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Science Curriculum

		Term 1 Autumn 1	Term 2 Autumn 2	Term 3 Spring 1	Term 4 Spring 2	Term 5 Summer 1	Term 6 Summer 2
EYFS Mini Models	**Cycle 1**	**New Beginnings** **Goat Goes To Playgroup**	**Space** **Aliens Love Underpants**	**Farm** **Rosie's Walk**	**That's Not My ...**	**Growing** **Jasper's Beanstalk**	**Transport** **Dig, Dig, Digging**
	Cycle 2	**All About Me** **Heads, Shoulders, Knees and Toes**	**Animals/Pets** **Hairy Maclary**	**Traditional tales** **Three Little Pigs**	**Growing** **One Mole Digging a Hole**	**Jungle** **Dear Zoo**	**Colour** **Brown Bear, Brwon Bear What Do You See?**
		Knowledge and Understanding: Range 4 • Notices detailed features of objects in their environment • Enjoy playing with small world reconstructions, building on first-hand experiences, e.g. visiting farms, garages, train tracks, walking by a river or lake **Skills** • Can talk about some of the things they have observed such as plants, animals, natural and found objects					
EYFS Nursery	**Cycle 1**	**Me and My Community** **It's Okay To Be Different**	**Traditional Tales** **Gingerbread Man**	**Traditional tales** **Goldilocks & the Three Bears**	**Traditional Tales** **The Three Billy Goats Gruff**	**We're Going on a Bear Hunt**	**Nursery Rhymes Traditional**
	Cycle 2	**Traditional Tales-** **Jack & the Beanstalk**	**Traditional Tales** **Gingerbread Man**	**Farm (Fiction)** **Chicken Licken**	**Starry Night** **Owl Babies**	**Number Nursery Rhymes**	**Growing** **The Very Hungry Caterpillar**
		Knowledge and Understanding: Range 5 • Talks about why things happen and how things work • Developing and understanding of growth, decay and changes over time • Shows care and concern for living things and the environment • Begin to understand the effect their behavior can have on the environment **Skills** • Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world.					
EYFS Reception		**Me and My Community Feelings** **The Colour Monster** **The Worrysaurus**	**Once Upon a Time & Christmas** **The Jolly Postman** **The Jolly Christmas Postman**	**Me and My Community Diversity** **Pink is For Boys Included**	**Ready, Steady Cook!** **Little Red Hen** **The Runaway Pea**	**Starry Night** **How to Catch a** **Poems Out Loud!**	**Animal Safari** **A First Book of Animals** **Little Red and the Very Hungry Lion**
		Knowledge and Understanding: Range 6 • Looks closely at similarities, differences, patterns and changes in nature • Knows about similarities and differences in relation to places, objects, materials and living things • Talks about the features of their own immediate environment and how environment and how environments might vary from one another **Skill** • Makes observations of animals and plants and explain why some things occur, and talks about changes **ELG's** • know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.					

