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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 materialsExplore collections of materials with similar and or different propertiesTalk about what they see, using a wide vocabularyTalk 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 themKnow 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 themDescribe 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 vocabularyPlant seeds and care for growing plantsUnderstand the key features of the life cycle of a plantBegin 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 materialsExplore collections of materials with similar and or different propertiesTalk about what they see, using a wide vocabularyTalk 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 animalBegin to understand the need to respect and care for the natural environment and all living thingsTalk about what they see, using a wide vocabulary |  | **Reception**Explore the natural world around themDescribe what they see, hear and feel whilst outside | **3-4 years**Explore how things workUse all their senses in hands-on exploration of natural materialsExplore collections of materials with similar and or different propertiesTalk about what they see, using a wide vocabularyBegin 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 questionsIdentifying and classifyingPerforming simple tests | Identifying and classifyingUsing observationsand ideas to suggestanswers to questionsGathering and recordingdata to help in answering questionsReporting on findings fromenquiries, including oral and written explanations,displays or presentationsof results and conclusions. | Identifying and classifyingObserving closely, using simpleequipmentUsing observations and ideas to suggest answers to questionsAsking simple questions andrecognising that they can be answered in different waysGathering and recording data to helpin answering questions | Using observations and ideas to suggest answers to questionsPerforming simple testsGathering and recording data to helpin answering questions | Identifying differences, similarities or changes related to simple scientific ideas and processesObserving and recording, with some accuracyAsking simple questions and recognising that they can be answered in different waysPerforming simple testsUsing observations and ideas to suggest answers to questionsPerforming simple testsGathering and recording data to help in answering questionsIdentifying and classifying | Identifying and classifyingUsing observations and ideas to suggest answers to questionsGathering and recording data to help in answering questionsAsking 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 aliveIdentify and name a variety of plants and animals in their habitats, including microhabitatsDescribe how animals obtain theirfood from plants and other animals,using the idea of a simple food chain including microhabitats |  | Observe and describe how seeds and bulbs into mature plantsFind out and describe how plants need water, light and a suitable temperature to grow and stay healthyUnderstand the requirements ofplants for germination, growth and survival, as well as, the processes of reproduction andgrowth in plants | Identify that most living things live in habitats to which they are suitedDescribe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each otherIdentify 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 usesFind 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 essentialvital non-essential survivegrow healthyprotein carbohydrate dairy vitamins calciumfat balanced diet nutrients fresh food pre-cookedprocessed foodexercise strength flexibility balance coordinationhygiene prevent germs bacteria virus | life cycle grow surviveindependent adultfoetus womb helplesstoddler develop offspringinherit gene resembledifferences reproductionhatchling chick bar chartpredict caterpillartransformation larvachrysalis metamorphosisfrog amphibian frogspawntadpole froglet | Senses nutrition reproduce excrete respire habitatmicrohabitat fungisurvive shelter antennae suitable condition colony insect producer consumer herbivore carnivore omnivore food chain life cycle nutrients rot caterpillar automatedfrozen food forklift truckrefrigerated lorrycanned | seeds bulbs growth plant comparepredict investigate control experiment method photosynthesis carbon dioxide oxygen glucose energypollination life cycle germination reproduction seedlingmanure crop insulate thrive healthyforest desert adapt condition survive | seeds bulbs growth plant compare predict investigate control experiment methodphotosynthesis carbon dioxide oxygen glucose energy pollination life cycle germination reproduction seedlingmanure crop insulate thrive healthyforest desert adapt condition survive | habitat microhabitatorganism environment materainforest moisture extinct climate endangeredbiodiversity deforestation poaching pollution rainforestplankton ocean ecosystem coral reef trench Antarctic Arctic caribou narwhal tundraearthworm 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 questionsUsing straightforward scientific evidence to answer questions or to support their findingsReporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusionsRecording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tablesIdentifying differences, similarities