

Nursery	EARLY YEARS AUTUMN	EARLY YEARS SPRING	EARLY YEARS SUMMER
	CL	CL & UW	UW
	<ul style="list-style-type: none"> ● Pay attention to more than one thing at a time, which can be difficult. ● Use a wider range of vocabulary. ● Understand a question or instruction that has two parts ● Understand 'why' questions ● Use longer sentences of four to six words. ● Be able to express a point of view and to debate when they disagree with an adult or a friend, using words as well as actions. ● Use talk to organise themselves and their play 	<ul style="list-style-type: none"> ● Pay attention to more than one thing at a time, which can be difficult. ● Use a wider range of vocabulary. ● Understand a question or instruction that has two parts ● Understand 'why' questions ● Use longer sentences of four to six words. ● Be able to express a point of view and to debate when they disagree with an adult or a friend, using words as well as actions. ● Use talk to organise themselves and their play ● 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. ● Plant seeds and care for growing plants. ● Understand the key features of the life cycle of a plant and an animal. ● Begin to understand the need to respect and care for the natural environment and all living things. ● Explore and talk about different forces they can feel. ● Talk about the differences between materials and changes they notice. 	<ul style="list-style-type: none"> ● 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. ● Plant seeds and care for growing plants. ● Understand the key features of the life cycle of a plant and an animal. ● Begin to understand the need to respect and care for the natural environment and all living things. ● Explore and talk about different forces they can feel. ● Talk about the differences between materials and changes they notice.

Reception	EARLY YEARS AUTUMN	EARLY YEARS SPRING	EARLY YEARS SUMMER
	CL & UW	CL & UW	UW
	<ul style="list-style-type: none"> ● Pay attention to more than one thing at a time, which can be difficult. ● Use a wider range of vocabulary. ● Understand a question or instruction that has two parts ● Understand 'why' questions ● Use longer sentences of four to six words. ● Be able to express a point of view and to debate when they disagree with an adult or a friend, using words as well as actions. ● Use talk to organise themselves and their play ● Use all their senses in hands-on exploration of natural materials. ● Explore collections of materials with similar and/or different properties. 	<ul style="list-style-type: none"> ● Understand how to listen carefully and why listening is important. ● Learn new vocabulary. ● Use new vocabulary through the day. ● Ask questions to find out more and to check they understand what has been said to them. ● Articulate their ideas and thoughts in well-formed sentences. ● Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. ● Explore the natural world around them. ● Describe what they see, hear and feel whilst outside. ● Recognise some environments that are different to the 	<ul style="list-style-type: none"> ● Explore the natural world around them, making observations and drawing pictures of animals and plants. ● 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. ● Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

