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| **EYFS Cycle 1** | **Autumn Term 1** | **Autumn Term 2** | **Spring Term 1** | **Spring Term 2** | **Summer Term 1** | **Summer Term 2** |
| **Topic** | **All About Me**  **Autumn** | **Light and Dark**  **Winter** | **Superheroes** | **Traditional Tales**  **Spring** | **Holidays**  **Summer** | **Growing** |
| **Continuous Provision** | **3-4 years**  Use all their senses in hands-on exploration of natural materials  Explore collections of materials with similar and or different properties  Talk about what they see, using a wide vocabulary  Talk about and explore different forces they can feel  **Reception**  Explore the natural world around them | | | | | |
|  | **3-4 years**  Make healthy choices about food, drink, activity and toothbrushing  **Reception**  Understand the effect of the changing seasons on the world around them  Know and talk about the different factors that support their overall health and wellbeing | **3-4 years**  Talk about materials and changes they notice  **Reception**  Explore the natural world around them  Describe what they see, hear and feel whilst outside | **3-4 years**  Explore collections of materials with similar and or different properties | **3-4 years**  Explore collections of materials with similar and or different properties  **Reception**  Understand the effect of the changing seasons on the world around them | **3-4 years**  Talk about materials and changes they notice  **Reception**  Understand the effect of the changing seasons on the world around them | **3-4 years**  Talk about what they see, using a wide vocabulary  Plant seeds and care for growing plants  Understand the key features of the life cycle of a plant  Begin to understand the need to respect and care for the natural environment and all living things  **Reception**  Explore the natural world around them |

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| **EYFS Cycle 2** | **Autumn Term 1** | **Autumn Term 2** | **Spring Term 1** | **Spring Term 2** | **Summer Term 1** | **Summer Term 2** |
| **Topic** | **Travel and Transport**  **Autumn** | **Pets**  **Winter** | **People who help us** | **Fantasy and adventure**  **Spring** | **Recycling and the environment**  **Summer** | **Dinosaurs** |
| **Continuous Provision** | **3-4 years**  Use all their senses in hands-on exploration of natural materials  Explore collections of materials with similar and or different properties  Talk about what they see, using a wide vocabulary  Talk about and explore different forces they can feel  **Reception**  Explore the natural world around them | | | | | |
|  | **3-4 years**  Explore how things work | **3-4 years**  Understand the key features of the life cycle of an animal  Begin to understand the need to respect and care for the natural environment and all living things  Talk about what they see, using a wide vocabulary |  | **Reception**  Explore the natural world around them  Describe what they see, hear and feel whilst outside | **3-4 years**  Explore how things work  Use all their senses in hands-on exploration of natural materials  Explore collections of materials with similar and or different properties  Talk about what they see, using a wide vocabulary  Begin to understand the need to respect and care for the natural environment and all living things |  |

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| ***Year 1*** | ***Autumn Term 1*** | ***Autumn Term 2*** | ***Spring Term 1*** | ***Spring Term 2*** | ***Summer Term 1*** | ***Summer Term 2*** |
| ***Topic/theme*** | ***Animals Including Humans (Humans)*** | ***Animals including Humans (Animals)*** | ***Seasonal Changes*** | ***Uses of Everyday Materials*** | ***Introduction to Plants*** | ***Exploring Everyday***  ***Materials*** |
| ***Scientific***  ***Enquiry*** | *Identify and classify*  *Perform simple tests*  *Gather and record data to help in answering questions*  *Use observations and ideas to suggest answers to questions* | *Use observations and ideas to suggest answers to questions*  *Group and sort* | *Identifying and classifying*  *Using their observations and ideas to suggest answers to questions*  *Performing simple tests*  *Gathering and recording data to help in answering questions* | *Perform simple tests*  *Use observations and ideas to suggest answers to questions*  *Identify and classify* | *Ask simple questions*  *Observe closely and use simple equipment*  *Use their observations and ideas to suggest answers to questions*  *Identify and classify*  *Compare and contrast*  *Observe closely, using simple equipment*  *Gather and record data to help in answering questions* | *. Perform simple tests*  *Identify and classify*  *Use observations and ideas to suggest answers to questions*  *Gather and record data to help in answering questions* |
| ***Biology*** | *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 carnivores, herbivores and omnivores*  *Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)*  *.* | *Observe changes across the 4 seasons*  *Observe and describe weather associated with the seasons and how day length varies* |  | *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.* |  |
| ***Chemistry*** |  |  |  | *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.* |  | *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.* |