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		• understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. **Skills** • explore the natural world around them, making observations and drawing pictures of animals and plants.					
		Term 1	**Term 2**	**Term 3**	**Term 4**	**Term 5**	**Term 6**
				This Unit builds on the learning objective: look closely at similarities, differences, patterns and changes in nature in Reception class	This Unit builds on the learning objective: look closely at similarities, differences, patterns and changes in nature Reception class		
Y1		**Chemistry Everyday materials** **Knowledge and understanding** Distinguish between an object and the material which it is made Identify and name a variety of everyday materials, including wood, glass, plastic, metal, water and rock Describe the physical properties of materials Compare and group together a variety of everyday materials based on their properties **Skills** • **observe closely.** • **perform simple tests. identify and classify.** • **use observations and ideas to suggest answers to questions.** • **gather and record data to help in answering questions.** **Vocabulary** material: rock, glass, plastic, metal, wood, paper, fabrics, brick, elastic; property: hard/soft; stretchy/stiff; shiny/dull; rough/smooth; transparent/opaque; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent	**Seasons of the year** **Knowledge and understanding** Observe changes across the seasons Observe how day length changes observe and describe weather When will this happen? **Skills** • **observe closely.** • **perform simple tests. identify and classify.** • **use observations and ideas to suggest answers to questions.** • **gather and record data to help in answering questions.** **Vocabulary** **Season**, summer, winter, autumn, spring, day, daytime **Weather** wind, rain, snow, hail, sleet, fog, sun, hot, warm, cold	**Biology** **Animals, including humans** **Knowledge and understanding** Identify and name a variety of common animals (fish, birds, mammals, reptiles, amphibians) **(3 lesson)** Describe and compare the structure of common animals **(1 lesson)** Identify and name a variety of common animals that are carnivores, omnivores and herbivores compare animals **(1 lesson)** Identify, name and draw and label common body parts and say which parts of the body are associated with each sense **(1 lesson)** **Skills** • **ask simple questions.** • **observe closely, using simple equipment.** • **perform simple tests.** • **identify and classify.** • **use observations and ideas to suggest answers to questions. gather and record data to help in answering questions.** **Vocabulary** fish, bird, reptile, amphibian, mammal, pets; carnivore, omnivore, herbivore; senses: hearing, sight, tough, smell, taste; head, neck, arms, elbows, legs,	**Biology Plants** **Knowledge and understanding** Identify and name common and wild and garden plants, including deciduous and evergreen trees **(2-3 lessons)** Identify the basic structure of common flowering plants including trees **(1 - 2 lessons)** **Skills** • **ask simple questions** • **observe closely, using simple equipment.** • **perform simple tests. identify and classify.** • **use observations and ideas to suggest answers to questions.** • **gather and record data to help in answering questions.** **Vocabulary** Common/ wild plants, garden plants; plant, leaf, leaves, root, bud, flowers, blossom, petals, root, stem; tree, deciduous, evergreen, trunk, branches, leaf, root This unit will strengthen the child's understanding of Plants, particularly the conditions a plant needs to grow, as they move in Year 2	**Seasons of the year** **Knowledge and understanding** Observe changes across the seasons Observe how day length changes observe and describe weather When will this happen? **Skills** • **observe closely.** • **perform simple tests. identify and classify.** • **use observations and ideas to suggest answers to questions.** • **gather and record data to help in answering questions.** **Vocabulary** **Season**, summer, winter, autumn, spring, day, daytime **Weather** wind, rain, snow, hail, sleet, fog, sun, hot, warm, cold	

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				knees, face, ears, eyes, hair, mouth, teeth This unit will strengthen the child's understanding of human and animal skeletons and muscles in Year 3 It will also strengthen the child's understanding of the classification of animals in Year 4			

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		This Unit builds on the Unit Everyday Materials in Year1	This Unit builds on the Animals, including humans unit in Year 1 (common animal groups and body parts)	This Unit builds on the unit about plants in Year 1 (plant growth and requirements for growth)	This unit builds on the Year 1 unit Animals, including Humans unit (identifying common animal groups)	
Y2		**Chemistry** **Use of everyday materials** **Knowledge and Understanding** Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses **(2 lessons)** Find out how the shapes of solid objects made from some materials can be changes by squashing, bending, twisting and stretching **(2 lessons)** **Skills** • **observe things using simple equipment.** • **identify and classify.** • **perform simple tests.** • **use observations and ideas to suggest answers to questions.** • **gather and record data to help in answering questions.** **Vocabulary** Wood – matches, floors, telegraph poles, metal – coins, cans, cars, table legs, plastic, glass, brick, rock, paper, cardboard, squashing, bending, twisting, stretching This unit will strengthen the child's understanding of magnetic materials in Year 3 and materials that conduct electricity in Year 4	**Biology** **Animals including humans** **Knowledge and Understanding** Notice that animals have offspring that grow into adults **(1 lesson)** Find out about and describe the basic needs of animals including humans for survival **(2 lessons)** Describe the importance for humans of exercise, eating the right amounts of the different types of food and hygiene **(2 lessons)** **Skills** • **observe things using simple equipment.** • **identify and classify.** • **perform simple tests.** • **use observations and ideas to suggest answers to questions.** • **gather and record data to help in answering questions.** **Vocabulary** offspring, grow, adults, nutrition, reproduce, baby, toddler, child, teenager, adult; egg, chick, chicken; egg, caterpillar, pupa, butterfly; spawn, tadpole, frog; lamb, sheep, survival, water, food, air, exercise, hygiene This unit will strengthen the child's understanding of human and animal skeletons and nutrition in the Animals, including humans topic in Year 3	**Biology Plants** **Knowledge and Understanding** Observe and describe how seeds and bulbs grow into mature plants **(1 lesson)** Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy **(2- 3 lessons**) **Skills** • **observe closely.** • **perform simple tests. identify and classify.** • **use observations and ideas to suggest answers to questions.** • **gather and record data to help in answering questions.** **Vocabulary** seed, bulb, germination, light, water, suitable temperature, grow, healthy, reproduction, stem, root, leaves, flowers This unit will strengthen the child's understanding of plants in Year 3 (functions of the parts, lifecycle of a plant)	Biology Living things and their habitats **Knowledge and Understanding** 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 animals in their habitats including micro-habitats Describe how animals obtain their food from other plants and animals using the idea of a simple food chain and identify and name different sources of food **Skills** • **observe closely.** • **perform simple tests.** • **identify and classify.** • **use observations and ideas to suggest answers to questions.** • **gather and record data to help in answering questions.** **Vocabulary** living, dead, never alive, habitats, micro-organisms, food, food chain, healthy, shelter, woodland, ocean, rainforest, seashore, conditions hot/warm/cold, dry/damp/wet, bright/shade/dark This unit will the strengthen the children's understanding in their work in Year 5 Animals, Including Humans (recognizing the effects of changing environments on living things)	

