**St Stephen’s Church of England Primary School**

**St. Stephen’s C of E school Science curriculum for Year 1 to 6**

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| **Area** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Animals (inc humans)  Vocabulary  Questions | * Observing animals: * Identify and name common animals e.g. birds, fish, amphibians etc. * Identify and name animals that are carnivores, herbivores and omnivores. * Describe / compare the structure of common animals. * Identify, name, draw and label basic parts of the human body and those parts associated with each sense. * Fish, amphibian, reptile, bird, mammal, legs, feet, nose, ears, eyes, feather, fur, scales, fins, fish, tail, gills. * What type of animal is this? How do you know? | * Observing animals: * Notice that animals (inc humans), have offspring which grow into adults. * Find out about basic needs of animals and humans for survival (water, food and air). * Describe the importance for humans to exercise, eat the right amounts of different food types and hygiene. * baby, need, want, living, alive, essential, food, milk, water, drink, eat, air, breathe, shelter, warmth, survival, depend, child, toddler, life cycle, pregnancy, birth, teenager, adult, parent, elderly person, grow. * How do we change throughout our lives? | * Identify that animals inc. humans need the right type/amount of nutrition as cannot make their own food. * Identify that humans and some animals have skeletons and muscles for support, protection and movement. * stay alive, survive, food, balanced diet, nutrition, nutrients, fruit and vegetables, carbohydrates, protein, roughage, fibre, sugar, fat, dairy, skeleton, bones, protect, support, move, muscles, joints, ribs, heart, skull, brain, backbone, spine, spinal column, vertebrate. * What should we eat to stay healthy? | * To describe the simple functions of the digestive system in humans. * To identify the different types of teeth in humans and their function * To construct/interpret a variety of food chains, identifying producers, predators and prey. * mouth, oesophagus, stomach, small intestine, large intestine, rectum, anus, digestive system, digestion, carbohydrate, fat, sugar, protein, roughage, dairy, fruit, vegetables, vitamins, minerals, teeth, canine, incisor, premolar, molar. * How does our body use food? | * 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. * Describe the changes as humans develop from birth to old age. * Life cycle, birth, growth, metamorphosis, flower, carpel, stamen, pollen, seed, fruit, pollination, seed dispersal.   • How do life cycles differ? | * Identify and name the main parts of the human circulatory system and explain functions of the heart, blood vessels and blood. * Recognise the impact of diet, exercise, drugs and lifestyle on the way the body functions. * Describe ways in which nutrients/water are transported within animals inc. humans. * aorta, artery, atrium, blood, blood vessel, body temperature, capillaries, carbon dioxide, oxygen, eat well plate, energy, exercise, fat, fibre, heart, heart rate. * How does our body function? |

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| Plants  Vocabulary  Questions | * Identify/name a variety of common plants inc. garden plants, wild plants, trees (deciduous and evergreen). * Identify/ describe the basic structure of commo n flowering plants (e.g. roots, stem/trunk, leaves and flowers. * plant (verb and noun), leaf, leaves, bud, twig, branch, tree, roots, stem, shoot, bud, flower, leaf, deciduous, evergreen, soil. * What type of plants grow in our garden? | * Observe and describe how seeds/bulbs grow into mature plants. * Find out and describe how plants need water, light and suitable temperature to grow/stay healthy. * seeds, plant (verb and noun), bulb, grow, observe, observations, describe, identify, question, predict, water, compare, answer, investigate, soil, * How does your garden grow? | * Identify/describe the functions of different parts of flowering plants; roots, stem, leaves and flowers. * Explore a plant’s need for life/growth (air, light, water, nutrients in soil, room to grow) and how this varies 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. * plant, roots, stem, trunk, leaf/leaves, flower, leaves, stalk, veins, flowering, pollination, seed formation, bud, petal, sepal, carpel, stamen, pollen, reproduce, nectar, seed, fruit, dispersal, animal, wind, water, stigma, style, ovary, anther, filament, observe. * How do plants work? | * Remember more! * **KEEP IT ALIVE!**   A single lesson where recap past knowledge of plants, e.g.   * Can you draw a labelled plant from memory? * What does a plant need to survive? * What are the functions of the parts of a plant? | * Remember more! * **KEEP IT ALIVE!**   A single lesson where recap past knowledge of plants, e.g.   * Can you draw a labelled plant from memory * What does a plant need to survive? * What are the functions of the parts of a plant? | * Remember more! * **KEEP IT ALIVE!**   A single lesson where recap past knowledge of plants, e.g.   * Can you draw a labelled plant from memory. * What does a plant need to survive? * What are the functions of the parts of a plant? |

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| **Area** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Materials  Materials Vocabulary  Questions | * 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 on the basis of their simple physical properties. * Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. * materials, wood, wooden, plastic, metal, glass, water, rock, brick, paper, * What are these things made from? | * Identify and compare the uses of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard. * Compare how things move on different surfaces. * Waterproof, absorb, absorbent, wet, light, block, transparent, opaque, translucent, rough, smooth, soft, hard, shiny, strength, strong * What materials suits which? | * Remember more! * **KEEP IT ALIVE!**   A single lesson where recap past knowledge of materials, e.g.   * How many different names of materials do you know? * Can you give some properties of that material? Hard, flexible, transparent. * What ways can you change the shape of a solid? Bend, twist, stretch. * Will a toy car move the same way on different surfaces? | * Remember more! * **KEEP IT ALIVE!**   A single lesson where recap past knowledge of materials, e.g.   * How many different names of materials do you know? * Can you give some properties of that material? Hard, flexible, transparent. * What ways can you change the shape of a solid? Bend, twist, stretch. * Will a toy car move the same way on different surfaces? | * Compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets. * Understand 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 metals, wood and plastic. * Demonstrate that dissolving, mixing and changes of state are reversible changes. * Explain that some changes result in the formation of new materials and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. * properties, material, brittle, thermal conductor, thermal insulator, insulate, insulation, viscosity, viscous, sticky, stickiness, waterproof, suspension, saturated, temperature, not reversible. * Which material would you choose? * How do materials change and why? | * Remember more! * **KEEP IT ALIVE!**   A single lesson where recap past knowledge of materials, e.g.   * How many different names of materials do you know? * Can you give some properties of that material? Hard, flexible, transparent. * What ways can you change the shape of a solid? Bend, twist, stretch. * Will a toy car move the same way on different surfaces? |

