of material, living things and their habitats, light, forces, electricity, seasonal change, sound, earth and space, evolution.

As scientists our children will develop:-

- The ability to think independently and raise questions about working scientifically and the knowledge and skills that it brings.
- Confidence and competence in the full range of practical skills, taking the initiative in, for example, planning and carrying out scientific investigations.
- Excellent scientific knowledge and understanding which is demonstrated in written and verbal explanations, solving challenging problems and reporting scientific findings
- High levels of originality, imagination or innovation in the application of skills
- The ability to undertake practical work in a variety of contexts, including fieldwork
- A passion for science and its application in past, present and future technologies

Key Knowledge/Breadth of Study	
Key Stage 1	Key Stage 2
<p>Working Scientifically</p> <ul style="list-style-type: none"> • Observe closely, using simple equipment • Perform simple tests • Gather and record data to help in answering questions <p>Biology</p> <ul style="list-style-type: none"> • Identify and name common plants • Observe and describe growth and conditions for growth 	<p>Working Scientifically</p> <ul style="list-style-type: none"> • Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations • Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs

Science skills, knowledge and vocabulary progress ladder

<ul style="list-style-type: none"> • Examine at the suitability of environments and food chains • Identify and name a variety of common animals that are carnivores, herbivores and omnivores • Know what the basic needs of animals (including humans) for survival are • Know that animals, including humans, have offspring which grow into adults • Observe seasonal changes <p>Chemistry</p> <ul style="list-style-type: none"> • Identify, name, describe, classify, compare properties and changes • Know the practical uses of everyday materials <p>Physics</p> <ul style="list-style-type: none"> • Identify sources of light and reflections • Describe basic movements 	<ul style="list-style-type: none"> • Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary <p>Biology</p> <ul style="list-style-type: none"> • Identify the function of parts of flowering plants, requirements of growth, water, transportation in plants, life cycles and seed dispersal as well as naming a growing number of common plants • Identify changes in animals over time in terms of adaptation and evolution • Understand how water and nutrients are transported in the body • and the muscle and skeleton system of humans and animals. • Understand how the basic human circulatory system works • Understand how plants, animals, and micro-organisms are classified • Know how plants and animals reproduce and how humans grow and change • Know the effect of diet, exercise, and drugs <p>Chemistry</p> <ul style="list-style-type: none"> • Compare and group rocks and describe the formation of fossils • Identify solids, liquids and gases and their characteristics. • Know that states can change - evaporation, condensation and the water cycle • Examine the properties of materials using various tests • Know what is meant by solubility and experience recovering dissolved substances • Experience separating mixtures • Know changes to materials that create new materials are usually not reversible <p>Physics</p> <ul style="list-style-type: none"> • Identify how sounds are made, associating some of them with something vibrating • Find patterns between the volume of a sound and the strength of the vibrations that produced it • Know 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 • 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 • Explain how light appears to travel in straight lines and how this affects seeing and shadows • Explain day and night as well as the movement of the Earth and the Moon
---	---

Science skills, knowledge and vocabulary progress ladder

Science skills, knowledge and vocabulary progress ladder - EYFS	
Year Group	Content
Nursery	<ul style="list-style-type: none"> • Understand the key features of the life cycle of a plant and animal • Begin to understand the need to respect and care for the natural environment and all living things • Make healthy choices about food, drink and activity • Use all their senses when exploring 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 • Explore and talk about different forces they can feel
Reception	<ul style="list-style-type: none"> • Describe what they see, hear and feel whilst outside • Explore the natural world around them, making observations and drawing pictures of animals and plants • Know regular physical activity, healthy eating and having a good sleep routine supports overall health and wellbeing • Know that seasons change • Know some materials can change – simple melting and evaporating