	<ul style="list-style-type: none"> • 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 and an animal. • Begin to understand the need to respect and care for the natural environment and all living things. • Explore and talk about different forces they can feel. • Talk about the differences between materials and changes they notice. 	<ul style="list-style-type: none"> • one in which they live. • Understand the effect of changing seasons on the natural world around them. 	
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	AUTUMN TERM	SPRING TERM	SUMMER TERM
YEAR 1	<i>Animals Including human & Seasonal changes</i>	<i>Materials and their properties & Seasonal changes</i>	<i>Plants & Seasonal changes</i>
Science Strand	<i>Biology</i>	<i>Chemistry</i>	<i>Biology</i>
Working Scientifically	I ask simple scientific questions. I use simple equipment to make observations. I carry out simple tests. I identify and classify things. I suggest what I have found out from observations. I can gather and record data. I use simple data to answer questions		
N.C skills	<ul style="list-style-type: none"> • 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) • Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. • Observe changes across the four seasons • Observe and describe weather associated with the seasons and how day length varies. 	<ul style="list-style-type: none"> • 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. • Observe changes across the four seasons • Observe and describe weather associated with the seasons and how day length varies. 	<ul style="list-style-type: none"> • 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. • Observe changes across the four seasons • Observe and describe weather associated with the seasons and how day length varies.
Vocabulary	Fish, amphibian, reptile, bird, mammal, common names of fish, amphibians, reptiles, birds, mammals, head, face, ears, hair, eyes, nose, mouth, teeth, cheek, chin, neck, body, arms, hands, fingers, paws, fins, wings, legs, feet, toes, tail, skin, scales, fur, feathers, herbivore, carnivore, omnivore, see, look, hear, listen, touch, feel, taste and smell Spring, Summer, Autumn, Winter, day, night, light, dark, sunrise, sunset, sun, rain, snow, hail, precipitation, wind, cloud, cloud cover, deciduous and evergreen tree.	Wood, plastic, glass, metal, water, rock, brick, paper, card, rubber, fur, fleece, cotton, wool, polyester and cotton wool. Names of common objects made from these materials e.g. door, building block, window, pencil sharpener, teddy etc. Soft, hard, rough, smooth, stretchy, stiff, shiny, dull, flexible, waterproof, absorbent, opaque, transparent and translucent. Spring, Summer, Autumn, Winter, day, night, light, dark, sunrise, sunset, sun, rain, snow, hail, precipitation, wind, cloud, cloud cover, deciduous and evergreen tree.	Leaves, flowers, blossom, petals, fruit, roots, bulb, seed, trunk, branches, stem Spring, Summer, Autumn, Winter, day, night, light, dark, sunrise, sunset, sun, rain, snow, hail, precipitation, wind, cloud, cloud cover, deciduous and evergreen tree.
Enrichment			

Key skills and knowledge

- Identify and name a variety of animals (fish, amphibians, reptiles, birds and mammals).
- Classify and name animals by what they eat (carnivores, herbivores and omnivores).
- Know how to sort living and non-living things.
- Describe and compare the structure of a variety of common animals.
- Identify, name, draw and label the basic parts of the human body and link it to each sense feature

- Distinguish between an object and the material it is made from.
- Know the material that an object is made from.
- Know the difference between wood, plastic, glass, metal, water and rock.
- Know the properties of everyday materials.
- Group objects based on the material they are made from.

- Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.
- Identify and name the basic structure of a plant (stem, petal, leaves and roots).
- Identify and name the basic structure of a tree (roots, trunk, branches and leaves of a tree)

	AUTUMN TERM	SPRING TERM	SUMMER TERM
YEAR 2	<i>Animals including humans</i>	<i>Materials and their properties & Living things and their habitats</i>	<i>Plants</i>
Science Strand	<i>Biology</i>	<i>Biology/Chemistry</i>	<i>Biology</i>
Working Scientifically	Ask simple scientific questions. Use simple equipment to make observations. Carry out simple tests. Identify and classify things. Suggest what I have found out. Use simple data to answer questions. Gather and record data.		
N.C skills	Notice that animals, including humans, have offspring which grow into adults 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.	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. Explore and compare the differences between things that are living, dead, and things that have never been alive Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other Identify and name a variety of plants and animals in their habitats, including microhabitats Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.	Observe and describe how seeds and bulbs grow into mature plants Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.
Vocabulary	Reproduce, offspring, grow, adults (fish, amphibian, reptile, bird, mammal, humans), survival, water, food, air, shelter, exercise, fit, healthy, food, fruit, vegetables, meat, fish, eggs, nuts, pulses, beans, milk, cheese, bread, pasta, rice, butter, vegetable oil, olive oil. common names of fish, amphibians, reptiles, birds, mammals including pets and those found in the local environment, common structure of animals and humans including: head, face, ears, hair, eyes, nose, mouth, teeth, cheek, chin, neck, body, arms, hands, fingers, paws, fins, wings, legs, feet, toes, tail, skin, scales, fur, feathers , herbivore, carnivore, omnivore	Wood, plastic, glass, metal, water, rock, brick, paper, card, rubber, fur, fleece, cotton, wool, polyester, cotton wool, words to describe why certain materials are suitable for particular uses e.g. soft, hard, rough, smooth, stretchy, stiff, shiny, dull, flexible, waterproof, absorbent, opaque, transparent, translucent, squash, bend, twist, stretch Living, dead, non-living, habitat, micro habitat, food chain, field, hedgerow, pond, woodland, seashore, ocean, rainforest, Arctic, desert, air, food, water, shelter, heat, warmth, sun	Seeds, bulbs, grow, healthy, water, light, temperature, soil, nutrients, leaves, flowers, blossom, petals, fruit, roots, trunk, branches, stem, names of plants in their local environment for example grass, clover, daisy, buttercup, dandelion, oak, holly, daffodil, tulip etc. and plants we grow to eat such as lettuce, tomatoes, cucumber, radish, herb etc.
Enrichment			