| ***Key Vocabulary*** | *head body skeleton limb joint*  *brain eyelash eye sight pupil*  *sound ear*  *sign language*  *vibration deafness*  *tongue mouth taste flavour sweet*  *touch fingertips skin organ brain*  *smell odour nose nostril nose hair* | *fish amphibian reptile mammal bird*  *feather*  *warm-blooded characteristic backbone hatchling*  *amphibian reptile gills*  *scale*  *cold-blooded*  *herbivore carnivore omnivore predator canines*  *pet wild shelter*  *veterinary natural*  *similarities differences compare unsuitable climate* | *season spring summer autumn winter autumn hibernate weather protect harvest winter weather frost sleet temperature*  *spring compare changes grow chick summer warm sun protection temperature heatwave*  *rainfall measuring record results graph* | *solid, strong, brick, clay, Wind, waterproof*  *absorbent*  *non-absorbent*  *roof, slate, transparent*  *opaque suitable*  *window pane*  *window frame*  *fabric, furniture cotton*  *mattress, soft, wool*  *weather, jumper*  *suitable, waterproof*  *evaluate, material properties, tile, garden* | *Seed, plant, tree, soil, predict, stem, petal, leaf, root, flower,*  *environment, weed,*  *Daisy, dandelion, wild*  *Deciduous,*  *evergreen seasons*  *branch, bush,*  *supermarket, fruit, vegetable, farm*  *tractor, growth,*  *seedling, young plant,*  *adult plant, observe* | *material fabric wood plastic metal object glass property brick elastic*  *property opaque transparent dull stiff*  *natural man made factory rubber polyester*  *predict float sink*  *submerge buoyant*  *absorbent sponge waterproof umbrella soak* |

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| **Year 2** | **Autumn Term 1** | | **Autumn Term 2** | **Spring Term 1** | | **Spring Term 2** | | **Summer Term 1** | | **Summer Term 2** |
| **Topic/theme** | **Animals including Humans - Growth** | **Animals including Humans – Life Cycles** | | | **Living Things and their Habitats** | | **Uses of Everyday**  **Materials** | | **Plants** | **Living Things and their Habitats – Habitats Around the World** |
| **Scientific**  **Enquiry** | Using observations and ideas to suggest answers to questions  Identifying and classifying  Performing simple tests | Identifying and classifying  Using observations  and ideas to suggest  answers to questions  Gathering and recording  data to help in answering questions  Reporting on findings from  enquiries, including oral and written explanations,  displays or presentations  of results and conclusions. | | | Identifying and classifying  Observing closely, using simple  equipment  Using observations and ideas to suggest answers to questions  Asking simple questions and  recognising that they can be answered in different ways  Gathering and recording data to help  in answering questions | | Using observations and ideas to suggest answers to questions  Performing simple tests  Gathering and recording data to help  in answering questions | | Identifying differences, similarities or changes related to simple scientific ideas and processes  Observing and recording, with some accuracy  Asking simple questions and recognising that they can be answered in different ways  Performing simple tests  Using observations and ideas to suggest answers to questions  Performing simple tests  Gathering and recording data to help in answering questions  Identifying and classifying | Identifying and classifying  Using observations and ideas to suggest answers to questions  Gathering and recording data to help in answering questions  Asking simple questions and recognising that they can be answered in different ways |
| **Biology** | 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 | Notice that animals, including humans, have offspring which grow into adults | | | Explore and compare the differences between things that are living, dead, and things that have never been alive  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 a simple food chain including microhabitats | |  | | Observe and describe how seeds and bulbs into mature plants  Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy  Understand the requirements of  plants for germination, growth and survival, as well as, the processes of reproduction and  growth in plants | Identify that most living things live in habitats to which they are suited  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 microhabitats |
| **Chemistry** |  |  | | |  | | 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 | |  |  |
| **Key Vocabulary** | survival shelter nutrition oxygen essential  vital non-essential survive  grow healthy  protein carbohydrate dairy vitamins calcium  fat balanced diet nutrients fresh food pre-cooked  processed food  exercise strength flexibility balance coordination  hygiene prevent germs bacteria virus | life cycle grow survive  independent adult  foetus womb helpless  toddler develop offspring  inherit gene resemble  differences reproduction  hatchling chick bar chart  predict caterpillar  transformation larva  chrysalis metamorphosis  frog amphibian frogspawn  tadpole froglet | | | Senses nutrition reproduce excrete respire habitat  microhabitat fungi  survive shelter antennae suitable condition colony insect producer consumer herbivore carnivore omnivore food chain life cycle nutrients rot caterpillar automated  frozen food forklift truck  refrigerated lorry  canned | | seeds bulbs growth plant compare  predict investigate control experiment method photosynthesis carbon dioxide oxygen glucose energy  pollination life cycle germination reproduction seedling  manure crop insulate thrive healthy  forest desert adapt condition survive | | seeds bulbs growth plant compare predict investigate control experiment method  photosynthesis carbon dioxide oxygen glucose energy pollination life cycle germination reproduction seedling  manure crop insulate thrive healthy  forest desert adapt condition survive | habitat microhabitat  organism environment mate  rainforest moisture extinct climate endangered  biodiversity deforestation poaching pollution rainforest  plankton ocean ecosystem coral reef trench Antarctic Arctic caribou narwhal tundra  earthworm desert lizard cactus pond |

