Science Curriculum Map

	Autumn Term		Spring Term		Summer Term	
Reception	Weather and seasonal change (daily observations, forest school) Light (shadows)		Weather and seasonal change (daily observations, forest school) Plants (environments, natural habitats, forest school, naming common plants) Changes in state (observational linked with seasonal change, forest school)		Weather and seasonal change (daily observations, forest school) Animals (environments, natural habitats, forest school, naming common animals) Materials (naming common materials, forest school)	
Key Vocabulary	Science Hot, cold, wet, dry Dark, light, shadow		Rain, wind, sunny, cloudy Living, flower, tree, plant Names of common garden plants Melt, freeze		Head, body, legs, arms, hands, feet/foot Alive, animal, woodland, polar, desert, garden, ocean Names of common British wildlife (fox, hedgehog, rabbit, pigeon, owl, mouse etc…) Material, hard, soft, rough, smooth	
Year 1	**Seasonal Change** Observe changes across the four seasons. Observe British birds, along with evergreen and deciduous trees.	**Materials** Identify, describe and name a variety of everyday materials.	**Seasonal Change** Observe and describe weather, measuring temperature and rainfall.	**Plants** Identify and name a variety of common wild and garden plants. Identify and describe the basic structure of a variety of common flowering plants, including trees.	**Animals including humans (body parts and senses)** What is a human. Body parts for a human. The human skeleton. The five senses.	**Animals including humans (Classification)** Identify, name and group a variety of common animals including fish, amphibians, reptiles, birds and mammals. Identify animals in hot/cold places.
Prior Learning	Reception - weather and observational changes, time at forest school	Reception – naming common materials	Reception - weather and observational changes, time at forest school	Reception – natural habitats, naming common plants, forest school	Reception – naming and using our five senses, naming body parts	Reception – naming common animals, forest school, concepts of hot and cold

Key Vocabulary	Autumn, Spring, Summer, Winter, weather, deciduous, coniferous	Material, wood, plastic, metal, liquid, gas, stretch, stiff, bend, waterproof, shiny	Fall, temperature, thermometer, weather symbol	Bud, bulbs, deciduous, evergreen, trunk, vegetable, wild plant, environment, blossom, petal, branch	Elbow, nose, mouth, finger, knee, foot, neck, eye, ear, smell, taste, touch, hear, sight	Fish, amphibians, reptiles, birds, mammals, carnivore, herbivore, omnivore, tame, wild, nocturnal
Year 2	**Materials** Identify and compare the suitability of a variety of everyday materials. Identify materials and their uses in everyday life.		**Animals, including humans (Being Healthy)** Find out about and describe the basic needs of animals, including humans, for survival. Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	**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.	**Animals, including humans (Life cycles)** Notice that animals, including humans, have offspring, which grow into adults. Describe the life cycles of animals.	**Living things and their habitats** 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. Identify simple food chains and how this links to sustaining habitats
Prior Learning	Year 1 – identifying and describing common materials, waterproof materials		Reception – names of common fruits and vegetables	Year 1 – naming common plants, labelling main parts of a plant	Year 1 – Naming common animals, classifying different animals	Reception – naming common animals and where they might live Year 1 – hot and cold habitats
Key Vocabulary	Brick, glass, transparent, Charles Macintosh, John Dunlop, squashing, bending, twisting, stretching, John McAdam		Healthy, diet, exercise, proteins, carbohydrates, dairy, fats, nutrition, survival, hygiene	Roots, crown, deciduous, evergreen, coniferous, stem, leaves, woodland, habitat	Life cycle, off-spring, growth, survival, young, adult, elderly, baby, reproduction	Habitat, micro-habitat, indigenous, food chain, producer, consumer
Year 3	**Forces and Magnets** Compare how things move on different surfaces. Notice that some forces need contact between two objects, but magnetic forces can act as a distance. Observe how magnets attract or repel each other. Describe magnets as having two poles.		**Rocks** Compare and group together different kinds of rocks based on their appearance and simple physical properties. Describe in simple terms how fossils are formed. Recognise that soils are made from rocks and organic matter.	**Plants** Identify and describe the functions of different parts of flowering plants. Explore the requirements of plants for life and growth. Investigate the way in which water is transported within plants.	**Animals, including humans (Skeleton and Muscles)** Identify that animals, including humans, need the right types and amount of nutrition. Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	**Light** Recognise that we need light to see things and that dark is the absence of light. Notice that light is reflected from surfaces and shadows are formed when light is blocked. Recognise that light from the sun can be dangerous.
Prior Learning	Reception – what a magnet is, what materials might a magnet attract?			Year 1 – naming common plants, labelling main parts of a plant Year 2 – knowing what plants need to survive	Year 1 – knowing what animals need to survive, human skeleton and body parts	Reception – concept of light and dark, ways to make shadows using a torch