Key skills and knowledge

- Explain the basic stages in a life cycle of offspring for animals, including humans.
- Describe what animals and humans need to survive (water, food and air).
- Describe why exercise, a balanced diet and good hygiene are important for humans.

- Identify and name a range of materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard.
- Suggest why a material might or might not be used for a specific job by comparing the suitability of everyday materials.
- Explore how shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.
- Identify, explore and compare differences between things that are living, dead and never lived.
- Describe how a specific habitat provides for the basic needs of things living there (plants and animals).
- Identify and name plants and animals in a range of habitats.
- Match living things to their habitat (plants and animals).
- Describe how animals find their food.
- Name some different sources of food for animals.
- Explain a simple food chain.

- Observe and describe how seeds and bulbs grow into plants.
- Describe what plants need in order to grow and stay healthy (water, light & suitable temperature).

	AUTUMN TERM	SPRING TERM	SUMMER TERM
YEAR 3	<i>Animals including humans/Forces and magnets</i>	<i>Light/Plants</i>	<i>Plants/Rocks</i>
Science Strand	<i>Biology/Physics</i>	<i>Physics/Biology</i>	<i>Biology/Chemistry</i>
Working Scientifically	<p>Ask relevant scientific questions. Use observations, different types of scientific enquiries and knowledge to answer scientific questions. Set up a simple enquiry to explore a scientific question. Set up a comparative test to compare two things. Set up a fair test and explain why it is fair. Make careful and accurate observations, including the use of standard units. Use equipment, including thermometers and data loggers to make accurate measurements using standard units. Gather, record, classify and present data in different ways to answer scientific questions. Use diagrams, keys, bar charts and tables; using scientific language. Use findings to report in different ways, including oral and written explanations, presentation. Draw simple conclusions and suggest improvements and raise further questions. Make a prediction with a reason. Identify differences, similarities and changes related to an enquiry and process. Use straightforward scientific evidence to answer questions or to support my findings</p>		
N.C skills	<ul style="list-style-type: none"> 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. 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 	<ul style="list-style-type: none"> 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 Recognise that they need light in order to see things and that dark is the absence of <ul style="list-style-type: none"> light Notice that light is reflected from surfaces Recognise that light from the sun can be dangerous and that there are ways to protect <ul style="list-style-type: none"> their eyes Recognise that shadows are formed when the light from a light source is blocked by <ul style="list-style-type: none"> an opaque object Find patterns in the way that the size of shadows changes 	<ul style="list-style-type: none"> 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 Compare and group together different kinds of rocks on the basis of their appearance <ul style="list-style-type: none"> and simple physical properties Describe in simple terms how fossils are formed when things that have lived are <ul style="list-style-type: none"> trapped within rock Recognise that soils are made from rocks and organic matter.
Vocabulary	Humans, food, feeding, balanced, diet, meat, fish, eggs, nuts, pulses, beans, cereal, fruit, vegetables, dairy products, milk, cheese, butter, potatoes, bread, rice, pasta, vitamins, minerals, fish, amphibian, reptile, bird, mammal, skeleton, skull, ribs, spine (backbone), joints, support, muscles Force, contact, non-contact, move, surface, material, carpet, tiles, wood, lino, bubble wrap, sandpaper, fleece, polythene, towel, magnet, magnetic, magnetic field, bar, horseshoe, ring, strength, strong, weak, metal, coated,, attract, repel, poles, north, south	See, eyes, light, dark, absence, light sources, Sun, dangerous, lamp, flame, torch, light bulb, day, night, light, dark, dim, sunrise, sunset, dusk, reflect, reflection, reflected, shadows, size, shape, pattern Leaves, flowers, blossom, petals, fruit, roots, bulb, seed, trunk, branches, stem, stigma, style, anther, air, light, water, nutrients, soil, transport, seed, seedling, bulb, compost, decay, die, fruit, moisture, ovary, ovule, pollen, pollination, seed formation, dispersal, reproduce	Leaves, flowers, blossom, petals, fruit, roots, bulb, seed, trunk, branches, stem, stigma, style, anther, air, light, water, nutrients, soil, transport, seed, seedling, bulb, compost, decay, die, fruit, moisture, ovary, ovule, pollen, pollination, seed formation, dispersal, reproduce Rocks, granite, limestone, sandstone, fossil, soil, sandy, peat, decay, compost, soft, hard, rough, smooth, stiff, shiny, dull, waterproof, absorbent, opaque, transparent, translucent, texture
Enrichment			