or changes related to simple scientific ideas and processes | Reporting on findings from enquiries, including oral andwritten explanations, displays orpresentations of results and conclusionsUsing results to draw simple conclusions, make predictions fornew values, suggestimprovements and raise further questionsMaking systematic and careful observations and, whereappropriate, taking accuratemeasurements using standard units, using a range of equipment,including thermometers and data loggersIdentifying differences, similarities or changes related tosimple scientific ideas andprocesses | Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results andconclusionsMaking systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggersSetting up simple practical enquiries, comparative and fair testsRecording 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 questionsRecording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tablesReporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusionsIdentifying differences, similarities or changes related to simple scientific ideas and processes | Asking relevant questions and using different types of scientific enquiries to answer themSetting up simple practical enquiries, comparative and fair testsMaking systematic and careful observationsMaking systematic and careful observationsReporting on findings from enquiries, including oral and written explanations, displays orpresentations of results and conclusionsGathering, recording, classifying and presenting data in a variety of ways to help in answeringquestionsRecording findings using simple scientificlanguage, drawings, labelled diagrams, keys, bar charts, and tablesUsing 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 themMaking systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggersRecording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tablesGathering, recording, classifying and presenting data in a variety of ways to help in answering questionsIdentifying differences, similarities or changes related to simple scientific ideas and processesReporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusionsSetting 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 eatIdentify 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 flowersExplore 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 plantInvestigate the way in which water is transported within plantsExplore 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 propertiesDescribe 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 lightNotice that light is reflected from surfacesRecognise that light from the sun can be dangerous and that there are ways to protect their eyesRecognise that shadows are formed when the light from a light source is blocked by an opaque objectFind patterns in the way that the size of shadows changes. |  | How can a solar ovenbe made moreeffective: posingquestions, writingpredictions, recording and presenting results.Cleaning coins:writing a method andcarrying out apractical test, recording and presenting results.Making a cake: fairtesting, controls andvariables |
| **Key Vocabulary** | nutrition carbohydrateprotein vitamin mineralnutrition label portionenergy balanced dietvertebrate invertebrateendoskeleton exoskeleton hydrostatic skeletonhumerus ulnaradius tibia fibularendoskeleton vertebrateskull rib cage spinemuscle contracthamstrings biceps diaphragm | igneous rocks intrusive igneous rockextrusive igneous rockcrystals magmasedimentary rock metamorphic rocklimestone marble sandstoneweathering chemical weatheringphysical weatheringbiological weathering acid rain appearance texture submergederosion recedingfossil extinct sedimentembedded amberdecompose fragmentsclay soil chalky soil sandy soil | Force contact forcenon-contact forces air resistance frictionmotion surfaceresistance texturetilt magnet attractrepel bar magnet horseshoe magnetmagnetism magneticmagnetic field ironsteel non-contact forces magnetism attractnon-magnetic materials recycle compass magnetic needlemagnetic north direction orienteering | light sourcenatural artificial reflectvitamin D ultraviolet rayssunburn exposureprotectionfluorescent high visibilityreflective surfacematerials shadow opaquesundial rays blocksposition cast opposite direction lengthsize shapecloser further puppet | nutrients fertilisernursery potassium stunted chlorophyll stomata xylem photosynthesis UV lightxylem phloem absorb stomata transpiration anther stigma style filament reproductionpollination pollennectar seed dispersal pollinator germination vulnerable anchorsapling formation | solarrenewable energyscientific investigationprediction plausiblerecord resultsdata table graphacid alkali PHmethod practicalconclusion evidenceexplanation compare enquiry baking measurementsfair test control experiment variableconclusivescientific knowledgeequipment diagramcollated |