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| **Year 3** | **Autumn Term 1** | **Autumn Term 2** | **Spring Term 1** | **Spring Term 2** | **Summer Term 1** | **Summer Term 2** |
| **Topic/theme** | **Animals including Humans** | **Rocks** | **Forces and Magnets** | **Light** | **Plants** | **Scientific**  **Enquiry** |
| **Scientific**  **Enquiry** | Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions  Using straightforward scientific evidence to answer questions or to support their findings  Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions  Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables  Identifying differences, similarities or changes related to simple scientific ideas and processes | Reporting on findings from enquiries, including oral and  written explanations, displays or  presentations of results and conclusions  Using results to draw simple conclusions, make predictions for  new values, suggest  improvements and raise further questions  Making systematic and careful observations and, where  appropriate, taking accurate  measurements using standard units, using a range of equipment,  including thermometers and data loggers  Identifying differences, similarities or changes related to  simple scientific ideas and  processes | Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and  conclusions  Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers  Setting up simple practical enquiries, comparative and fair tests  Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables | Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions  Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables  Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions  Identifying differences, similarities or changes related to simple scientific ideas and processes | Asking relevant questions and using different types of scientific enquiries to answer them  Setting up simple practical enquiries, comparative and fair tests  Making systematic and careful observations  Making systematic and careful observations  Reporting on findings from enquiries, including oral and written explanations, displays or  presentations of results and conclusions  Gathering, recording, classifying and presenting data in a variety of ways to help in answering  questions  Recording findings using simple scientific  language, drawings, labelled diagrams, keys, bar charts, and tables  Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions | Asking relevant questions and using different types of scientific enquiries to answer them  Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers  Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables  Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions  Identifying differences, similarities or changes related to simple scientific ideas and processes  Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions  Setting up simple practical enquiries, comparative and fair tests |
| **Biology** | 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 |  |  |  | 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 |  |
| **Chemistry** |  | 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 |  |  |  |  |
| **Physics** |  |  | 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 on the basis of whether they are attracted to a magnet, and identify some magnetic materials.  Describe magnets as having two poles. | Recognise that they 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 their eyes  Recognise that shadows are formed when the light from a light source is blocked by an opaque object  Find patterns in the way that the size of shadows changes. |  | How can a solar oven  be made more  effective: posing  questions, writing  predictions, recording and presenting results.  Cleaning coins:  writing a method and  carrying out a  practical test, recording and presenting results.  Making a cake: fair  testing, controls and  variables |
| **Key Vocabulary** | nutrition carbohydrate  protein vitamin mineral  nutrition label portion  energy balanced diet  vertebrate invertebrate  endoskeleton exoskeleton hydrostatic skeleton  humerus ulna  radius tibia fibular  endoskeleton vertebrate  skull rib cage spine  muscle contract  hamstrings biceps diaphragm | igneous rocks intrusive igneous rock  extrusive igneous rock  crystals magma  sedimentary rock metamorphic rock  limestone marble sandstone  weathering chemical weathering  physical weathering  biological weathering acid rain appearance texture submerged  erosion receding  fossil extinct sediment  embedded amber  decompose fragments  clay soil chalky soil sandy soil | Force contact force  non-contact forces air resistance friction  motion surface  resistance texture  tilt magnet attract  repel bar magnet horseshoe magnet  magnetism magnetic  magnetic field iron  steel non-contact forces magnetism attract  non-magnetic materials recycle compass magnetic needle  magnetic north direction orienteering | light source  natural artificial reflect  vitamin D ultraviolet rays  sunburn exposure  protection  fluorescent high visibility  reflective surface  materials shadow opaque  sundial rays blocks  position cast opposite direction length  size shape  closer further puppet | nutrients fertiliser  nursery potassium stunted chlorophyll stomata xylem photosynthesis UV light  xylem phloem absorb stomata transpiration anther stigma style filament reproduction  pollination pollen  nectar seed dispersal pollinator germination vulnerable anchor  sapling formation | solar  renewable energy  scientific investigation  prediction plausible  record results  data table graph  acid alkali PH  method practical  conclusion evidence  explanation compare enquiry baking measurements  fair test control experiment variable  conclusive  scientific knowledge  equipment diagram  collated |