Key skills and knowledge

- Explain the importance of a nutritious, balanced diet..
- Identify that animals including humans cannot make their own food.
- Describe and explain the skeletal system of a human.
- Describe and explain the muscular system of a human (support, protection and movement).
- Describe the purpose of the skeleton in humans and animals.
- Explore and describe how objects move on different surfaces.
- Explain how some forces require contact and some do not, giving examples.
- Explore and explain how objects attract and repel in relation to objects and other magnets.
- Predict whether objects will be magnetic and carry out an enquiry to test this out.
- Describe how magnets work.
- Predict whether magnets will attract or repel and give a reason.

- Describe what dark is (the absence of light).
- Explain that light is needed in order to see things.
- Explain that light is reflected from a surface.
- Explain and demonstrate how a shadow is formed from a light source being blocked by an opaque object.
- Explore shadow size and explain.
- Explain the danger of direct sunlight and describe how to keep protected.
- Identify, describe the function of different parts of flowering plants and trees (roots, stem/trunk, leaves and flowers).
- Explore and describe the needs of different plants for survival (air, light, water, nutrients from soil and room to grow).

- Investigate, explore and describe how water is transported within plants Describe the plant life cycle, especially the importance of flowers.
- Explore the part of flowers that play in the life cycle of flowering plants (pollination, seed formation and seed dispersal).
- Compare and group rocks based on their appearance and physical properties, giving a reason.
- Describe how fossils are formed when things that have lives are trapped within rock.
- Describe how soil is made from rocks and organic matter.
- Describe and explain the difference between sedimentary and igneous rock.