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			This Unit builds on	This Unit builds on	This Unit builds on the work on Plants in Year 2	This unit build on the Year 2 Unit Animals, including Humans (food groups, exercise in humans)
Y3	**Physics Forces and magnets** **Knowledge and Understanding** 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, predict whether two magnets will attract or repel each other depending on which poles are facing Predict whether two magnets will attract or repel each other, depending on which poles are facing. **Skills** • **ask relevant questions and use different types of scientific enquiries to answer them.** • **set up simple practical enquiries, comparative and fair tests.** • **make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment including thermometers and data loggers.** • **gather, record, classify and present data in a variety of ways to help in answering questions.** • **record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.** • **use results to draw simple conclusions, make predictions for new**		**Chemistry Rocks** **Knowledge and Understanding** Compare and group together different types of rocks based on their appearance and simple physical properties **(2 lessons)** Describe in simple terms how fossils are formed when things that have lived are trapped within rock **(1 lesson)** Recognise that soils are made from rocks and organic matter **(1 lesson)** **Skills** • **ask relevant questions and use different types of scientific enquiries to answer them.** • **set up simple practical enquiries, comparative and fair tests.** • **make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment.** • **gather, record, classify and present data in a variety of ways to help in answering questions.** • **report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.** **Vocabulary** appearance, properties, hard/soft dull/shiny rough/smooth absorbent/not absorbent fossils sedimentary rock soils organic matter	**Physics Light** **Knowledge and Understanding** Recognise that they need light to see things and that dark is the absence of light **(1 lesson)** Notice that light is reflected from surfaces **(1 lesson)** Recognise that light from the sun is dangerous and that there are ways to protect their eyes **(1 lesson)** Recognise that shadows are formed when the light from a light source is blocked by an opaque object **(1 lesson**) Find patterns in the way that the size of shadows change **(1 lesson)** **Skills** • **set up simple practical enquiries, comparative and fair tests.** • **make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment including thermometers and data loggers.** • **report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.** **use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions** **Vocabulary** Light, see, dark, reflect, surface, natural, star, Sun, Moon, shadow, blocked, solid, artificial, torch, candle, lamp, sunlight, dangerous, protect eyes This Unit will strengthen the child's understanding of Light in Year 6	**Biology Plants:** **Knowledge and Understanding** Identify and describe the functions of different parts of flowering plants Explore the requirements of plants for life and growth (air, light, water, nutrients from sol, 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 lifecycle of plants, including pollination, seed formation and seed dispersal **Skills** • **ask relevant questions and use different types of scientific enquiries to answer them.** • **set up simple practical enquiries, comparative and fair tests.** • **make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment including thermometers and data loggers.** • **gather, record, classify and present data in a variety of ways to help in answering questions.** • **record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.** • **report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.** • **use results to draw simple conclusions, make predictions** **for new values, suggest improvements and raise further questions** **Vocabulary** **Structure** flowering plants, roots, stem/trunk, leaves, **Function** nutrition, support, reproduction, makes its own food	**Biology** **Animals, including humans:** **Knowledge and Understanding** 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 **Skills** • **set up simple practical enquiries, comparative and fair tests.** • **make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment including thermometers and data loggers.** • **report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.** **use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions** **Vocabulary** nutrition, diet, vitamins, minerals, fat, protein, carbohydrates, fibre, water, skeletons, support, protection, , joints, bones, muscles, relax, contract This unit will strengthen the children's understanding of the human body as they complete learning in Year 4 (Digestion and Teeth), and Year 6 (Circulatory System/ impact of exercise, drugs)