Science skills, knowledge and vocabulary progress ladder – KS1 & KS2		
Topic	Year Group	Content
Working scientifically	Year 1 & Year 2	<ul style="list-style-type: none"> • Ask simple questions and recognise that they can be answered in different ways • Observe closely, using simple equipment • Perform simple tests • Gather and record data to help in answering questions • Identify and classify • Use their observations and ideas to suggest answers to questions <p>Y1 GDS:</p> <ul style="list-style-type: none"> • Find out by watching, listening, tasting, smelling and touching • Give reasons for their answers • Discuss similarities and differences • Explain what they have found out using scientific vocabulary <p>Make accurate measurements using nonstandard measurements i.e. unifix</p> <p>Y2 GDS:</p> <ul style="list-style-type: none"> • Suggest ways of finding out through listening, hearing, smelling, touching and tasting • Say whether things happened as they expected and if not why not

Science skills, knowledge and vocabulary progress ladder

Science skills, knowledge and vocabulary progress ladder – KS1 & KS2		
Topic	Year Group	Content
		<ul style="list-style-type: none"> Suggest more than one way of grouping animals and plants and explain their reasons Use information from books and online information to find things out Begin to independently consider controlling variables to create a fair test
	Year 3 & Year 4	<ul style="list-style-type: none"> Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions Identify differences, similarities or changes related to simple scientific ideas and processes Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions Use straightforward scientific evidence to answer questions or to support their findings Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables Gather, record, classify and present data in a variety of ways to help in answering questions Ask relevant questions and use different types of scientific enquiries to answer them Set up simple practical enquiries, comparative and fair tests <p>Y3 GDS:</p> <ul style="list-style-type: none"> Record and present what they have found using scientific language, drawings, labelled diagrams, bar charts and tables Explain their findings in different ways (display, presentation, and writing) Use their findings to draw a simple conclusion Suggest improvements and predictions for further tests Suggest how to improve their work if they did it again <p>Y4 GDS:</p> <ul style="list-style-type: none"> Plan and carry out an investigation by controlling variables fairly and accurately Use test results to make further predictions and set up further comparative tests Record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models Report findings from investigations through written explanations and conclusions Use a graph or diagram to answer scientific questions Use a range of variables to investigate
	Year 5 & Year 6	<ul style="list-style-type: none"> Use test results to make predictions to set up further comparative and fair tests Identify scientific evidence that has been used to support or refute ideas or arguments

Science skills, knowledge and vocabulary progress ladder

Science skills, knowledge and vocabulary progress ladder – KS1 & KS2		
Topic	Year Group	Content
		<ul style="list-style-type: none"> Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary <p>Y5 GDS:</p> <ul style="list-style-type: none"> Explore different ways to test an idea, choose the best way and give reasons Vary one factor whilst keeping the others the same in an experiment Use information to help make a prediction Explain, in simple terms, a scientific idea and what evidence supports it Decide which units of measurement they need to use Explain why a measurement needs to be repeated Find a pattern from their data and explain what it shows Link what they have found out to other science Suggest how to improve their work and say why they think this <p>Y6 GDS:</p> <ul style="list-style-type: none"> Choose the best way to answer a question and use information from different sources to plan an investigation Make a prediction which links with other scientific knowledge Plan which equipment they will need and use it effectively Explain qualitative and quantitative data Identify scientific evidence that has been used to support or to refute ideas or arguments and link their conclusions to it Explain how they could improve their way of working Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
Plants	Year 1	<ul style="list-style-type: none"> 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
	Year 2	<ul style="list-style-type: none"> 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 .