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| **Area** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| States of matter  Vocabulary  Questions |  |  |  | * 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 (ºC). * Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. * Solid, liquid, gas, temperature, cold, hot, runny, viscous, sticky, ice, water, freeze, solidify, compress, squash, evaporation, condense, droplets, cycle, boiling point. * What are the different states of matter and how do they behave? | * Remember more! * **KEEP IT ALIVE!**   A single lesson where recap past knowledge of states of matter, e.g.   * Can you recall the different states of matter? * What can cause a material to change state? * Recalling the water cycle | * Remember more! * **KEEP IT ALIVE!**   A single lesson where recap past knowledge of states of matter, e.g.   * Can you recall the different states of matter? * What can cause a material to change state? * Recalling the water cycle |

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| Living things and habitats  Vocabulary  Questions |  | * Explore and compare the differences 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 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 food from plants and other animals, including the idea of simple food chain and identify / name different sources of food. * Alive, living, once-lived, dead, never-lived, suited, habitat, features, names of habitats, animals, herbivores, carnivores, omnivores, food chain, plants, source of food * Where do these creatures live? | * Remember more! * **KEEP IT ALIVE!**   A single lesson where recap past knowledge of Living things and habitats, e.g.   * Do you know the difference between deal, living and never alive? Examples? * Recall names of plants and animals in their habitats. * Can you recall a food chain? | * Identify and name a variety of living things (plants and animals) in the local and wider environment, using classification keys to assign them to groups. * Recognise that environments can change and that this can sometimes pose dangers to living things. * Environment, impact, positive, negative, litter, pollution, waste, biodiversity, habitat, destroy, food chain, producer, consumer, human impact, global issue, destruction, deforestation. * How do environments affect living things? | * Explain 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.   * Life cycle, birth, growth, reproduction, metamorphosis, mammal, amphibian, insect, bird, egg, larva, cocoon, pupa, prey, predator, reproduce, habitat. * How do life cycles differ? | * 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. * Vertebrates, invertebrates, fish, amphibians, molluscs, annelids, arachnids, insects, arthropods, flowering plants, conifers, ferns, fungi, bacteria, winged, jointed legs, antennae, shell, backbone. * How are animals and plants adapted to suit their environment? |

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| **Area** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Light  Questions  Vocabulary |  |  | * Notice that light is reflected from surfaces. * Find patterns that determine the size of shadows. * Light, dark, shadow, mirror, bright, dim, reflect, eye, transparent, translucent, ray, beam, absorb, luminous, non-luminous. * How can we see things? How are shadows formed? | * Remember more! * **KEEP IT ALIVE!**   A single lesson where recap past knowledge of Light e.g.   * How are shadows formed? * Recall how light can be reflected from surfaces. | * Remember more! * **KEEP IT ALIVE!**   A single lesson where recap past knowledge of Light e.g.   * How are shadows formed? * Recall how light can be reflected from surfaces. | * Understand 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 and to predict the size of shadows when the position of the light source changes. * Light, dark, shadow, mirror, bright, dim, reflect, eye, opaque, transparent, translucent, ray, beam, refraction, periscope, spectrum, dispersion, inverted. * How does light behave? |

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| Forces/ Magnets  Vocabulary  Questions |  |  | * Notice that some forces need contact between two objects, but magnetic forces act at distant. * Observe how magnets attracts or repel each other and attract some materials and not others. * Compare and group together 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 2 magnets will attract or repel each other, depending on which poles are facing. * Push, pull, twist, force, air, slows down, magnet, attracts, magnetism, non-magnetic material, metal, non-metal, north pole, south pole, repel. * How do magnets behave? | * Remember more! * **KEEP IT ALIVE!**   A single lesson where recap past knowledge of Forces and Magnets e.g.   * Recall how magnets attract and repel. * Magnetic and non- magnetic materials investigation. * What are the poles of a magnet? Predict if two magnets attract/repel. | * 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. * Understand that forces and motion can be transferred through mechanical devices such as gears, pulleys, levers and springs. * Gravity, forces, force arrow, fulcrum, air resistance, upthrust, resistance, water resistance, push, pull, gears, pulleys, lever, springs. * Why do things fall? * How can I use forces to help me? | * Remember more! * **KEEP IT ALIVE!**   A single lesson where recap past knowledge of Forces and Magnets e.g.   * Recall the forces acting on a falling object (gravity, air resistance). * .Transferring force through gears, pulleys, levers and springs. |

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| Electricity  Questions  Vocabulary |  |  |  | * 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. * Electricity, mains, plugged in, battery, cells, wires, bulbs, switches, buzzers, circuit, complete circuit, conductor, insulator, metal, non-metal, positive, negative, electron, flow. * How does electricity work? | * Remember more! * **KEEP IT ALIVE!**   A single lesson where recap past knowledge of Electricity e.g.   * Recall a simple series circuit with components. * Investigate whether a bulb will light up in different scenarios. * The role of a switch. * Common conductors and insulators. | * 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. * Current, filament, voltage, battery, lamp, wire, buzzer, motor, circuit, switch, conductor, insulator. * How do different circuits behave? |