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	values, suggest **Vocabulary** force, push, pull, open, surface, magnet, magnetic, repel, attract, magnetic poles, North, South				**Requirements for life and growth** air, light, water, nutrients from soil, room to grow, needs vary, fertilizer **Life cycle** flowers pollination, seed formation, seed dispersal This Unit will strengthen the child's understanding of Plants in Year 5)	

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			This unit will build on the Use of Everyday Material units in Year 2	This Unit builds on the unit Animals, including humans in Year 1 (common groups of animals) It also builds on the Year 2 learning (food chains)	This unit builds on the Year 2 Unit Uses of everyday material	This unit builds on the Year 3 Unit Animals, including humans (nutrition, skeleton, muscles)
Y4	•	**Physics Sound** **Knowledge and Understanding** 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 **Skills** • **asking relevant questions and using different types of scientific enquiries to answer them** • **setting up simple practical enquiries, comparative and fair tests** • **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** • **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** • **using straightforward scientific evidence to answer questions or to support their findings.** **Vocabulary** sound, vibrate, vibrations, pitch, volume, air, sound waves, ear, faint, loud, high, low	**Physics Electricity** **Knowledge and Understanding** Identify common appliances that run on electricity **(1 lesson)** Construct a simple series electrical circuit, identifying its main parts **(1 lesson**) 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 **(1 lesson)** Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit **(1 lesson)** Recognise some common conductors and insulators and associate metals with being good conductors **(1 lesson)** **Skills** • **asking relevant questions and using different types of scientific enquiries to answer them** • **setting up simple practical enquiries** • **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** • **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** • **using straightforward scientific evidence to answer questions or to support their findings.** **Vocabulary**	Biology Living things and their habitats **Knowledge and Understanding** Recognise that living things can be grouped in a variety of ways **(2 lessons)** Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment **(1- 2 lessons)** Recognise that environments can change and that this can sometimes pose dangers to living things **(1 lesson)** Construct and interpret a variety of food chains identifying produces, predators and prey **(1 lesson)** **Skills** • **asking relevant questions and using different types of scientific enquiries to answer them** • **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** • **using straightforward scientific evidence to answer questions or to support their findings.** **Vocabulary** characteristics, classification key, vertebrate, mammal, bird, amphibian, reptile, fish, invertebrates, snails, slugs, worms, spiders, insects, environment, endangered, extinct, positive impact, negative impact, flowering plants, non-flowering plants This unit will strengthen the child's understanding of classification, when they complete the Living Things and	**Chemistry** **States of matter** **Knowledge and Understanding** 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 Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature **Skills** • **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 and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers** • **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** • **using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions** • **identifying differences, similarities or changes**	**Biology** **Animals, including humans** Describe the simple functions of the basic parts of the digestive system Identify the different types of teeth and their simple functions **Skills** • **asking relevant questions and using different types of scientific enquiries to answer them** • **setting up simple practical enquiries, comparative and fair tests** • **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** • **using straightforward scientific evidence to answer questions or to support their findings.** **Vocabulary** human digestive system, mouth, tongue, teeth, oesophagus, saliva, colon, liver, stomach, acid, enzymes, small intestine, large intestine; teeth: canines, incisors, molars, premolars; enamel, dentine, pulp, gum; food chain, producer, Sun predator, prey, carnivore, herbivore