Science skills, knowledge and vocabulary progress ladder

Science skills, knowledge and vocabulary progress ladder – KS1 & KS2		
Topic	Year Group	Content
	Year 3	<ul style="list-style-type: none"> Identify and describe the 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 dispersal
	Year 4	
	Year 5	<ul style="list-style-type: none"> Describe the life process of reproduction in some plants and animals.
	Year 6	
Animals including humans	Year 1	<ul style="list-style-type: none"> 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 and label the basic parts of the human body and say which part of the body is associated with each sense
	Year 2	<ul style="list-style-type: none"> Notice that animals, 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
	Year 3	<ul style="list-style-type: none"> 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 Identify that humans and some other animals have skeletons and muscles for support, protection and movement
	Year 4	<ul style="list-style-type: none"> 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
	Year 5	<ul style="list-style-type: none"> Describe the changes as humans develop to old age Use basic ideas of inheritance, variation and adaptation to describe how living things have changed over time
	Year 6	<ul style="list-style-type: none"> 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

Science skills, knowledge and vocabulary progress ladder

Science skills, knowledge and vocabulary progress ladder – KS1 & KS2		
Topic	Year Group	Content
Materials, states of matter, properties and changes of material		<ul style="list-style-type: none"> Describe the ways in which nutrients and water are transported within animals, including humans
	Year 1	<ul style="list-style-type: none"> Distinguish between an object and the material from which it is made Describe materials using their senses, using specific scientific words Explain what material objects are made from Explain why a material might be useful for a specific job Name some different everyday materials e.g. wood, plastic, metal, water and rock Sort materials into groups by a given criterion Explain how solid shapes can be changed by squashing, bending, twisting and stretching
	Year 2	<ul style="list-style-type: none"> 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
	Year 3	<p>Rocks</p> <ul style="list-style-type: none"> 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
	Year 4	<ul style="list-style-type: none"> 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 (°C) Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature
Year 5	<ul style="list-style-type: none"> Compare and group together everyday materials on the basis of their properties, including hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets Explain how some materials dissolve in liquid to form a solution Explain what happens when dissolving occurs Use their knowledge of solids, liquids and gases to decide and describe how mixtures might be separated, including through filtering, sieving, evaporating Give reasons, based on evidence for comparative and fair tests for the particular uses of everyday materials, including metals wood and plastic Describe changes using scientific words (evaporation, condensation) 	

Science skills, knowledge and vocabulary progress ladder

Science skills, knowledge and vocabulary progress ladder – KS1 & KS2		
Topic	Year Group	Content
		<ul style="list-style-type: none"> • 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 • Use the terms 'reversible' and 'irreversible'
	Year 6	<ul style="list-style-type: none"> • Compare and group materials together, according to whether they are solids, liquids or gases • Explain what happens to materials when they are heated or cooled • Measure or research the temperature at which different materials change state in degrees Celsius • Describe how materials change state at different temperatures • Use measurements to explain changes to the state of water • Explain everyday phenomena including the water cycle
Living things and their habitats	Year 1	
	Year 2	<ul style="list-style-type: none"> • Explore and compare the difference between things that are living, dead, and things that have never been alive • 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 • Identify and name a variety of plants and animals in their habitats, including micro-habitats • 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
	Year 3	
	Year 4	<ul style="list-style-type: none"> • 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 living things in their local and wider environment • Recognise that environments can change and that this can sometimes pose dangers to living things
	Year 5	<ul style="list-style-type: none"> • Describe the differences in the life cycles of a mammal, amphibians, an insects and a bird • Identify the reproductive processes of some animals • Describe the life cycles of common plants • Explore the work of well know naturalists and animal behaviourists (David Attenborough and Jane Goodall)
	Year 6	<ul style="list-style-type: none"> • 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 • Give reasons for classifying plants and animals based on specific characteristics.
Light	Year 1	
	Year 2	

Science skills, knowledge and vocabulary progress ladder

Science skills, knowledge and vocabulary progress ladder – KS1 & KS2		
Topic	Year Group	Content
	Year 3	<ul style="list-style-type: none"> Recognise that they need light in order to see things and that the dark is the absence of light Notice that light is reflected from surfaces Recognise that light from the sun can be dangerous and that 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 changes
	Year 4	
	Year 5	
	Year 6	<ul style="list-style-type: none"> 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	Year 1	
	Year 2	
	Year 3	<ul style="list-style-type: none"> Compare how things move on different surfaces Observe that magnetic forces can be transmitted without direct contact Observe how some magnets attract or repel each other Identify and classify which everyday materials are attracted to magnets and which are not Notice that some forces need contact between two objects, but magnetic forces can act at a distance Describe magnets have having two poles (N & S) and predict whether two magnets will attract or repel each other depending on which poles are facing Make and record a prediction before testing
	Year 4	
	Year 5	<ul style="list-style-type: none"> 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
	Year 6	
Electricity	Year 1	