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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 observationsReporting on findings from enquiries, including oral and written explanationsRecording findings using simple scientific language, drawings, labelled diagrams,keys, bar charts, and tablesSetting up simple practical enquiries, comparative and fair testsUsing results to draw simple conclusions, make predictions for new values, suggestimprovements and raise further questions | Identifying differences, similarities or changes related to simple scientific ideas and processesReporting on findings from enquiries, including oral and written explanations,displays or presentations of results andconclusionsGathering, recording, classifying and presenting data in a variety of ways to help in answering questionsRecording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables | Identifying differences, similarities or changes related to simple scientific ideas and processesSetting up simple practical enquiries, comparative and fair testsMaking systematic and careful observations and, where appropriate, taking accurate measurementsusing standard units, using a range of equipment, including thermometers and data loggersRecording findings using simple scientific language, drawings, labelled diagrams, keys, barcharts, and tablesReporting on findings from enquiries, including oraland written explanations, displays or presentations of results and conclusions | Gathering, recording, classifying and presenting data in a variety of ways to help in answering questionsUsing straightforward scientific evidence to answer questions or to support their findingsMaking systematic and careful observations and, where appropriate, taking accuratemeasurements using standard units, using a range of equipment,including thermometers and data loggersRecording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tablesUsing 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 findingsReporting on findings from enquiries, including oral and written explanations, displays or presentations ofresults and conclusionsGathering, recording, classifying and presenting data in a variety of ways to help in answering questionsSetting up simple practical enquiries, comparative and fair testsMaking systematic and careful observations and, where appropriate, taking accurate measurementsusing standard units, using a range of equipment, including thermometers and data loggersInvestigate, record data, analysing data, presenting findings | Gathering, recording, classifying and presenting data in a variety of ways to help inanswering questionsUsing straightforward scientific evidence to answer questions or to support their findingsRecording findings using simple scientific language, drawings, labelled diagrams, keys,bar charts, and tablesReporting on findings from enquiries, including oral and written explanations, displays orpresentations of results and conclusionsMaking systematic and careful observations and, where appropriate, taking accuratemeasurements using standard units, using arange 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 waysExplore 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 gasesObserve 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 vibratingRecognise that vibrations from sounds travel through a medium to the earFind patterns between the pitch of a sound and features of the object that produced itFind patterns between the volume of a sound and the strength of the vibrations that produced itRecognise that sounds get fainter as the distance from the sound source increases |  | Identify common appliances that run on electricityConstruct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzersIdentify 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 batteryRecognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuitRecognise some common conductors and insulators, and associate metals with being good conductor |  |
| **Key Vocabulary** | digestive system oesophagus stomach small intestine large intestine saliva peristalsisabsorb liver gall bladderincisors canines molars jaw gum enamel plaque tooth decay cavity fluoride ecosystem producer consumer prey predator food web tundra hide interdependence threatened | habitat microhabitatconditionsadapted camouflagecoastal grasslandenvironmentclimate exposureclassify characteristicsvertebrateinvertebrate speciessub-groups identifycriteriaclassification keys organismadapted regionfeaturescolouring blubberecosystem oxygenisedflowering plantnon-flowering plantpond dipping | vibration mediumwaves eardrum signalssource energyparticles echo vacuummaterials reflectabsorb insulate defendersvolume decibelsdecibel metreamplitude powerpitch high pitchlow pitch instruments orchestra energy particlestravel sound source fade | matter solid liquidgas volume particle bondarranged cooled heatedparticle meltingmelting pointtemperature thermometerfreezing reverseboiling sublimation depositionevaporation condensation absorbwater vapour processwater cycle precipitationsurface runofftranspiration groundwater | electricity batteriesmains electricity appliance socketcircuit series circuitcomponent cell voltagecurrent powerbattery wire bulbconductor insulatormetal copper rubberswitch currentcontrol complete circuitincomplete circuitnon-renewable energy renewable energywind 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 complexityusing scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphsReporting 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 presentationsTaking measurements, using a range of scientificequipment, with increasing accuracy and precision, taking repeat readings when appropriateIdentifying 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 