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| **Year 4** | **Autumn Term 1** | **Autumn Term 2** | **Spring Term 1** | **Spring Term 2** | **Summer Term 1** | **Summer Term 2** |
| **Topic/theme** | **Animals including Humans** | **Living Things and their Habitats** | **Sound** | **States of Matter** | **Electricity** | **Living Things and their Habitats – Conservation** |
| **Scientific**  **Enquiry** | Making systematic and careful observations  Reporting on findings from enquiries, including oral and written explanations  Recording findings using simple scientific language, drawings, labelled diagrams,  keys, bar charts, and tables  Setting up simple practical enquiries, comparative and fair tests  Using results to draw simple conclusions, make predictions for new values, suggest  improvements and raise further questions | Identifying differences, similarities or changes related to simple scientific ideas and processes  Reporting on findings from enquiries, including oral and written explanations,  displays or presentations of results and  conclusions  Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions  Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables | Identifying differences, similarities or changes related to simple scientific ideas and processes  Setting up simple practical enquiries, comparative and fair tests  Making systematic and careful observations and, where appropriate, taking accurate measurements  using standard units, using a range of equipment, including thermometers and data loggers  Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar  charts, and tables  Reporting on findings from enquiries, including oral  and written explanations, displays or presentations of results and conclusions | Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions  Using straightforward scientific evidence to answer questions or to support their findings  Making systematic and careful observations and, where appropriate, taking accurate  measurements using standard units, using a range of equipment,  including thermometers and data loggers  Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables  Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions | Using straightforward scientific evidence to answer questions or to support their findings  Reporting on findings from enquiries, including oral and written explanations, displays or presentations of  results and conclusions  Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions  Setting up simple practical enquiries, comparative and fair tests  Making systematic and careful observations and, where appropriate, taking accurate measurements  using standard units, using a range of equipment, including thermometers and data loggers  Investigate, record data, analysing data, presenting findings | Gathering, recording, classifying and presenting data in a variety of ways to help in  answering questions  Using straightforward scientific evidence to answer questions or to support their findings  Recording findings using simple scientific language, drawings, labelled diagrams, keys,  bar charts, and tables  Reporting on findings from enquiries, including oral and written explanations, displays or  presentations of results and conclusions  Making systematic and careful observations and, where appropriate, taking accurate  measurements using standard units, using a  range of equipment, including thermometers and data loggers |
| **Biology** | 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 | 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 |
| **Chemistry** |  |  |  | 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. |  |  |
| **Physics** |  |  | 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 |  | 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 conductor |  |
| **Key Vocabulary** | digestive system oesophagus stomach small intestine large intestine saliva peristalsis  absorb liver gall bladder  incisors canines molars jaw gum enamel plaque tooth decay cavity fluoride ecosystem producer consumer prey predator food web tundra hide interdependence threatened | habitat microhabitat  conditions  adapted camouflage  coastal grassland  environment  climate exposure  classify characteristics  vertebrate  invertebrate species  sub-groups identify  criteria  classification keys organism  adapted region  features  colouring blubber  ecosystem oxygenised  flowering plant  non-flowering plant  pond dipping | vibration medium  waves eardrum signals  source energy  particles echo vacuum  materials reflect  absorb insulate defenders  volume decibels  decibel metre  amplitude power  pitch high pitch  low pitch instruments orchestra energy particles  travel sound source fade | matter solid liquid  gas volume particle bond  arranged cooled heated  particle melting  melting point  temperature thermometer  freezing reverse  boiling sublimation deposition  evaporation condensation absorb  water vapour process  water cycle precipitation  surface runoff  transpiration groundwater | electricity batteries  mains electricity appliance socket  circuit series circuit  component cell voltage  current power  battery wire bulb  conductor insulator  metal copper rubber  switch current  control complete circuit  incomplete circuit  non-renewable energy renewable energy  wind turbines solar panels hydropower. | Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate |

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| **Year 5** | **Autumn Term 1** | **Autumn Term 2** | **Spring Term 1** | **Spring Term 2** | **Summer Term 1** | **Summer Term 2** |
| **Topic/theme** | **Animals, including humans** | **Earth and Space** | **Forces** | **Changes of Materials** | **Properties of Materials** | **Living Things and their Habitat** |
