ST CROSS SCHOOL
National Curriculum Progression in Science

NC Topic	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Plants	Seasonal change Play and explore outside in all seasons and in different weather. Understand seasonal changes. Explain what happens during each Season. Describe what clothes you might need for each season. Observe living things throughout the year.	Plants Seasonal change 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 changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies **Vocab:** leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud, names of	Plants 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. **Vocab:** light, shade, Sun, warm, cool, water, space, grow, healthy, bulb, germinate, shoot, seedling	Plants 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			

		trees in the local area, names of garden and wild flowering plants in the local area **Seasonal change:** weather, sunny, rainy, raining, shower, windy, snowy, cloudy, hot, warm, cold, storm, thunder, lightning, hail, sleet, snow, icy, frost, puddles, rainbow, seasons, winter, summer, spring, autumn, Sun, sunrise, sunset, day length		formation and seed dispersal **Vocab:** photosynthesis, pollen, insect/wind pollination, male, female, seed formation, seed dispersal (wind dispersal, animal dispersal, water dispersal), air, nutrients, minerals, soil, absorb, transport			
Animals including humans	**Animals incl. humans** Name and describe animals that live in different habitats. Describe different habitats. Describe people who are familiar to them. Learn about how to take	**Animals incl. humans** Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. 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	**Animals incl. humans** 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	**Animals incl. humans** 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	**Animals incl. humans** 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,	**Animals incl. humans** Describe the changes as humans develop to old age. **Vocab:** puberty, the vocabulary to describe sexual characteristics in line with the school's RSE policy	**Animals incl. humans** 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

	care of themselves.	carnivores, herbivores, and omnivores. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) **Vocab:** 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	types of food, and hygiene. **Vocab:** offspring, reproduction, growth, baby, toddler, child, teenager, adult, old person, names of animals and their babies (e.g. chick/chicken, kitten/cat, caterpillar/butterfly), survive, survival, water, food, air, exercise, heartbeat, breathing, hygiene, germs, disease, food types (e.g. meat, fish, vegetables, bread, rice, pasta, dairy)	support, protection and movement. **Vocab**: nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, joints, support, protect, move, skull, ribs, spine	predators and prey. **Vocab:** digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, large intestine, rectum, anus, incisor, canine, molar, premolar, herbivore, carnivore, omnivore, producer, predator, prey		the way their bodies function. Describe the ways in which nutrients and water are transported within animals, including humans. **Vocab**: heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, cycle, circulatory system, diet, drugs, lifestyle
Living things & habitats	**Living things and their habitats** Explore the plants in the surrounding		**Living things and their habitats** Explore and compare the differences between things that are living, dead, and		**Living things and their habitats** Recognise that living things can be grouped in a variety of ways.	**Living things and their habitats** Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.	**Living things and their habitats** Describe how living things are classified into broad groups

	natural environment. Explore the animals in the surrounding natural environment. Explore plants and animals in a contrasting natural environment.		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 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 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 **Vocab:** living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed, water,		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. **Vocab**: classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate	Describe the life process of reproduction in some plants and animals. **Vocab**: life cycle, reproduce, sexual, sperm, fertilises, egg, live young, metamorphosis, asexual, plantlets, runners, cuttings	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. **Vocab**: vertebrates, fish, amphibians, reptiles, birds, mammals, warm-blooded, cold-blooded, invertebrates, insects, spiders, snails, worms, flowering, non-flowering, mosses, ferns, conifers

			air, survive, survival, names of local habitats (e.g. pond, woodland etc.), names of micro-habitats (e.g. under logs, in bushes etc.), conditions, light, dark, shady, sunny, wet, damp, dry, hot, cold, names of living things in the habitats and micro-habitats studied .				
Materials / States of Matter / Rocks	**Materials** Explore a range of materials, including natural materials. Make objects from different materials, including natural materials. Observe, measure and record how	**Materials** 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	**Materials** Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. To sort materials into groups by squashing, bending, twisting or stretching	**Rocks** 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.	**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	**Materials** 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	

	materials change when heated and cooled. Compare how materials change over time and in different conditions.	a variety of everyday materials. Compare and group together a variety of everyday materials on the basis of their simple physical properties. **Vocab**: 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	**Vocab:** opaque, transparent, translucent, reflective, non-reflective, flexible, rigid, shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching	Recognise that soils are made from rocks and organic matter. **Vocab:** rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorbs water, fossil, bone, flesh, minerals, marble, chalk, granite, sandstone, slate, types of soil (e.g. peaty, sandy, chalky, clay)	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. **Vocab:** solid, liquid, gas, heating, cooling, state change, melting, freezing, melting point, boiling, boiling point, evaporation, condensation, temperature, water cycle	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 metals, wood and plastic. Demonstrate that dissolving, mixing and changes of state are reversible changes. 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. **Vocab:** thermal insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non-reversible change, burning, rusting, new materials	
Light	**Light** Explore shadows. Explore rainbows.			**Light** Recognise that we 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 that there are ways to protect the eyes. Recognise that shadows are formed when the light from a light source is blocked by a solid object.			**Light** 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

				Find patterns in the way that the sizes of shadows change. **Vocab**: light, light source, dark, absence of light, surface, shadow, reflect, mirror, Sun, sunlight, dangerous			then to our eyes. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects **Vocab:** straight lines, light rays
Forces and Magnets (Y3) **Forces (Y5)**	**Forces and Magnets** Explore how to change how things work. Explore how the wind can move objects. Explore how objects move in water.			**Forces and Magnets** 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.		**Forces and Magnets** 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.	

				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. Describe magnets as having two poles. Predict whether two magnets will attract or repel each other, depending on which poles are facing. **Vocab:** 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		**Vocab:** force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears	
Electricity					**Electricity**		**Electricity**

					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		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. **Vocab:** circuit diagram, circuit symbol, voltage

					Vocab: 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		
Sound	**Sound** Listen to sounds outside and identify the source. Make sounds.				**Sound** 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. **Vocab:** sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, quiet, loud, insulation		
Earth and Space	**Earth and Space** Learn about the Earth, Sun, Moon, planets and stars. Learn about space travel.					**Earth and Space** Describe the movement of the Earth and other planets relative to the sun 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. **<u>Vocab:</u>** Sun, Moon, Earth, planets (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune), spherical, Solar System, rotate, star, orbit	
Evolution and Inheritance							**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 adaptation may lead to evolution. Know about evolution and can explain what it is. Know how fossils can be used to find out about the past. **Vocab:** offspring, sexual reproduction, vary, characteristics, adapted, inherited, species, evolve, evolution