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			electricity appliance mains, battery, electrical circuit, battery, bulb, wires, switch, buzzer, insulator, conductor This Unit will strengthen the child's understanding of Electricity taught in Year 6	their Habitat unit in Year 6	**related to simple scientific ideas and processes** • **using straightforward scientific evidence to answer questions or to support their findings.** **Vocabulary** solid, liquid, gas; evaporation, condensation. water cycle; thermometer, temperature, degrees Celsius (ºC) melt, freeze, evaporate, condense, water vapour container, heated, heat, cooled, cool This unit will strengthen the children's understanding of states of matter in their Year 5 Topic Properties and changes of materials	

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	This unit builds on the Year 4 Unit Changing State	This unit builds on the Year 3 Unit Light (sun and shadows)	This Unit builds on the Year 2 Unit Animals, including humans (animals have offspring) It also builds on the Year 3 Plants topic (plant lifecycle)	This unit builds on the Year 4 Unit Living Things and their Habitats (Classification of animals) Year 3 unit Plants	This unit builds on the Year 3 unit Magnets and Forces
Y5	**Chemistry** **Properties and changes of materials** **Knowledge and Understanding** Compare and group together everyday materials on the basis of their properties and response to magnets 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 describe how mixtures might be separated Give reasons based on evidence from comparative and fair tests for the particular uses of everyday materials Demonstrate that dissolving, mixing and changes of state are reversible changes Explain that come 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 **Skills** ▪ **planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary** • **take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate** • **record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs** • **use 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 degree of trust in results, in oral and written forms such as displays and other presentations** • **identify scientific evidence that has been used to support or refute ideas or arguments.** **Vocabulary** soluble, separate, separation, conductor, transparent, magnetic, solution, sieving, evaporating, evaporation, filtration, filtering, dissolving, mixing, melting, burning reversible, irreversible changes liquid	**Physics** **Earth and Space** **Knowledge and Understanding** Describe the sun, earth and moon as an approximate spherical bodies **(1 lesson)** Describe the movement of the earth and other planets relative to the sun in the solar system **(1 lesson)** Describe the movement of the moon relative to the earth **(1 lesson)** Use the idea of the earth's rotation to explain day and night and the apparent movement of the sun across the sky (**1 lesson)** **Skills** • **plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.** • **take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.** • **use test results to make predictions to set up further comparative and fair tests.** • **report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.** **identify scientific evidence that has been used to support or refute ideas or arguments.**	**Biology** **Animals, including Humans** **Knowledge and Understanding** Describe the changes as humans develop to old age: babies, puberty, old age **(4 lesson)** End of unit **assessment (1 lesson)** **Skills** • **plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.** • **take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.** • **use test results to make predictions to set up further comparative and fair tests.** • **report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.** • **identify scientific evidence that has been used to support or refute ideas or arguments.** **Vocabulary** human development baby, toddler, child, teenager, adult, puberty, gestation, length, mass, grows, grow, growing This Unit will strengthen the child's understanding Reproduction when they move into Year 7	**Biology Living things and their habitats** **Knowledge and Understanding** Describe the differences in the lifecycles of a mammal, amphibian, insect and a bird **(3 lessons)** Describe the life process of reproduction in some plants and animals **(2 lessons)** **Skills** • **plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.** • **take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.** • **use test results to make predictions to set up further comparative and fair tests.** • **report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.** • **identify scientific evidence that has been used to support or refute ideas or arguments.** **Vocabulary** mammal, amphibian, insect, bird, Reproduction Lifecycle, Plants, animals, Sexual/asexual plants •	**Physics Forces** **Knowledge and Understanding** 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 **Skills** • **plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.** • **record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.**

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		Vocabulary Earth, Sun, Moon, planets, star, solar system, rotate, orbit, axis, heat, eclipse, satellite, solar, celestial body, spherical, sphere, day, night, light, universe • This unit will strengthen the child's understanding of the Earth and atmosphere as they move into Year 7			