	AUTUMN TERM	SPRING TERM	SUMMER TERM
YEAR 4	<i>Animals including humans/Electricity</i>	<i>Sound/States of matter</i>	<i>Living things and their habitats</i>
Science Strand	<i>Biology/Physics</i>	<i>Physics</i>	<i>Biology</i>
Working Scientifically	<p>Ask relevant scientific questions. Use observations, different types of scientific enquiries and knowledge to answer scientific questions. Set up a simple enquiry to explore a scientific question. Set up a comparative test to compare two things. Set up a fair test and explain why it is fair. Make careful and accurate observations, including the use of standard units. Use equipment, including thermometers and data loggers to make accurate measurements using standard units. Gather, record, classify and present data in different ways to answer scientific questions. Use diagrams, keys, bar charts and tables; using scientific language. Use findings to report in different ways, including oral and written explanations, presentation. Draw simple conclusions and suggest improvements and raise further questions. Make a prediction with a reason. Identify differences, similarities and changes related to an enquiry and process.</p>		
N.C skills	<ul style="list-style-type: none"> 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 Identify common appliances that run on electricity Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit Recognise some common conductors and insulators, and associate metals with being good conductors 	<ul style="list-style-type: none"> 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 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 	<ul style="list-style-type: none"> 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
Vocabulary	Digestion, mouth, teeth, tongue, saliva, oesophagus, stomach, gastric juices, enzyme, small intestine, bile, pancreatic juice, large intestine, rectum, incisors, cut, slice, canines, grip, pierce, premolars, molars, crush, grind, dental, dentist, disclosing tablets, food chain, producers, predators, prey, herbivore, carnivore, omnivore Electrical appliances, mains, battery, television, computer, tablet, mobile phone, light, lamp, cooker, microwave, toaster, radio, component, bulb, buzzer, battery, cell, wire, motor, switch, open, closes, circuit, series, complete loop, bright, brightness, current, electrical insulator, plastic, fabric, electrical conductor, metals, water	<i>Sound, sources, vibrating, medium, ear, eardrum, instruments, pitch, high, low, volume, loudness, loud, soft, quiet, insulation, sound proof, distance, fainter</i> <i>Solids, liquids, gases</i> <i>Change state, melt, freeze, heated, cooled, temperature, Celsius, chocolate, butter, ice, water, steam, water vapour, water cycle, evaporation, condensation, rate, precipitation, rain, rain fall, snow, sleet</i>	Classify, classification, animal, vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, snails, slugs, worms, spiders, insects, flowering plants, non-flowering plants, ferns, mosses, fungi, environment, habitat, micro habitat, adaption, human impact, ecological, ecosystem, nature reserves, parks, ponds, pollution, litter, deforestation, field, hedgerow, pond, woodland, seashore, ocean, rainforest, Arctic, desert, nest, burrow, air, food, water, shelter, heat, warmth, sun, camouflage

Enrichment			
Key skills and knowledge	<ul style="list-style-type: none"> ● Identify and name the parts of the human digestive system. ● Describe the functions of the organs in the human digestive system. ● Identify and describe the different types of teeth in humans. ● Describe the functions of different human teeth. ● Use food chains to identify producers, predators and prey. ● Construct food chains to identify producers, predators and prey. ● Identify and name appliances that require electricity to function. ● Construct a series circuit. ● Identify and name the components in a series circuit (including cells, wires, bulbs, switches and buzzers). ● Draw a circuit diagram. ● Predict and test whether a lamp will light within a circuit. ● Describe the function of a switch in a circuit. ● Describe the difference between a conductor and an insulator; giving examples of each. ● Associate metals with being good conductors. 	<ul style="list-style-type: none"> ● Describe how sound is made, associating some of them with something vibrating. ● Explain how sound travels from a source/medium to our ears. ● Explore the correlation between pitch and the object producing a sound. ● Explore the correlation between the volume of a sound and the strength of the vibrations that produced it. ● Describe what happens to a sound as it travels away from its source. ● Group materials based on their state of matter (solid, liquid, gas). ● Describe how some materials can change state. ● Explore how materials change state. ● Measure the temperature at which materials change state. ● Describe the water cycle. ● Explain the part played by evaporation and condensation in the water cycle. 	<ul style="list-style-type: none"> ● Recognise and group living things in different ways. ● Use classification keys to group, identify and name living things. ● Create classification keys to group, identify and name living things (for others to use). ● Describe how changes to an environment could endanger living things.