| **Scientific Enquiry** | Recording data and results of increasing complexity  using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs  Reporting and presenting findings from enquiries,  including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations  Taking measurements, using a range of scientific  equipment, with increasing accuracy and precision, taking repeat readings when appropriate  Identifying scientific evidence that has been used to support or refute ideas or arguments | Identifying scientific evidence that has been used to support or refute ideas or arguments  Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter  graphs, bar and line graphs Using test results to make predictions to set up further comparative and fair tests  Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations | Identifying scientific evidence that has been used to support or refute ideas or arguments  Taking measurements, using a range of  scientific equipment, with increasing accuracy and precision, taking repeat  readings when appropriate  Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a  degree of trust in results, in oral and written forms such as displays and other  presentations  Planning different types of scientific enquiries  to answer questions, including recognising  and controlling variables where necessary | Reporting and presenting findings from enquiries, including conclusions, in oral and written forms  causal relationships  and explanations of and a degree of trust in results,  Planning different types of  scientific enquiry to answer questions, including recognising  and controlling variables where necessary  Identifying scientific evidence that has been used to support or refute ideas or arguments  Using test results to make predictions to set up further comparative and fair tests | Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary  Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate  Recording data and results of increasing  complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar  and line graphs  Reporting and presenting findings from  enquiries, including conclusions, causal relationships and explanations of and a degree of  trust in results, in oral and written forms such as displays and other presentations  Using test results to make predictions to set up further comparative and fair tests | Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations  Plan different types of scientific enquiries to answer questions, including controlling variables where necessary  Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs |
| **Biology** | Describe the changes as humans develop to old age |  |  |  |  | Describe the life process of reproduction in some plants and animals  Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird  Understand the work of naturalists and animal behaviourists, for example, David Attenborough and Jane Goodall. [Non-statuary] |
| **Chemistry** |  |  |  | Describe how to recover a substance from a solution  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. | 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  Compare and group together everyday materials based on evidence from comparative and fair tests, including their conductivity of heat  Give reasons, based on evidence from  comparative and fair tests, for the particular uses of everyday materials, including metals ,wood and plastic  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 |  |
| **Physics** |  | Describe the movement of the Earth and other planets relative to the sun in the solar system  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 | 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  Recognise that some  mechanisms including levers, pulleys and gears  allow a smaller force to  have a greater effect |  |  |  |
| **Key Vocabulary** | foetus dependent  adolescent  puberty reproduce  gestation pregnant  duration extreme breeding  womb umbilical chord  embryo trimester midwife  growth spurt childhood  motor skills milk teeth constant adolescence puberty hormones  mood swing develop  lifestyle keratin elasticity cataracts neurodegenerative | heliocentric geocentric  Nicolaus Copernicus orbit  Ptolemy axis season  Poles eclipse hemisphere  ocean tides gravitational force black hole  Mass celestial  rocky planets gas planets  dwarf planet Moon  solar system astronomy universe Milky Way  expand Big Bang theory  phase orbit illuminate  waxing waning | Sir Isaac Newton gravity astronomy weight mass  Galileo Galilei air resistance opposing  streamlined parachute  water resistance streamlined up thrust buoyant sink friction  resistance Newton meter  Newton lever load pivot  fulcrum pulley mechanism  gear mesh rack and pinion  bevel gear | conductive magnetic durable transparent versatile thermal conduction molecules  degrees Celsius (℃) insulator hardness force iron steel stone  dissolve solute insoluble soluble solvent solute  solvent solution  substance saturation  pure substance mixture filtering sieving evaporation | pure substance solute  solvent solution evaporate  reversible mixture physical change melting evaporate  irreversible chemical change compare effervescence product  fair test variable control variable corrosion rusting  combustion fuel  oxygen extinguish smother  reaction predict acid  bicarbonate of soda  carbon dioxide | fertilisation, genes, sexual reproduction, pollination, pollen asexual, plantlet, bulb, tuber, bacteria  unborn, egg, hatch, fledgling, mammary gland  metamorphosis, larva, pupa, tadpole, butterfly  David Attenborough, natural sciences, documentary, naturalist, lecture Jane Goodall, chimpanzee, primatologist, primate, endangered |

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| **Year 6** | **Autumn Term 1** | **Autumn Term 2** | **Spring Term 1** | **Spring Term 2** | **Summer Term 1** | **Summer Term 2** |