argumentsRecording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scattergraphs, bar and line graphs Using test results to make predictions to set up further comparative and fair testsReporting 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 argumentsTaking measurements, using a range ofscientific equipment, with increasing accuracy and precision, taking repeatreadings when appropriateReporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and adegree of trust in results, in oral and written forms such as displays and otherpresentationsPlanning different types of scientific enquiriesto answer questions, including recognisingand controlling variables where necessary | Reporting and presenting findings from enquiries, including conclusions, in oral and written formscausal relationshipsand explanations of and a degree of trust in results, Planning different types ofscientific enquiry to answer questions, including recognisingand controlling variables where necessaryIdentifying scientific evidence that has been used to support or refute ideas or argumentsUsing 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 necessaryTaking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriateRecording data and results of increasingcomplexity using scientific diagrams and labels, classification keys, tables, scatter graphs, barand line graphsReporting and presenting findings fromenquiries, including conclusions, causal relationships and explanations of and a degree oftrust in results, in oral and written forms such as displays and other presentationsUsing 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 presentationsPlan different types of scientific enquiries to answer questions, including controlling variables where necessaryRecording 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 animalsDescribe the differences in the life cycles of a mammal, an amphibian, an insect and a birdUnderstand 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 solutionDemonstrate that dissolving, mixing and changes of state are reversible changesExplain that some changes result in theformation 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 magnetsCompare and group together everyday materials based on evidence from comparative and fair tests, including their conductivity of heatGive reasons, based on evidence fromcomparative and fair tests, for the particular uses of everyday materials, including metals ,wood and plasticKnow that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solutionUse knowledge of solids, liquids and gases todecide how mixtures might be separated, including through filtering, sieving andevaporating |  |
| **Physics** |  | Describe the movement of the Earth and other planets relative to the sun in the solar systemDescribe the sun, Earth and moon as approximately spherical bodiesUse the idea of the Earth’s rotation to explain day and night and theapparent movement of the sun across the sky | Explain that unsupportedobjects fall towards the Earth because of the forceof gravity acting between the Earth and the fallingobjectIdentify the effects of airresistance, waterresistance and friction,that act between moving surfacesRecognise that somemechanisms including levers, pulleys and gearsallow a smaller force to have a greater effectRecognise that somemechanisms including levers, pulleys and gearsallow a smaller force tohave a greater effect |  |  |  |
| **Key Vocabulary** | foetus dependentadolescentpuberty reproducegestation pregnantduration extreme breedingwomb umbilical chordembryo trimester midwifegrowth spurt childhoodmotor skills milk teeth constant adolescence puberty hormonesmood swing developlifestyle keratin elasticity cataracts neurodegenerative | heliocentric geocentricNicolaus Copernicus orbitPtolemy axis seasonPoles eclipse hemisphereocean tides gravitational force black holeMass celestialrocky planets gas planetsdwarf planet Moonsolar system astronomy universe Milky Wayexpand Big Bang theoryphase orbit illuminatewaxing waning | Sir Isaac Newton gravity astronomy weight massGalileo Galilei air resistance opposingstreamlined parachutewater resistance streamlined up thrust buoyant sink frictionresistance Newton meterNewton lever load pivotfulcrum pulley mechanismgear mesh rack and pinionbevel gear | conductive magnetic durable transparent versatile thermal conduction moleculesdegrees Celsius (℃) insulator hardness force iron steel stonedissolve solute insoluble soluble solvent solutesolvent solutionsubstance saturationpure substance mixture filtering sieving evaporation | pure substance solutesolvent solution evaporatereversible mixture physical change melting evaporateirreversible chemical change compare effervescence product fair test variable control variable corrosion rustingcombustion fueloxygen extinguish smotherreaction predict acidbicarbonate of sodacarbon dioxide | fertilisation, genes, sexual reproduction, pollination, pollen asexual, plantlet, bulb, tuber, bacteriaunborn, egg, hatch, fledgling, mammary glandmetamorphosis, larva, pupa, tadpole, butterflyDavid 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 increasingcomplexity using scientific diagrams and labels, classification keys, tables, scatter graphs, barand line graphsTaking measurements, using a range ofscientific equipment, with increasing accuracyand precision, taking repeat readings