	AUTUMN TERM	SPRING TERM	SUMMER TERM
YEAR 5	<i>Forces/Earth and Space</i>	<i>Properties and changes of materials</i>	<i>Living things and their habitats/Animals including humans</i>
Science Strand	<i>Physics</i>	<i>Physics</i>	<i>Biology</i>
Working Scientifically	<p>Plan different types of scientific enquiry to answer questions. Recognise and control variables in an enquiry, when necessary. Measure accurately and precisely using a range of scientific equipment. Record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Use the outcome of test results to make predictions and set up a further comparative and fair tests. Report findings from enquiries in a range of ways. Explain a conclusion from an enquiry. Explain causal relationships in an enquiry. Relate the outcome from an enquiry to scientific knowledge in order to state whether evidence supports or refutes an argument or theory. Read, spell and pronounce scientific vocabulary accurately. Identify scientific evidence that has been used to support or refute ideas or arguments.</p>		
N.C skills	<ul style="list-style-type: none"> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system Describe the movement of the Moon relative to the Earth Describe the Sun, Earth and Moon as approximately spherical bodies Use the idea of the Earth's rotation to explain day and night 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. 	<ul style="list-style-type: none"> 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 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 Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic Demonstrate that dissolving, mixing and changes of state are reversible changes Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda 	<ul style="list-style-type: none"> Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Describe the life process of reproduction in some plants and animals Describe the changes as humans develop to old age
Vocabulary	<p>Force, contact, non-contact, gravity, falling, friction, air resistance, water resistance, newton, force metre, drag, levers, pulleys, gears, move, surface, material, carpet, tiles, wood, lino, bubble wrap, sandpaper, fleece, polythene, towel</p> <p>Day, night, light, dark, dim, sunrise, sunset, dusk, Earth, moon, moons, reflect, sun, star, spherical, rotation, Earth's axis, solar system, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune (Pluto as a dwarf planet), shadow clock, sundials, astronomical clock</p>	<p>Soft, hard, rough, smooth, stiff, shiny, dull, waterproof, absorbent, opaque, transparent, translucent, texture, conduct, insulate, electrical, thermal, magnetic solids, liquids, gases, dissolve, solution, substance, separated, filtering, sieving, evaporating, reversible, irreversible state, burning, oxygen, acid, bicarbonate of soda, carbon dioxide, change state, melt, melting, freeze, heated, cooled, temperature, Celsius, chocolate, butter, ice, water, steam, water vapour, water cycle, evaporation, condensation, rate, precipitation, rain, rain fall, snow, sleet</p>	<p><i>Life cycle, reproduction, asexual, sexual, animal, vertebrates, amphibians, reptiles, birds, mammals, invertebrates, insect, babies, young, grow, adult, egg, caterpillar, larva, chrysalis, pupa, head, abdomen, thorax, wings, fur, feathers, scales, plants, seeds, stem, root cuttings, tubers, bulbs, pollen, leaves, flowers, blossom, petals, fruit, roots, bulb, seed, trunk, branches, stem, stigma, style, anther, ovary, ovule, seed formation, seed dispersal</i></p> <p><i>Humans, gestation, baby, child, teenager, adult, geriatric, puberty, hormones, muscles, testicles, pubic hair, voice, acne, breasts, hips, period, ovulation</i></p>
Enrichment			

Key skills and knowledge

- Explain what gravity is and its impact on our lives
- Identify and explain the effect of air resistance
- Identify and explain the effect of water resistance
- Identify and explain the effect of friction.
- Recognise and explain that mechanisms (levers, pulleys and gears) allow a smaller force to have a greater effect
- Describe and explain the movement of the Earth and other planets relative to the Sun.
- Describe and explain the movement of the Moon relative to the Earth.
- Explain and demonstrate how night and day are created.
- Describe the Sun, Earth and Moon (using the term spherical).
- Use the idea of the earth's rotation to explain day and night and the apparent movement of the sun across the sky.

- Compare and group materials based on their properties (including their hardness, solubility, transparency, conductivity, [electrical & thermal], and response to magnets).
- Describe how a material dissolves to form a solution; explaining the process of dissolving.
- Describe and show how to recover a substance from a solution.
- Describe how some materials can be separated.
- Demonstrate how materials can be separated (e.g. through filtering, sieving and evaporating).
- Know and can demonstrate that some changes are reversible and some are not.
- Explain how some changes result in the formation of a new material and that this is usually irreversible.
- Discuss reversible and irreversible changes.
- Explain that some changes result in the formation of new materials.
- Give evidenced reasons why materials should be used for specific purposes

- Describe the life cycle of different living things (mammal, amphibian, insect and a bird).
- Describe the differences between different life cycles.
- Describe the process of reproduction in plants.
- Describe the process of reproduction in animals.
- Create a timeline to indicate stages of growth in humans to old age.

	AUTUMN TERM	SPRING TERM	SUMMER TERM
YEAR 6	<i>Animals including humans/Light</i>	<i>Electricity/Living things and their habitats</i>	<i>Evolution and inheritance</i>
Science Strand	<i>Biology/Physics</i>	<i>Biology/Physics</i>	<i>Biology</i>
Working Scientifically	<p><i>Plan different types of scientific enquiry to answer questions. Recognise and control variables in an enquiry, when necessary. Measure accurately and precisely using a range of scientific equipment. Record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Use the outcome of test results to make predictions and set up a further comparative and fair tests. Report findings from enquiries in a range of ways. Explain a conclusion from an enquiry. Explain causal relationships in an enquiry. Relate the outcome from an enquiry to scientific knowledge in order to state whether evidence supports or refutes an argument or theory. Read, spell and pronounce scientific vocabulary accurately. Identify scientific evidence that has been used to support or refute ideas or arguments</i></p>		
N.C skills	<ul style="list-style-type: none"> 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. 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. 	<ul style="list-style-type: none"> Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches Use recognised symbols when representing a simple circuit in a diagram. Describe how living things are classified into broad groups according to common Observable characteristics and based on similarities and differences, including microorganisms, plants and animals Give reasons for classifying plants and animals based on specific characteristics 	<ul style="list-style-type: none"> 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.
Vocabulary	<p>Blood, heart, heart rate, circulation, oxygen, lungs, veins, arteries, cells, pulse rate, healthy diet, exercise, drugs, nutrients, water</p> <p>See, eyes, light, straight lines, reflect, reflected, reflection, light sources, shadows, size, shape, pattern, mirrors, rainbows, colour, colour filters, water, refraction</p>	<p>Component, bulb, buzzer, battery, cell, wire, motor, switch, open, closes, circuit, series, complete loop, bright, brightness, current, volume, volts, voltage, symbols, circuit diagram</p> <p>Vertebrates, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, head, abdomen, thorax, wings, fur, feathers, scales, plants, micro-organisms, kingdom, species</p>	<p><i>Fossils, evolution, evolve, inherit, inheritance, offspring, vary, variation, species, adapted, environment, climate, habitat, suited</i></p>
Enrichment			

Key skills and knowledge

- Identify and name the main parts of the human circulatory system.
- Describe the function of the heart, blood vessels and blood.
- Discuss the impact of diet, exercise, drugs and life style on health.
- Describe the ways in which nutrients and water are transported in animals, including humans.
- Explain how light travels.
- Explain and demonstrate how we see objects.
- Explain why shadows have the same shape as the object that casts them.
- Explain how simple optical instruments work, e.g. periscope, telescope, binoculars, mirror, magnifying glass etc

- Explain how the number & voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer
- Compare and give reasons for why components work and do not work in a circuit
- Draw circuit diagrams using correct symbols
- Classify living things into broad groups according to observable characteristics and based on similarities & differences.
- Describe how living things have been classified.
- Give reasons for classifying plants and animals in a specific way using characteristics.

- Describe how the Earth and living things have changed over time.
- Explain how fossils can be used to find out about the past (millions of years ago).
- Explain about reproduction and offspring of the same kind (recognising that offspring normally vary and are not identical to their parents).
- Explain how animals and plants are adapted to suit their environment.
- Link adaptation over time to evolution.
- Explain evolution.



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