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	This unit builds on the Year 3 unit Animals including humans (skeleton and muscles	This unit builds on the unit Light and shadows in Year 3	This Unit builds on the unit of Electricity taught in Year 4.	This unit builds on the unit of Living Things and their Habitats taught in Year 4.		This Unit builds on the unit builds on the Year 5 unit
Y6	**Biology** **Animals including humans** **Knowledge and Understanding** Identify and name the main parts of the human circulatory system and describe the functions of the heart, blood vessels and blood Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function Describe the ways in which nutrients and water are transported within animals including humans **Skills** • **plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.** • **take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.** • **record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. use test results to make predictions to set up further comparative and fair tests.** • **report and present findings from enquiries, including conclusions, causal relationships and explanations of and 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.** **Vocabulary** Human internal organs: heart, lungs, liver, kidney, brain, skeletal, skeleton, muscle, muscular, digest, digestion, digestive, Human circulatory system, heart,	**Physics Light** **Knowledge and Understanding** 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 object that cast them **Skills** • **plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.** • **take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.** • **record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.** • **use test results to make predictions to set up further comparative and fair tests. report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.** • **identify scientific evidence that has been used to support or refute ideas or**	**Electricity** **Knowledge and Understanding** Use recognised symbols when representing a simple circuit in a diagram **(Lesson 1)** Associate the brightness of a lamp or the volume of a buzzer with a the number and voltage of cells used in a circuit **(Lesson 2)** 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 **(Lesson 3 & 4)** **Skills** • **plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.** • **take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.** • **record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.** • **use test results to make predictions to set up further comparative and fair tests. report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.** **identify scientific evidence that has been used to support or refute ideas or arguments.** **Vocabulary** electricity appliance • mains, battery, cell, electrical	**Biology** **Living things and their habitats** **Knowledge and Understanding** Describe how living things are classified in to broad groups according to common observable characteristics and based on similarities and differences including micro-organisms, plants and animals **(3 lessons)** Give reasons for classifying plants and animals based on specific characteristics **(2 lessons)** **Skills** • **plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.** • **take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.** • **record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. use test results to make predictions to set up further comparative and fair tests.** • **report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.** **identify scientific evidence that has been used to support or refute ideas or arguments.** **Vocabulary** classification, classify, characteristics, group, plants, animal vertebrates: fish, birds, mammals, reptiles, amphibians; invertebrates: insects, spiders, snails, worms; micro-organisms		**Biology** **Evolution and inheritance** **Knowledge and Understanding** Recognise that living things have changed over time and that fossils provide information about living things that inhabited the earth millions of years ago Recognise that living things produce offspring of the same kind but normally offspring vary and are not identical to their parents Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution **Skills** **identify scientific evidence that has been used to support or refute ideas or arguments.** **Vocabulary** Evolution, adaptation, inherited traits, adaptive traits, natural selection, inheritance, DNA, genes, variation, parent, offspring, fossil, environment, habitat, fossilisation, plants, animals, living things This unit will strengthen the child's understanding of Genetics and evolution as the children move into Year 7.

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	blood, vessels, blood, diet, exercise, drugs, alcohol, substances, lifestyle, nutrients, water,	**arguments.** **gather and record data to help in answering questions.** • **identify scientific evidence that has been used to support or refute ideas or arguments.** **Vocabulary** Light, see, dark, reflect, surface, natural, star, Sun, Moon, shadow, blocked, solid, artificial, torch, candle, lamp, sunlight, dangerous, protect eyes	circuit, battery, bulb, wires, motor, switch, buzzer, voltage, brightness, volume. This unit will strengthen the child's understanding of Electricity and Electromagnetism as they move into Year 7.	This unit will strengthen the child's understanding of Relationships in a an ecosystem)Interactions and Interdependencies0 as they move into Year 7		

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		Physics Light **Knowledge and Understanding** 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 object that cast them **Skills** • **plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.** • **take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.** • **record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.** • **use test results to make predictions to set up further comparative and fair tests. report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.** • **identify scientific evidence that has been used to support or refute ideas or arguments.** **gather and record data to help in answering questions.** • **identify scientific evidence**				

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