whenappropriateIdentifying scientific evidence that has beenused to support or refute ideas or argumentsPlanning different types of scientific enquiriesto answer questions, including recognising andcontrolling variables where necessaryReporting and presenting findings fromenquiries, including conclusions, causalrelationships 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 graphsPlanning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessaryReporting 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 presentationsUsing test results to make predictions to set up further comparative and fair testsTaking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate | Planning different types of scientific enquiriesto answer questions, including recognisingand 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 argumentsPlanning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessaryRecording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphsReporting and presenting findings from enquiries,including conclusions, causal relationships andexplanations of and a degree of trust in results, in oral and written forms such as displays and other presentations | Recording data and results of increasingcomplexity using scientific diagrams andlabels, classification keys tables, scatter graphs, and bar and line graphs.Planning different types of enquiries to answer questions including recognising andcontrolling variables where necessaryIdentifying scientific evidence that has beenused to support or refute ideas or argumentsReporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written formssuch as displays or other presentations,identifying scientific evidence that has beenused 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 graphsReporting 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 presentationsIdentifying scientific evidence that has been used to support or refute ideas or argumentsUsing 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, anddescribe the functions of the heart, blood vessels and bloodDescribe the ways in which nutrients and water are transported within animals, including humansRecognise 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 livingthings 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 notidentical to their parents.Find out about the work of paleontologists such as Mary Anning; recognise that living things have changed over time and thatfossils provide information about living things that inhabited the Earth millions of years ago. |  | Describe how living things are classified intoboard groups according to common observablecharacteristics and based on similarities anddifferences, including micro-organisms, plantsand animalsGive reasons for classifying plants and animals based on specific characteristics | Learn about climate changeExplore ways to reduce how much rubbish is sent to landfillExplore ways to reduceenergy consumptionExplore what happens when fuels are burntExplore the outcomes of COP26Compare data associated with the weather |
| **Chemistry** |  |  |  |  |  |  |
| **Physics** |  | Use recognised symbols when representing a simple circuit in a diagramAssociate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuitCompare 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 linesUse the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eyeExplain that we see things becauselight travels from light sources to our eyes or from light sources to objects and then to our eyesUse the idea that light travels in straight lines to explain why shadowshave the same shape as the objects that cast them |  |  |
| **Key Vocabulary** | circulatory system atriumventricle vessel valvesvessel artery vein capillary microscopeblood plasmaplatelet white blood cellred blood cell absorbdiffusion osmosisconcentration nutrients diet exercise heart rateBPM pulse drug painkillerstimulant depressanthallucinogens | symbol circuit diagram battery wires electricity current voltage voltmeterbrightness blown resistorvariable resistor LEDdimmer switchoutput variable fair test control test systematicallysynchronised traffic light signal sensor timer-based closed electric circuit indicatingconductor insulator resistor | adaptation desertcactus insulatingenvironment fossilfossilisation evidencedinosaur petrifiedgenetically modified croptoxin resilience breedingyield generationspecies evolutionoffspring DNACharles Darwinhabitat ancestornatural selectionextinct Mary Anningspecimen prehistoricJurassic coastpalaeontologist | light eye light source symbol scientific diagramreflected prediction fair test variable tableperiscope angle mirrorline of sight utiliseshadow blockopaque transparenttranslucent plansun shade real life problem rotatedirection opticalphenomenadisperse spectrumrefraction | Classify sporemicro-organism seedsimilarities multicellularunicellular kingdomcell MRS GRENLatin genus Carl Linnaeus classSpecies vertebratecold-blooded amphibianreptile mammal carbon dioxide microorganismplant oxygenmicroscopicmycelium fungimushrooms yeastshyphae | weather climate prevent global warming climate changerecycle landfill rubbish biodegrade councilnet zero renewablenon-renewable greenhouse gases emissionsindustrial revolutionfossil fuel coal combustion fuelCOP sustainability conference pledge subsidy species sensitive natural disaster habitat vulnerable |