					Year 2 – healthy diets and what nutrition the body needs	
Key Vocabulary	Magnet, friction, ferrous, repulsion, loadstone, pulley, magnetic pole, hoist, attract, repel		Fossil, coil, crystals, sedimentary, metamorphic, igneous, organic matter	Nutrients, pollination, seed dispersal, fertiliser, seed, stigma, anther	Nutrition, skeleton, muscles, joint, pelvis, cartilage, rib cage, tendon, spine	Reflection, shadows, light source, opaque, refraction, periscope, nocturnal, orbits, convex, concave
Year 4	**Living things and their habitats (Classification and habitats)** Recognise that living things can be grouped in a variety of ways and use classification keys to help group them. Recognise that environments can change and that this can sometimes pose dangers to living things.	**States of matter** Compare and group materials together (solids, liquids or gases). Observe that some materials change state when they are heated or cooled. Identify the part played by evaporation and condensation in the water cycle.	**Animals, including humans (Digestive System)** Simple functions of the basic parts of the digestive system in humans. Identify the types of teeth in humans and their simple function. Food chains – identifying producers, predators and prey.	**Sound** Identify how sounds are made. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of a sound and the volume of a sound. Recognise that sounds get fainter as distance from the source increases.	**Electricity** Identify common appliances that run on electricity. Construct a simple series electrical circuit. Identify whether a lamp will light in a simple series circuit. Recognise that a switch opens and closes a circuit. Recognise some common conductors and insulators.	**Scientists and Inventors** Researching a selection of scientists who have made significant discoveries in history. Identifying their discoveries, how discoveries have been made, uses of discoveries today and any barriers they faced while conducting research/investigations. Thomas Edison, Marie Curie, George Washington Carver
Prior Learning	Year 1 – classifying different animal groups Year 2 – knowing and describing different habitats	Year 2 – states of matter	Year 2 – animal food chains			
Key Vocabulary	Flowering plants, pollution, invertebrates, mosses, spiders, insects, vertebrates	Water vapour, condensation, precipitation, evaporation, substance, matter, lava, solid, liquid, gas	Pancreas, oesophagus, intestine, organ, molars, canine, predators, prey, salivary gland	Vibrating, pitch, volume, insulation, outer/middle/inner ear, cochlea, auditory, frequency, hammer	Circuit, buzzer, conductor, battery, cells, switch, socket, appliance, appliance series circuit, insulator	Famous, significant impact, discovery, Thomas Edison, Marie Curie, physicist, chemist, inventor
Year 5	**Forces** Explain that unsupported objects fall towards the Earth	**Properties and changes of materials (Reversible and**	**Earth and space** Describe the movement of the Earth, and other	**Living things and their habitats (Life cycles)**	**Animals including humans (Changes as you age)** Describe the changes as humans develop to old age.	**Scientists and Inventors** Researching a selection of scientists who have made

	because of the force of gravity. Identify the effects of air resistance, water resistance and friction. Recognise that some mechanisms allow a smaller force to have a greater effect.	**Irreversible Changes)** Compare and group together everyday materials. Know that some materials will dissolve in liquid and describe how to recover a substance from a solution. Use knowledge of solids, liquids and gases to decide how mixtures might be separated. Demonstrate that some processes are reversible changes, and some are irreversible changes.	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.	Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Describe the life process of reproduction in some plants and animals.		significant discoveries in history. Identifying their discoveries, how discoveries have been made, uses of discoveries today and any barriers they faced while conducting research/investigations. Albert Einstein, Alexander Fleming, Jane Goodall
Prior Learning	Year 3 – what a force is, how forces can affect objects		Year 1 – naming everyday materials Year 2 – stating properties of everyday materials e.g. waterproof, transparent etc... Year 4 – states of matter	Year 2 – life cycles of different animals, understanding at which stage an animal reproduces	Year 1 – naming body parts for a human Year 2 – life cycle of a human	Year 4 – previous scientists looked at, Thomas Edison, Marie Curie and George Washington Carver
Key Vocabulary	Gravity, air resistance, water resistance, levers, gears, parachute, Galileo, Newton	Orbit, solar system, astronomical, planet, rotation, spherical, crescent moon, gibbous moon, eclipse, lunar	Solubility, conductivity, transparency, thermal evaporation, dissolve, bicarbonate of soda, thermal, filtering, melting, separate	Life cycle, gestation, classification, precision, obese, embryo	Puberty, reproduction, teenager, adolescent, toddler, elderly	Albert Einstein, Alexander Fleming, Jane Goodall, zoologist, antibiotic,
Year 6	**Light**	**Electricity**	**Living things and their habitats (Classification)**	**Animals including humans (Circulatory System)**	**Evolution and Adaptation**	

	Recognise that light appears to travel in straight lines and use this idea 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. Explain why shadows have the same shape as the objects that cast them.	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. Use recognised symbols when representing a simple circuit in a diagram.	Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences. Give reasons for classifying plants and animals based on specific characteristics.	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 body's function. Describe the ways in which nutrients and water are transported.	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.
Prior Learning	Year 3 – recognise how light can be made, how we can make shadows, and that light from the sun is dangerous	Year 4 – identifying items that use electricity, recognising and building simple circuits, naming common conductors and insulators	Year 1 – naming some animal groups, naming common plant and animal features Year 4 – recognising animal groups, grouping plants and animals based off their habitats.	Year 2 – healthy lifestyle choices, how diet, exercise and sleep can affect the body Year 3 – looking after our muscles and bones, how exercise can affect our muscles and bones	
Key Vocabulary	Light wave, light source, concave, convex, filters, lens, retina, cornea, iris, pupil	Conductor, insulator, socket, series circuits, cells, volts, generator, turbine, fuses	Micro-organism, species, fungi, monera, bacteria, protista, algae, Carl Linnaeus	Blood vessels, drugs, atrium, William Harvey, cardiovascular, ultrasound, cardiologist, capillaries, pulse, ventricles	Offspring, adaptation, evolution, inheritance, palaeontologist, Charles Darwin, genes, chromosomes, syndrome, genotype