Science skills, knowledge and vocabulary progress ladder

Science skills, knowledge and vocabulary progress ladder – KS1 & KS2		
Topic	Year Group	Content
	Year 2	
	Year 3	
	Year 4	<ul style="list-style-type: none"> 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 or not a lamp lights in a simple series circuit Recognise some common conductors and insulators, and associate metals with being good conductors
	Year 5	
	Year 6	<ul style="list-style-type: none"> 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
Seasonal Change	Year 1	<ul style="list-style-type: none"> Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies
	Year 2	
	Year 3	
	Year 4	
	Year 5	
	Year 6	
Sound	Year 1	
	Year 2	
	Year 3	
	Year 4	<ul style="list-style-type: none"> 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
	Year 5	

Science skills, knowledge and vocabulary progress ladder

Science skills, knowledge and vocabulary progress ladder – KS1 & KS2		
Topic	Year Group	Content
Earth and Space	Year 6	
	Year 1	
	Year 2	
	Year 3	
	Year 4	
	Year 5	<ul style="list-style-type: none"> Describe the movement of the Earth, and other planets, relative to the Sun 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
	Year 6	
Evolution	Year 1	
	Year 2	
	Year 3	
	Year 4	
	Year 5	
	Year 6	<ul style="list-style-type: none"> 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 Give reasons why offspring are not identical to each other or to their parents Explain the process of evolution and describe the evidence for this Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution
	Year 6	

Science Key Vocabulary						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Plants	leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch,	As for year 1 plus - light, shade, sun, warm, cool, water, grow, healthy, germinate	photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal – wind		reproduction, sexual, asexual, plantlets, cuttings	

Science skills, knowledge and vocabulary progress ladder

	stem, bark, stalk, bud		dispersal, animal dispersal, water dispersal			
Animals including humans	head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves	offspring, reproduction (all things reproduce, not the process), growth child, young/old stages (examples - chick/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, vitamins, minerals, 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	Vocab to be decided alongside PSHE puberty topic	heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon, dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs and lifestyle
Materials, states of matter, properties and changes of material	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 – increased range from year 1 Properties of materials - as for year 1 plus opaque, transparent and translucent, reflective, non-reflective, flexible, rigid, shape, push/pushing, pull/puling, twist/twisting, squash/squashing. Bend/bending, stretch/stretching	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	solid, liquid, gas, state change, melting, freezing, melting point, boiling point, evaporation, temperature, water cycle	thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve reversible/nonreversible change, burning, rusting, new material thermal/electrical insulator/conductor,	

Science skills, knowledge and vocabulary progress ladder

Living things and their habitats		living, dead, never been alive, suited, suitable, basic needs food, food chain, shelter, move, 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	vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering and non-flowering
Light			light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous			As for year 3 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	

Science skills, knowledge and vocabulary progress ladder

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 - NB Children do not need to understand what voltage is but will use volts and voltage to describe different batteries. The words cells and batteries are now used interchangeably
Seasonal change	weather (sunny, rainy, windy, snowy etc.), seasons (Winter, Summer, Spring, Autumn), sun, sunrise, sunset, day length, monsoon, khareef, thunder storm					
Sound				sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, loud, insulation		

Science skills, knowledge and vocabulary progress ladder

Earth and Space					Earth, Sun, Moon, (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune) spherical, solar system, rotates, star, orbit, planets	
Evolution						Offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils