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Reception	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Lead Enquiry Question **(Composite Outcome)**	**Weather and seasons**	**My body**	**Seasons**	**Seasons**	**Plants**	**Changing states of matter** **Seasons**
Spirituality – (Community, Dignity) encouraging our pupils to reflect upon their learning and its impact on themselves and others – Look in, look out, look up. **Hope** – (Hope) providing aspirational opportunities **Inspiring** – (Hope, Wisdom) developing pupils' resilience and motivation **Nurture** – (Dignity) caring and growing ourselves, others and God's creation **Environment** – (Community) developing an awareness of our local, national and international community	Spirituality- experience and reflect on changes in their natural environment Hope – seasonal walks and discussions Environment – using senses to explore the weather and reflect on how our lives are now impacting on the weather that the earth is experiencing	Spirituality- reflect upon what we have learnt about our bodies Hope – learning about our bodies and how we are unique and special (Jigsaw) Nurture- Learning about our body and similarities and differences Inspiring- Learn about how their body is unique and special	Spirituality- experience and reflect on changes in their natural environment Hope – seasonal walks and discussions Environment – using senses to explore the weather and reflect on how our lives are now impacting on the weather that the earth is experiencing	Spirituality- experience and reflect on changes in their natural environment Hope – seasonal walks and discussions Environment – using senses to explore the weather and reflect on how our lives are now impacting on the weather that the earth is experiencing	Spirituality- reflect on how their learning about plants and use their knowledge to care for plants in their environment Hope – how can we grow plants to help make a healthier planet Nurture- caring for plants in our environment nurturing them as they grow	Spirituality- reflect upon the changing stated of matter in our environments Inspiring- how materials are used in different ways to create things that we can use
Learning Threads	**Physics:** Seasonal changes	**Biology:** Animals including humans	**Physics:** Seasonal changes	**Physics:** Seasonal changes	**Biology:** Plants	**Chemistry:** Materials and their properties

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(Substantive Concepts)						**Physics:** Seasonal changes
Key Vocabulary	Wind, movement, air, cool Cold, raindrop **Seasons –** Autumn, season, leaves, trees,	Arm, leg, chest, hand, finger, feet eyes, nose, face, mouth, ears, head, hair, eyebrows, teeth, grow, change, unique,	winter, season, snow, cold, melt	Spring, season, warm, sun	Plant, seed, nutrients, soil, water, stem, leaves, sunlight, compost heap, weeds, garden, roots	**Materials** Non-living, change, solid, liquid, melt, freeze, material **Weather and Seasons – summer** Summer, season, hot, sun
LCs **Components** **Assessment checkpoints in green**	1. Can I find signs of autumn? Identify signs of autumn on a walk around school grounds 2. Can I explore the weather we experience in autumn? Name the weather we typically experience in autumn	1. Can I name parts of my body? Name some parts of body 2. Can I describe how I have changed since I was a baby? describe what has changed since they were a baby 3. Can I understand similarities and differences in human beings? Identify something that is similar and different with their talk partner	1. Can I find signs of winter? Identify signs of winter on a walk around school grounds 2. Can I explore the weather we experience in winter? Name the weather we typically experience in winter	1.Can I find signs of spring? Identify signs of spring on a walk around school grounds 2. Can I explore the weather we experience in spring? Name the weather we typically experience in spring and make comparisons with other seasons	1. Can I identify living and non-living things? Sort images into those that are living and non-living 2. Can I explain why a plant is a living thing and what it needs to live? Identify what a plant needs to grow. 3. Can I identify and name the features of a plant? Match labels to image of plant	1.Can I find signs of summer? Identify signs of summer on a walk around school grounds 2. Can I explore the weather we experience in summer? Name the weather we typically experience in summer and make comparisons with other seasons 2 Can I investigate materials that change shape? 3. Can I explore the process of melting? Describe what happens when materials melt

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						4. Can I explore the best consistency of sand to make a castle? Describe the best consistency of sand for their castle
Assessment at a distance		Identify signs of autumn from a selection of objects	Discuss the weather we experience in autumn	Identify signs of winter from a selection of objects	Verbally name body parts	Name the parts of a plant and what it needs to grow Discuss features of the four seasons and the weather typically experienced

Year 1	Autumn 2		Spring 1		Summer 2	
Lead Enquiry Question **(Composite Outcome)**	**Animals, including humans- All about me**	**Exploring Everyday Materials 1**	**Animals, including humans- All about animals**	**Exploring Everyday Materials 2**	**Seasonal Changes**	**Plants**
Spirituality – (Community, Dignity) encouraging our pupils to reflect upon their learning and its impact on themselves and others – Look in, look out, look up. **Hope** – (Hope) providing aspirational opportunities **Inspiring** – (Hope, Wisdom) developing pupils' resilience and motivation **Nurture** – (Dignity) caring and growing ourselves, others and God's creation **Environment** – (Community) developing an awareness of our local, national and international community	Spirituality - Pupils reflect on how their own bodies work, appreciating the dignity of themselves and others as unique creations. They "look in" to understand themselves and "look out" to value others' similarities and differences. Inspiring- Engaging, hands-on experiments with the senses inspires wonder and motivating pupils to investigate further. Environment - Recognising how senses help us connect with the world encourages appreciation of the environment seeing, hearing, and feeling the	Hope - Through investigation and prediction, pupils develop curiosity and confidence to test ideas — fostering hope and aspiration for future scientific discovery and problem-solving. **Reasoning:** Nurture - Understanding natural and manmade materials nurtures respect for the environment and responsibility for using resources wisely. Environment – awareness of materials used in the world around us	Spirituality- Children will reflect on their learning about humans Inspiring - Through active investigation, sorting and reasoning, pupils develop resilience and motivation to make thoughtful classifications, using wisdom to understand the balance of nature and food chains. Nurture - Learning about pets and wild animals nurtures compassion, responsibility, and care for living things. Pupils recognise their role in protecting and respecting animals in their homes and environment.	Hope - Building and testing their own structures encourages pupils to experiment and problem-solve, fostering ambition and confidence. They see mistakes as opportunities for growth, developing hopeful, resilient attitudes towards learning. Inspiring - Investigating materials through practical enquiry promotes perseverance and curiosity. Environment – awareness of materials used in the world around us	Spirituality - -Pupils "look up in wonder at the world around them, reflecting on the beauty and order of creation through the seasons. They "look in" to recognise how the changing seasons affect their own lives and "look out" to see the shared experiences of others. Nurture - Recognising how weather and seasons affect living things encourages care and responsibility for plants, animals, and one another. Environment- explore the weather and reflect on how our routines are	Hope - Planting seeds encourages anticipation and hope as pupils look forward to growth, understanding that care and patience lead to positive outcomes. Nurture - Actively caring for plants nurtures responsibility and respect for life, helping pupils recognise their role in sustaining and growing God's creation. Environment - Recognising plants and trees in the local environment develops pupils' awareness of the natural world, fostering a sense of connection to their community and the wider environment.

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	world around us with gratitude.				impacted due to the weather	
Cross Curricular links	**English –** Senses poems (Autumn 1)	**English –** How to build a boat instruction text	**English –** Animal poems	**D&T –** building houses from Great Fire of London (Spring 2)	**Geography –** comparing UK & Greenland (Summer 2)	**Talk Through Stories –** The Extraordinary Gardner & The Wall (Summer 2) and the Wild (Summer 1)
Learning Threads (Substantive Concepts)	**Biology:** Animals including Humans	**Chemistry**: Materials and their properties	**Biology:** Animals Investigating living things and their habitats	**Chemistry**: Materials and their properties	**Physics:** Seasonal changes	**Biology:** Plants
Disciplinary Knowledge	Ask questions Planning and enquiry types Observing and measuring Recording data Interpreting and analysing data Communicate findings	Ask questions. Observe and measure Recording data	Ask questions Planning and enquiry types Recording data	Ask questions Planning and enquiry types Interpreting and analysing data Communicate findings	Observe and measure Recording data Interpreting and analysing data Communicate findings	Planning and enquiry types Observe and measure Record data Interpreting and analysing data Communicate findings
Key Vocabulary	head, body, skeleton, bones, eye, sight, sound, ear, hear, deafness, tongue, mouth, taste, touch, skin, smell, nose,	object material, wood, plastic, metal, glass, plastic, water, rock, property, natural, manmade, float, sink, opaque,	fish, amphibian, reptile, mammal, bird, feather, backbone, amphibian, reptile, gills, scale, fur, herbivore,	Object, material, wood, plastic, metal, glass, plastic, water, rock, property, natural, manmade, float, sink, opaque,	season, spring, summer, autumn, winter, weather, frost, sleet, warmer, colder, temperature, rainfall, sun protection, grow,	seed, bulb, plant, tree, soil, stem, petal, leaf, root, flower, blossom, daisy, dandelion, clover, daffodil, wild, deciduous, evergreen, pine

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	hand, leg, arm, foot, back	transparent, bendy, smooth, rough	carnivore, omnivore, pet, wild,	transparent, bendy, smooth, rough waterproof, absorbent, non-absorbent, suitable,	observe, changes, compare,	tree, oak tree, branch, trunk, fruit, vegetable,
LCs **(Components)** **Assessment checkpoints in green.**	1)Can I identify the basic parts of the human body? 2) Can I describe my eye? Label basic parts of the human body 3) Can I understand sound? 4) Can I explore the tongue and taste? 5) Can I explore the sense of touch? 6) Can I explore the sense of smell? Match body parts to its sense.	1) Can I identify and name a variety of everyday materials? 2) Can I distinguish between an object and the material that it is made from? Sort items by material 3) Can I describe the properties of everyday materials? 4) Can I identify objects which are made from natural materials and objects that are made from manmade materials? 5)Can I predict and identify if an object will float or sink?	Class list of known animals 1)Can I sort and classify animals? 2) Can I identify the differences and similarities between mammals and birds? 3) Can I identify the differences and similarities between amphibians, reptiles and fish? Name all five vertebrate groups. 4) Can I identify and name a variety of common animals that are carnivores, herbivores and omnivores?	1) Can I build a structure strong enough to withstand wind? 2) Can I build a waterproof roof? 3) Can I understand the properties of glass and its uses? Describe simple physical properties of everyday materials. 4) Can I design and make furniture? 5) Can I explore a variety of fabrics and understand their different properties? Compare and group everyday materials based on their physical properties	1) Can I explore the four seasons? Name the four seasons 2) Can I understand the changes that take place in autumn? 3) Can I understand the changes that take place in winter? Discuss changes from autumn to winter 4) Can I understand the changes that take place in spring? 5) Can I understand the changes that take place in summer? Describe changes that take place	In table groups, draw, list, name some flowers & trees 1) Can I plant a variety of seeds? 2) Can I identify and describe the basic structure of a variety of common plants? Name the basic structure of common flowers and trees – draw on whiteboard 3) Can I identify and classify a variety of plants? 4) Can I identify and name a variety of deciduous and evergreen trees? Identify common flowers and trees rom pictures

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		Make a predicition 6)Can I identify absorbent and waterproof materials?	Name and sort animals into the five vertebrate groups 5) Can I identify and group animals into those that are pets and those that live in the wild? 6)Can I compare the characteristics of animals? Sort animals by what they eat and if they're wild or pets	6) Can I explain the uses of materials and why they are suitable? Describe simple physical properties **of a variety** of everyday materials.	across the four seasons, including associated weather and how day length changes	5)Can I observe the growth of a plant over time?
Assessment at a distance			**Identify and name the basic parts of the human body and say which part is associated with which sense**	**Name a variety of materials including wood, plastic, glass, metal, water, rock. Distinguish between object and material.**	**Before starting D&T structure unit: Name everyday materials and describe some of their**	**Name the five vertebrate groups. Recall carnivore, herbivore, omnivore**

Year 2	Autumn 1	Spring 1	Summer 1

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Lead Enquiry Question **(Composite Outcome)**	**Animals including humans - growth**	**Animals including humans – life cycles**	**Uses of everyday materials**	**Plants**	**Living things and their habitats**	**Living things and their habitats - Habitats around the world**
Spirituality – (Community, Dignity) encouraging our pupils to reflect upon their learning and its impact on themselves and others – Look in, look out, look up. **Hope** – (Hope) providing aspirational opportunities **Inspiring** – (Hope, Wisdom) developing pupils' resilience and motivation **Nurture** – (Dignity) caring and growing ourselves, others and God's creation **Environment** – (Community) developing an awareness of our local, national and international community	Nurture – reflecting on how we change as we grow	Spirituality – reflecting on new life	Environment – awareness of materials used in the world around us	Inspiring – growth of new plants	Environment – local habitats and microhabitats	Hope – how we can have a positive impact on habitats and our world
Cross curricular links		Lifecycle books	The Building Boy The house that once was	Wild		
Learning Threads **(Substantive Concepts)**	Biology Animals including humans - growth	Biology Animals including humans – life cycles	Chemistry Uses of everyday materials	Biology Plants	Biology Living things and their habitats	Biology Living things and their habitats - Habitats around the world
Disciplinary Knowledge	Asking questions Planning and enquiry types Observing and measuring Recording data	Asking questions Planning and enquiry types Communicating findings	Asking questions Planning and enquiry types Observing and measuring Recording data	Asking questions Planning and enquiry types Observing and measuring Recording data	Asking questions Planning and enquiry types Communicating findings	Asking questions Planning and enquiry types Communicating findings

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	Interpreting and analysing data Evaluating evidence Communicating findings		Interpreting and analysing data Evaluating evidence Communicating findings	Interpreting and analysing data Evaluating evidence Communicating findings		
Key Vocabulary	survival, shelter, nutrition, oxygen, vital, survive, grow, healthy, protein, carbohydrate, dairy, vitamins, calcium, fat, balanced diet, nutrients, exercise, strength, flexibility, balance, coordination, hygiene, germs, bacteria, virus	offspring, inherit, gene, resemble, differences, reproduction, hatchling, chick, caterpillar, larva, chrysalis, metamorphosis, frog, amphibian, frogspawn, tadpole, froglet life cycle, grow, survive, independent, adult, foetus, womb	material, property, suitable, brick, bridge, structure, construction, stretchy, elastic bend, twist, squash, stretch, force, waterproof,	seeds, bulbs, growth, plant, control, method, photosynthesis, carbon dioxide, oxygen, glucose, energy, pollination, life cycle, germination, reproduction, seedling, thrive, healthy, forest, desert, adapt, condition, survive	nutrition, reproduce, excrete, respire, habitat, microhabitat, , condition, insect, producer, consumer, herbivore, carnivore, omnivore, food chain, life cycle, nutrients, caterpillar, habitat, microhabitat, organism, environment, mate, rainforest, extinct, climate, endangered, biodiversity, deforestation, poaching, pollution, rainforest, plankton, ocean, ecosystem, coral reef, Antarctic, Arctic, desert	
LCs **(Components)** **Assessment checkpoints in green.**	1. Can I describe the needs of animals for survival?	1. Can I order the stages of the human life cycle?	1. Can I identify different materials and their uses?	1. Can I explain the differences between seeds and bulbs?	1. Can I compare the differences between things that are living,	1. Can I learn about habitats? 2. Can I appreciate

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	2. Can I describe the needs of humans for survival? Name what animals and humans need to survive 3. Can I explore the importance of eating the right food? 4. Can I describe what a healthy, balanced diet looks like? List examples of healthy food choices 5. Can I investigate the impact of exercise on our bodies?	2. Can I describe the stages of life from adulthood to old age? Correctly describe the human stages of life 3. Can I match offspring to their parent? 4. Can I explore the life cycle of a chicken? 5. Can I describe the life cycle of a butterfly? 6. Can I explore the life cycle of a frog? Draw or explain a lifecycle	2. Can I understand how to select the right materials to build a bridge? 3. Can I explore and test the stretchiness of materials? Identify materials and their uses 4. Can I understand materials can change their shape by twisting, bending, squashing or stretching? 5. Can I learn about Charles Macintosh and explore how materials are suitable for different purposes?	Explain the difference between a seed and a bulb 2. Can I design an experiment to find out what plants need to grow? 3. Can I describe what plants need to grow and stay healthy? List what plants need to grow and how they can stay healthy 4. Can I describe the life cycle of a plant? Draw and explain the life cycle of a plant	dead, and things which have never been alive? Sort images between living, dead and never been alive 2. Can I identify and name a variety of plants and animals in a microhabitat? Describe a habitat and what might be living there 3. Can I design a suitable microhabitat where living things could survive? 4. Can I find out what animals eat to survive in their habitat?	that environments are constantly changing? Give a reason for how a habitat might change 3. Can I explore the rainforest and its problems? 4. Can I describe life in the ocean? 5. Can I discover the Arctic and Antarctic habitat? Describe a habitat and list problems that they face

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	Explain what happens to their body when they exercise 6. Can I investigate the importance of hygiene? Explain why hygiene is important		List three materials, their purpose and if they can be changed	5. Can I observe and record the growth of plants over time? Complete a plant diary 6. Can I understand that plants adapt to suit their environment? Give an example of how a plant can adapt to their environment	List examples of what animals eat in their habitat 5. Can I understand food chains? Give an example of a food chain	
Assessment at a distance	What do we need to survive, grow and stay healthy? On whiteboards.	Draw and label a life cycle	Use scientific language to describe a range of materials – oracy discussion	Draw and label a plant life cycle	Use provided images to create a simple food chain	Discuss how habitats differ and what problems they might face – oracy discussion

Year 3	Autumn 1	Spring 1	Summer 1

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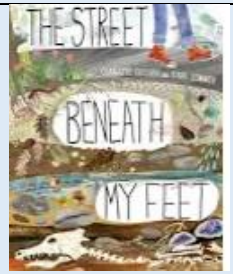
Lead Enquiry Question **(Composite Outcome)**	**Rocks**	**Forces and Magnets**	**Humans and Animals**	**Plants**	**Light**	**Scientific Enquiry**
Spirituality – (Community, Dignity) encouraging our pupils to reflect upon their learning and its impact on themselves and others – Look in, look out, look up. Hope – (Hope) providing aspirational opportunities Inspiring – (Hope, Wisdom) developing pupils' resilience and motivation Nurture – (Dignity) caring and growing ourselves, others and God's creation Environment – (Community) developing an awareness of our local, national and international community	**Spirituality** Exploring the Earth beneath our feet **Environment –** variety of rocks from different locations. Visit to local mine.	**Environment –** magnets in everyday world	**Nurture** – caring for our bodies	**Hope-** Visit to Travaskis Farm **Nurture –** caring for God's creations. **Environment** – How to look after our environment	**Environment** – The impact of too much/not enough light in our environment.	**Inspiring** – resilience and motivation to predict and carry out experiments. Investigating to produce and discuss outcomes.
Cross curricular links						
Learning Threads **(Substantive Concepts)**	**Chemistry:** Rocks	**Physics:** Forces and Magnets	**Biology:** Animals including humans.	**Biology:** Plants	**Light:** Light	
Disciplinary Knowledge	Ask questions	Ask questions Observing and measuring.	Ask questions Make predictions	Ask questions Make predictions	Ask questions	Ask questions Make predictions

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	Make predictions	Communicating our findings.	Identify, group, classify. Research	Set up fair tests Observe, measure and record. Interpret, evaluate and communicate results.	Make predictions	Set up fair tests Observe, measure and record. Interpret, evaluate and communicate results.
Key Vocabulary	igneous rocks, intrusive igneous rock, extrusive igneous rock, crystals, magma, sedimentary rock, metamorphic rock, limestone, marble, sandstone, fossil, soil	force, magnet, attract, repel, magnetic, poles.	nutrition, carbohydrate, protein, vitamin, mineral, nutrition label, vertebrate, invertebrate, endoskeleton, exoskeleton, hydrostatic skeleton, organs, flex, contract, muscle	nutrients, fertiliser, photosynthesis absorb, reproduction, pollination, seed dispersal, pollinator, germination,	light, source, reflect, ultraviolet rays, shadow, opaque, rays,	solar, renewable energy, prediction, record, results, data, table, graph, fair test, variable, equipment, diagram,
LCs **(Components)** **Assessment checkpoints in green.**	1. Can I explore the formation and properties of Igneous rocks? 2. Can I explore the formation and properties of sedimentary and metamorphic rocks? Identify the 3 main rocks linked to their properties. 3. Recognise that soils are made from rocks and organic matter.	1. Can I explore contact and non-contact forces? 2. Compare how things move on different surfaces. Know that magnets have 2 poles 3. Explore the properties of magnets and predict if magnets will attract or repel. 4. Can I explore everyday objects	1.Can I explore the 5 key food groups? 2. Can I discuss the nutrition in the food we eat? Create a healthy balanced meal 3.Can I investigate the human skeleton? Flashback: Calcium good for bones? Know that the human skeleton protects our vital organs 4 Can I investigate how animal skeletons provide protection?	1. Can I describe the functions of different parts of a flowering plant and how they are used in photosynthesis? Explain the role/function on root, stem, leaves, flowers, fruit. 2. Can I investigate the way in which water is transported within plants? 3. Can I explore the part that flowers play in the life cycle of flowering plants?	1. Can I explain how light helps us to see? 2. Can I explore the light that comes from the sun and how to stay safe? Understand that light from the sun can be harmful and explain the best ways to protect ourselves. 3. Can I explore materials which are reflective?	1. Can I discuss how a solar oven be made more effective? 2. Can I investigate how best to clean coins? 3. Can I discuss fair testing, controls and variables when making a cake?

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	Describe the process of how soil is made?? 4. Can I understand how fossils are formed? Explain how living things are trapped within soil and rock to form fossils.	that are magnetic and not magnetic? Group materials into magnetic and non magnetic.	5. Can I explore the role of muscles and explain how they make a skeleton move. Flashback: protein is needed for healthy muscles Know that skeletons provide support, protection and movement.	Describe the stages of a plant life cycle, discussing the importance of each stage affecting the next. 4. Can I understand the pollination process and the way in which seeds are dispersed? 5. Can I compare the effect of different factors on plant growth?	4. Can I discover how shadows are formed? Demonstrate how shadows are formed and explain why. 5. Can I investigate how you can change the size of a shadow? (needs to come before shadow day investigation) 6. Can I investigate how shadows change throughout the day? **Oracy**: class experiment to discuss how the shadow changes throughout the day… and why.	
Assessment at a distance		Grouping and naming rocks	What do we already know about plants? (From Year 2) Magnet/forces vocab check and understanding	What types of soil do plants like?	Describe what our bodies need – food protection, muscles	Discuss how light sources are different.

Year 4	Autumn	Spring	Summer

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Lead Enquiry Question (Composite Outcome)	**States of Matter**	**Sound**	**Electricity**	**Animals, including Humans**	**Living things & their Habitats**	**Living things & their Habitats Conservation**
Spirituality – (Community, Dignity) encouraging our pupils to reflect upon their learning and its impact on themselves and others – Look in, look out, look up. **Hope** – (Hope) providing aspirational opportunities **Inspiring** – (Hope, Wisdom) developing pupils' resilience and motivation **Nurture** – (Dignity) caring and growing ourselves, others and God's creation **Environment** – (Community) developing an awareness of our local, national and international community	Nurture- how does the changing states of matter affect God's Creation? Environment – what can we do to support our community with environmental changes (fossil fuels)	Spirituality – reflecting on how sound can affect us and the people around us Environment - how does sound change our environment?	Hope – what can we create with our knowledge of electricity? Inspiring – looking at famous scientists (Tesla) Environment – how can more sustainable sources of energy have a positive effect on our community?	Inspiring - how can we change our habits to a better life? Environment – what can we do to support our community in eating well?	Nurture- how do humans impact God's Creation? Environment – what can we do to support local habitats?	Nurture- how can humans positively impact God's Creation? Environment – what can we do to support sustainability?
Cross curricular links			**English – Tesla/Edison**		**English – The Explorer** **Art – Jungle animals**	
Learning Threads (Substantive Concepts)	**Chemistry** States of matter	**Physics** Sound	**Physics** Electricity	**Biology** Animals including Humans	**Biology** Investigating living things and their habitats	**Biology** Investigating living things and their habitats
Disciplinary Knowledge	Asking questions Making predictions Setting up tests	Making predictions	Setting up tests	Observing, measuring and recording	Observing and classifying	Interpreting and communicating results
Key Vocabulary	matter, solid, liquid, gas, volume, particle, bond,	vibration, medium, waves, eardrum, signals, source,	electricity, batteries,, socket, circuit, series	ecosystem, producer, consumer, prey,	habitat, microhabitat, adapted,	ecosystem, monsoon, rainforest,

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	cooled, heated, particle, melting, melting point, temperature, thermometer, freezing, reverse, boiling, evaporation, condensation, absorb, water vapour, process, water cycle, precipitation, transpiration,	energy, particles, echo, vacuum, materials, reflect, absorb, insulate, defenders, volume, decibels, decibel metre, power, pitch, high pitch, low pitch, orchestra, energy, travel, sound source,	circuit, component, cell, current, power, battery, wire, bulb, conductor, insulator, metal, copper, rubber, switch, current, control, complete circuit, incomplete circuit, non-renewable energy, solar panels, hydropower	predator, food web, tundra, hide, interdependence, threatened	camouflage, coastal, grassland, environment, climate, exposure, classify, characteristics, vertebrate, species, sub-groups, identify, criteria, classification keys, organism, adapted, features, colouring, , ecosystem,	deforestation, drought, biodiversity, recycling, fossil fuels, pollution, greenhouse gases, sewage, contaminate, pesticides, water treatment, plant, conserve, endangered, marine sanctuaries, , conservation areas, recycling
LCs **(Components)** **Assessment checkpoints in green.**	Can I compare and group the three states of matter? Can I explain the properties of particles in solids, liquids and gases? draw how particles behave in the three states of matter. Can I investigate melting points? Observe and accurately record the temperature at which food changes state	Can I identify how sounds are made? Explain how sound is created and how it travels from an object to the ear Can I identify how vibrations from sounds travel through a medium to the ear? Explain how sound waves travel through air, liquids and solids Can I identify how materials can absorb, reflect or insulate sound vibrations?	Can I identify common electrical appliances and explain how to keep safe whilst using them? Identify 2 common appliances and explain to a partner how to keep safe whilst using them. Can I construct a simple series circuit? draw a simple series circuit. Construct a simple circuit	Can I identify and explain different parts of the human digestive system? Can I describe the functions of the main organs in the human digestive system? Describe the functions of the main organs in the human digestive system. Can I identify the different teeth and describe their functions? Identify and explain the function the different types of teeth.	Can I explore different habitats? Can I research habitats? Can I classify animals? Describe 3 animals that are in different classification groups. Can I create a classification key? Create a classification key using a series of questions.	Can I describe ecosystems and how they are affected by changes in the seasons? Explain 2 factors that cause ecosystems to change. Can I understand the human impact on the environment through deforestation? Can I investigate air pollution? Describe 2 factors that contribute to air pollution.

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	Can I explore freezing and boiling points? Can I explore evaporation and condensation? Explain the terms evaporation and condensation. Can I explain the water cycle?	Can I find patterns between the volume of sounds and the strength of the vibrations that produce it? Explain the link between volume and vibration Can I find patterns between the pitch of sounds and the objects that produce it? Explain Describe that pitch is caused by the speed of the sound source's vibrations Can I identify why sound gets quieter as the distance from the source increases?	Can I investigate simple series circuits? Can I explore conductors and insulators? Give 2 examples of conductors and insulators. Can I explain how an electrical switch works? Explain why a switch works.	Can I find out which drink causes the most tooth decay? Give two possible causes of tooth decay. Can I construct and interpret a variety of food chains? Can I construct and interpret a food web?	Can I investigate adaptations and classification within species? Give an example of how an animal is adapted to its environment. Can I explore and classify pond plants?	Can I understand water pollution? Can I explore methods that can be used to conserve water? Suggest 2 ways we can conserve water. Can I understand that humans can have a positive impact on nature?
Assessment at a distance		Complete a Quiz on states of matter	Complete a Quiziz on sound	Complete a Quiziz on electricity	Complete a Quiziz on food chains	Complete a Quiziz on habitats

Year 5	**Autumn 1**		**Spring 1**		**Summer 1**	
Lead Enquiry Question	**Earth and Space**	**Forces**	**Living things and their habitats**	**Properties of materials**	**Changes of materials**	**Animals including humans**

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(Composite Outcome)						
Spirituality – (Community, Dignity) encouraging our pupils to reflect upon their learning and its impact on themselves and others – Look in, look out, look up. **Hope** – (Hope) providing aspirational opportunities **Inspiring** – (Hope, Wisdom) developing pupils' resilience and motivation **Nurture** – (Dignity) caring and growing ourselves, others and God's creation **Environment** – (Community) developing an awareness of our local, national and international community	**Spirituality (Community, Dignity) –** Encouraging awe and wonder at the vastness of the universe, reflecting on humanity's place in it and our responsibility for Earth. **Hope (Hope) –** Exploring space exploration and scientific discoveries as a source of inspiration for the future. **Nurture (Dignity) –** Understanding how Earth's position allows life to thrive and the importance of protecting our planet.	**Spirituality (Community, Dignity) –** Reflecting on the unseen forces (gravity, magnetism, friction) that shape our world and how they relate to faith, belief, and interconnectedness. **Hope (Hope) –** Investigating how understanding forces has led to technological advancements (e.g., flight, engineering) and future possibilities. **Inspiring (Hope, Wisdom) –** Encouraging resilience in problem-solving, experimentation, and innovation. **Nurture (Dignity) –** Considering the impact of forces in everyday life, from the way we move to the technology we rely on.	**Hope (Hope) –** Exploring conservation efforts and scientific advancements that protect endangered species and ecosystems, inspiring action and optimism for the future. **Inspiring (Hope, Wisdom) –** Learning about scientists and activists who have dedicated their lives to studying and protecting habitats, encouraging curiosity and resilience in solving environmental challenges. **Environment (Community) –** Investigating human impact on habitats locally, nationally, and globally, discussing ways to protect biodiversity and promote sustainability.	**Spirituality (Community, Dignity) –** Encouraging appreciation for the diversity of materials and their unique properties, reflecting on the ingenuity of the natural world. **Hope (Hope) –** Exploring how new materials are developed to solve problems, such as medical advancements or eco-friendly innovations. **Inspiring (Hope, Wisdom) –** Investigating scientists who have made breakthroughs in material science, fostering curiosity and ambition. **Nurture (Dignity) –** Considering the responsible use of materials to support sustainability and care for creation. **Environment (Community) –** Discussing how material choices affect the environment, from pollution to renewable resources.	**Spirituality (Community, Dignity) –** Reflecting on transformation in nature and human life, considering change as a metaphor for growth and development. **Hope (Hope) –** Exploring reversible and irreversible changes, linking to resilience and learning from mistakes. **Inspiring (Hope, Wisdom) –** Looking at how chemical changes have led to important discoveries (e.g., cooking, medicine, energy production). **Nurture (Dignity) –** Discussing the responsible use of chemical processes to protect people and the planet. **Environment (Community) –** Understanding how human actions, such as pollution or recycling, influence material changes and sustainability.	**Spirituality (Community, Dignity) –** Recognizing the dignity of all living things and reflecting on the wonder of human and animal life. **Hope (Hope) –** Learning about medical advancements and scientific discoveries that improve human and animal health. **Inspiring (Hope, Wisdom) –** Exploring the resilience of the human body and the dedication of scientists, doctors, and conservationists. **Environment (Community) –** Investigating how humans impact animal habitats and the responsibility we have toward conservation and biodiversity.

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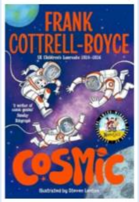
Cross curricular links						
Learning Threads **(Substantive Concepts)**	**Physics**: Earth and Space	**Physics**: Forces and magnets	**Biology**: Plants Investigating living things and their habitats	**Chemistry**: Materials and their properties	**Chemistry**: States of matter	**Biology**: Animals including Humans
Disciplinary Knowledge	Asking questions Planning and enquiry types Observing and measuring Recording data Interpreting and analysing data Evaluating evidence Communicating findings	Asking questions Planning and enquiry types Observing and measuring Recording data Interpreting and analysing data Evaluating evidence Communicating findings	Asking questions Planning and enquiry types Observing and measuring Recording data Interpreting and analysing data Evaluating evidence Communicating findings	Asking questions Planning and enquiry types Observing and measuring Recording data Interpreting and analysing data Evaluating evidence Communicating findings	Asking questions Planning and enquiry types Observing and measuring Recording data Interpreting and analysing data Evaluating evidence Communicating findings	Asking questions Planning and enquiry types Observing and measuring Recording data Interpreting and analysing data Evaluating evidence Communicating findings
Key Vocabulary	terrestrial planet, gas giant planets, Solar System, spherical, orbit, astronomy, heliocentric, geocentric, dwarf planet, orbit, axis, poles, season, hemisphere, orbit, sundial, time zone, gnomon, dial, shadow, moon phase, waxing,	Sir Isaac Newton, gravity, astronomy, weight, mass, Galileo Galilei, air resistance, opposing, streamlined, upthrust, buoyant, sink, friction, resistance, lubricant, Newton meter, Newton, lever, load, pivot, fulcrum, pulley, mechanism, gear, mesh, rack and pinion, bevel gear,	reproduction, asexual, fertilisation, tuber, genes, pouch, mammary glands, placental mammal, monotreme mammal, marsupial, metamorphosis, caterpillar, amphibian, larva, pupa, fledgling, egg tooth, hatch, embryo, documentary, naturalist,	Conductive, magnetic, durable, transparent, versatile, thermal, conduction, molecules, degrees Celsius (℃), insulator, hardness, force, iron, steel, stone, dissolve, solute, insoluble, soluble, solvent, solution, substance, saturation, pure substance, mixture, filtering, sieving, evaporation	pure substance, reversible, mixture, physical change, melting, evaporate, irreversible, chemical change, compare, effervescence, product, control carriable, corrosion, rusting, combustion, fuel, oxygen, extinguish, smother, reaction, predict,	foetus, dependent, adolescent, puberty, reproduce, gestation, pregnant, duration, extreme, breeding, womb, umbilical chord, embryo, trimester, midwife, growth spurt, childhood, motor skills, milk teeth, constant, adolescence, puberty, hormones, mood swing,

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	waning, eclipse, rocky planet, moon		primatologist, endangered, natural sciences, living organism, reproduction, life cycle, vertebrate, warm-blooded		acid, bicarbonate of soda, carbon dioxide	develop, lifestyle, keratin, elasticity, cataracts, neurodegenerative
LCs **(Components)** **Assessment checkpoints in green.**	1. Explore the solar system and its planets? Name and describe the planets in our solar system. 2. Understand the heliocentric model of the solar System. 3. Explain the Earth's movement in space. 4. Explain the Earth's rotation and night and day. Explain day and night. **5.** Understand the movement of the moon. Describe the movement of the Sun, Earth and Moon.	1. Explore gravity and the life and work of Isaac Newton. 2. Examine the connection between air resistance and parachutes 3. Explore factors which affect water resistance. Explain the effects of air and water resistance 4. Investigate the effects of friction on different surfaces. Explain the effect of friction on a moving object. 5. Investigate mechanisms – levers and pulleys. 6. Investigate mechanisms – gears. Know what can affect a force	1. Understand the life processes of a plant. Explain how different plants reproduce 2. Understand the life cycles of mammals 3. Compare the life cycles of insects and amphibians 4. Understand the life cycle of birds and reptiles Describe the life cycle of different types of animals 5. Know about the life and work of Jane Goodall and David Attenborough	1. Explore properties of materials. 2. Explore thermal conductors and thermal insulators. 3. Explore the hardness of materials. Investigate the properties of different materials 4. Discover materials that are soluble in water. 5. Investigate the solubility of materials. Describe what affects the rate of dissolving **6.** Explore how mixtures can be separated by filtering, sieving, evaporating or magnets. Explain what a non-reversible change is	1. Use evaporation to recover the solute from a solution. 2. Recognise and describe reversible changes. Explain some reversible and irreversible changes 3. Observe chemical reactions and describe how we know new materials are made. 4. Investigate rusting reactions. 5. Investigate burning reactions. 6. Investigate chemical reactions - acids and bicarbonate of soda. Know which materials will dissolve in a liquid	1. Identify the key stages of a mammal's life cycle. 2. Explore the gestation periods of mammals. Compare gestation time for different mammals 3. Learn about foetal development. 4. Investigate the hand span of differently aged children. 5. Learn about the changes experienced in puberty – covered in RSE. 6. Describe the changes humans may experience during old age. Describe each stage of the human life cycle
Assessment at a distance	End of Autumn 2 - Create a travel poster advertising our solar system. Promote the planets, our moon and the day/night system.	Oracy – discuss forces in action for an Emperor penguin or a polar bear	Apply knowledge of David Attenborough to writing a biography of his life	Morning activity – identify reversible and non-reversible changes for a selection of items	At the end of Summer 2 – Give children 4 different materials -In teams, describe how materials can be separated in the most efficient way	Oracy - Compare the human life cycle to other animals

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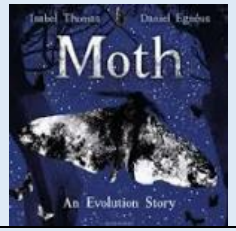
Year 6	Autumn 1		Spring 1		Summer 1	
Lead Enquiry Question (Composite Outcome)	**Evolution and inheritance**	**Electricity**	**Light**	**Living things and their habitats**	**Animals, including humans**	
Spirituality – (Community, Dignity) encouraging our pupils to reflect upon their learning and its impact on themselves and others – Look in, look out, look up. **Hope** – (Hope) providing aspirational opportunities **Inspiring** – (Hope, Wisdom) developing pupils' resilience and motivation **Nurture** – (Dignity) caring and growing ourselves, others and God's creation **Environment** – (Community) developing an awareness of our local, national and international community	**Spirituality** – creation vs scientific understanding **Inspiring** – Darwin and his theories of natural selection **Nurture** – importance of looking after nature due to extinction being permanent (Moths) **Environment** – Moths and how adaptation was created as a result of man-made climate	**Hope** – renewable sources for sustainable energy **Inspiring** – historical figures – Thomas Edison **Nurture** – hwo to use electrity wisely at home and at school **Environment** – how we can use this learning in the future to create sustainable technology	**Spirituality** – how we see light and it is a symbol for worship **Nurture** – how plants need light and how sunlight provides nuture for the planet **Environment** – light pollution	**Spirituality** – stewardship and caring for our natural world **Hope** – link to Art conservation projects **Inspiring** – imagining how the part they can play in preserving biodiversity **Nurture** – looking after local area as well as the sea **Environment** – impact of human actions on habitats	**Inspiring** – encouraging children to see themselves as future innovators in health or science **Nurture** – identifying the importance of nurturing animals **Environment** – making sustainable choices	
Cross curricular links	 Origin of the Species – English writing non-chronological report					
Learning Threads **(Substantive Concepts)**	**Biology**: Plants Animals including Humans Investigating living things and their habitats Evolution and Inheritance	**Physics**: Electricity	**Physics**: Light	**Biology**: Plants Investigating living things and their habitats	**Biology**: Animals including Humans	

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Disciplinary Knowledge	Asking questions Planning and enquiry types Observing measuring Recording data Interpreting and analysing data Evaluating evidence Communicating findings	Asking questions Planning and enquiry types Observing measuring Recording data Interpreting and analysing data Evaluating evidence Communicating findings	Asking questions Planning and enquiry types Observing measuring Recording data Interpreting and analysing data Evaluating evidence Communicating findings	Asking questions Planning and enquiry types Observing measuring Recording data Interpreting and analysing data Evaluating evidence Communicating findings	Asking questions Planning and enquiry types Observing measuring Recording data Interpreting and analysing data Evaluating evidence Communicating findings	
Key Vocabulary	offspring, inherit, variation, adaptation, Mary Anning, Jurassic coast, extinct, Homo sapien,	circuit, battery, conductor, dimmer switch, insulator, output, resistor, signal, synchronised, systematically	eye, light source, reflected, line of sight, shadow, opaque, transparent, translucent	classify, living organism, Mrs Gren, Carl Linnaeus, living organism	circulatory system, artery, vein, blood, absorb, nutrients, diet, exercise, heart rate, pulse, drug	
LCs **(Components)** **Assessment checkpoints in green.**	Can I understand that living things produce offspring which are not identical to their parents? Describe the role of genetics in off-spring. Can I investigate how birds are adapted to suit their environment in different ways and that adaptation may lead to evolution? Know how to plan a fair test Describe how some animals have adapted and why. Can I explain how moths have evolved to survive in a particular habitat?	Can I identify components from their symbols and their definition? Can I create an accurate circuit diagram? Use symbols when drawing electrical circuits Can I describe how volts affects brightness of bulbs in the circuit? Associate brightness of a bulb with the number of volts Can I draw open and closed diagrams and explain why components in circuits will not work? Use	Can I explain how light travels in straight lines and how shadows are formed? Explain how light travels Can I understand why shadows change during the day? Explain how shadows form Can I understand that light travels in straight lines and that we see things	Can I understand that living things are classified into groups called kingdoms? Describe how the classification system for animals was devised. Can I explain how animals are grouped into animal kingdoms? Can I explain MRS GREN? Use classification keys to identify groups of animals Can I describe the work of Carl Linnaeus?	Can I describe the structure and function of the heart? Can I define the function of different blood vessels? Explain the function of the heart, blood vessels and blood Can I describe the composition of the blood? Name the key parts of the circulatory system Can I explain how water and nutrients are transported?	

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	Can I understand what can be learnt from fossils? Can I identify differences in human ancestors? Describe the significance of Charles Darwin to the scientific world.	symbols when drawing a circuit Can I investigate possible variables for an investigation? Make a circuit that will solve a given problem Can I create a switch that is incorporated into a set of traffic lights? Compare how components function	because our eyes receive light? Explain how we see things Can I explain how light is reflected off surfaces so that we can see it?	Can I explore and differentiate the kingdoms of life? Classify animals in different forms Can I explain the difference between fungi and other living organisms? Can I describe, represent and present data about a living organism?	Can I design an investigation associated with heart rate diet and exercise? Can I describe the impact of drugs and alcohol on health? Describe the impact of poor lifestyle choices on our bodies	
Assessment at a distance	At start of Living things and their Habitat unit, children to identify key aspects of learning from this unit in oracy discussion (including key findings of Charles Darwin, evolution and adaptation)	Morning work activity in Spring term – children to draw an open and closed circuit, labelling components.	Draw a diagram of how light travels and how the eye receives light.	Oracy discussion – how are animals categorised?	Create a information leaflet/poster to explain key how bodies work and how to stay healthy.	

Science Substantive Concepts

Biology:	**Chemistry**:	**Physics**:
• Plants • Animals including humans • Investigating living things and their habitats • Evolution and Inheritance	• Materials and their properties • States of matter • Rocks	• Forces and magnets • Seasonal changes • Light • Electricity • Earth and Space • Sound

Science Disciplinary Knowledge

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Asking questions	Planning and enquiry types	Observing and measuring	Recording data	Interpreting and analysing data	Evaluating evidence	Communicating findings