| **Topic/theme** | **Animals including Humans** | **Electricity** | **Evolution and Inheritance** | **Light** | **Living Things and their Habitats** | **Looking after the Environment** |
| **Scientific**  **Enquiry** | Recording data and results of increasing  complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar  and line graphs  Taking measurements, using a range of  scientific equipment, with increasing accuracy  and precision, taking repeat readings when  appropriate  Identifying scientific evidence that has been  used to support or refute ideas or arguments  Planning different types of scientific enquiries  to answer questions, including recognising and  controlling variables where necessary  Reporting and presenting findings from  enquiries, including conclusions, causal  relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations | Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs  Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary  Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations  Using test results to make predictions to set up further comparative and fair tests  Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate | Planning different types of scientific enquiries  to answer questions, including recognising  and controlling variables where necessary.  Identify scientific evidence that has been used to support or refute ideas or arguments | Identifying scientific evidence that has been used to support or refute ideas or arguments  Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary  Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs  Reporting and presenting findings from enquiries,  including conclusions, causal relationships and  explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations | Recording data and results of increasing  complexity using scientific diagrams and  labels, classification keys tables, scatter graphs, and bar and line graphs.  Planning different types of enquiries to answer questions including recognising and  controlling variables where necessary  Identifying scientific evidence that has been  used to support or refute ideas or arguments  Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written forms  such as displays or other presentations,  identifying scientific evidence that has been  used to support or refute ideas  Grouping and classifying.  Record scientific data using diagrams | Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs  Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations  Identifying scientific evidence that has been used to support or refute ideas or arguments  Using test results to make predictions to set up further comparative and fair tests |
| **Biology** | Identify and name the main parts of the human circulatory system, and  describe the functions of the heart, blood vessels and blood  Describe the ways in which nutrients and water are transported within animals, including humans  Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function |  | 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 that offspring normally vary and are not  identical to their parents.  Find out about the work of paleontologists such as Mary Anning; recognise that living things have changed over time and that  fossils provide information about living things that inhabited the Earth millions of years ago. |  | Describe how living things are classified into  board 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 | Learn about climate change  Explore ways to reduce how much rubbish is sent to landfill  Explore ways to reduce  energy consumption  Explore what happens when fuels are burnt  Explore the outcomes of COP26  Compare data associated with the weather |
| **Chemistry** |  |  |  |  |  |  |
| **Physics** |  | Use recognised symbols when representing a simple circuit in a diagram  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 |  | 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 |  |  |
| **Key Vocabulary** | circulatory system atrium  ventricle vessel valves  vessel artery vein capillary microscope  blood plasma  platelet white blood cell  red blood cell absorb  diffusion osmosis  concentration nutrients  diet exercise heart rate  BPM pulse drug painkiller  stimulant depressant  hallucinogens | symbol circuit diagram battery wires electricity current voltage voltmeter  brightness blown resistor  variable resistor LED  dimmer switch  output variable fair test control test systematically  synchronised traffic light signal sensor timer-based closed electric circuit indicating  conductor insulator resistor | adaptation desert  cactus insulating  environment fossil  fossilisation evidence  dinosaur petrified  genetically modified crop  toxin resilience breeding  yield generation  species evolution  offspring DNA  Charles Darwin  habitat ancestor  natural selection  extinct Mary Anning  specimen prehistoric  Jurassic coast  palaeontologist | light eye light source symbol scientific diagram  reflected prediction fair test variable table  periscope angle mirror  line of sight utilise  shadow block  opaque transparent  translucent plan  sun shade real life problem rotate  direction optical  phenomena  disperse spectrum  refraction | Classify spore  micro-organism seed  similarities multicellular  unicellular kingdom  cell MRS GREN  Latin genus Carl Linnaeus class  Species vertebrate  cold-blooded amphibian  reptile mammal carbon dioxide microorganism  plant oxygen  microscopic  mycelium fungi  mushrooms yeasts  hyphae | weather climate prevent global warming  climate change  recycle landfill rubbish biodegrade council  net zero renewable  non-renewable greenhouse gases emissions  industrial revolution  fossil fuel coal combustion fuel  COP sustainability conference pledge subsidy species sensitive natural disaster habitat vulnerable |