Curriculum Overview

Year	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
Nursery 3 and 4 year olds	**Communication and language:** Understand 'why' questions, like: "Why do you think the caterpillar got so fat?"					
	Personal, Social and emotional development: Make healthy choices about food, drink, activity and tooth brushing.					
	Understanding the world: Use all their senses in hands-on exploration of natural materials. Explore collections of materials with similar and/or different properties. Talk about what they see, using a wide vocabulary. Begin to make sense of their own life-story and family's history. Explore how things work. 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.					
Rec	**Communication and language:** Learn new vocabulary Ask questions to find out more and to check what has been said to them Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail. Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen Use new vocabulary in different contexts.					
	Personal, Social and emotional development: Know and talk about the different factors that support their overall health and wellbeing: regular physical activity healthy eating tooth brushing sensible amounts of 'screen time' having a good sleep routine being a safe pedestrian					
	Understanding the world: Explore the natural world around them. Describe what they see, hear and feel while they are outside. Recognise some environments that are different to the one in which they live. Understand the effect of changing seasons on the natural world around them.					
ELG	**Communication and language:** Make comments about what they have heard and ask questions to clarify their understanding.					
	Personal, Social and emotional development: Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.					
	Understanding the world: 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.					

Theme	Empires and Rulers	Exciting Earth	Discoveries	Fantasy Land	Being Human	Local History
1	**Focus: Materials** **NC ref:** Pupils should be taught to: • 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. **Skills: Science enquiry- comparative fair test, identifying and classifying and observing over time.** • Performing simple comparing tests • Comparing and contrasting materials • Observe closely using simple equipment **Enhancement-** Make waterproof coats/ shoes Visit John Bull factory in Carnaby **Key Vocabulary:** property group changing materials boil natural manufactured		**Focus:** **Seasonal changes** **NC ref-** Pupils should be taught to: • observe changes across the four seasons • observe and describe weather associated with the seasons and how day length varies **Skills: Science enquiry - pattern seeking, research and observation over time.** • Use observation to begin to notice patterns • Asking simple questions and recognizing they can be answered in different ways • Observe closely using simple equipment **Enhancement:** Go on a seasonal walk throughout the year, Weather diary. **Key Vocabulary** Seasons, weather, temperature, climate, changes Autumn, spring, summer, winter, buds, frost, leaves, seeds, day, night.	**Focus: plants** **NC ref-** Pupils should be taught to: • 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. **Skills: Science enquiry -observation over time, comparative fair test and identifying and classifying.** • Observe closely using simple equipment • Performing simple comparing tests • Comparing and contrasting materials **Enhancement:** Make a miniature fairy garden. **Key Vocabulary:** Deciduous, evergreen, petals, roots, seeds, growing plant, branch, root, stem, trunk, flower, leaf seed, wed living, alive, not living, dead.	**Focus: Animals including humans** **NC ref-** Pupils should be taught to: • 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. **Skills: Science enquiry- identifying and classifying, research and pattern seeking.** • Comparing and contrasting materials • Asking simple questions and recognizing they can be answered in different ways • Use observation to begin to notice patterns **Enhancement:** Visit a farm, visitors bring in a range of animals. **Key Vocabulary:** Carnivores, Omnivores, Herbivores, amphibians, mammals, reptiles, experiment, data, diagram, system, reproduce, animals, shoot fruit, earth, soil.	

2	**Focus: Use of everyday materials** **NC ref-** Pupils should be taught to: • 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 **Skills: Science enquiry comparative fair tests, observation over time and identifying and classifying.** • Perform simple tests- for example which paper towel is the most absorbent? • Measure change over time • Identify and classify properties of materials **Enhancement:** Experiments of proprieties of materials **Key Vocabulary:** Metal, glass, wood, tin, plastic, rough, smooth, flexibility, durability,	**Focus: Animals including humans** **NC ref-** Pupils should be taught to: • 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 **Skills: Science enquiry – pattern seeking, research and identifying and classifying.** • Begin to look for natural patterns and relationships and decide what data to collect and to identify them • Select information from a range or given sources and ask questions • Identify and classify things that are living or dead **Enhancement:** Grow your own butterfly. **Key Vocabulary:** egg, chick, chicken; egg, caterpillar, pupa, butterfly; spawn, tadpole, frog; lamb, sheep.	**Focus: plants** **NC ref-**Pupils should be taught to: • 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. **Skills: Science enquiry -observation over time, comparative fair test and identifying and classifying.** • Measure change over time for example plant growth. • Perform simple tests- for example what if plants get no light • Identify and classify things that are living or dead **Enhancement:** Grow plants/ visit a garden center **Key Vocabulary:** Seeds, growth, germination, reproduction, stigma,	**Focus: Living things** **NC ref-** Pupils should be taught to: • 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. **Skills: Science enquiry- identifying and classifying, research and pattern seeking.** • Identify and classify things that are living or dead • Select information from a range or given sources and ask questions • Begin to look for natural patterns and relationships and decide what data to collect and to identify them **Enhancement:** Visit a woodland/ Dalby walks **Key Vocabulary:** shelter, living, nonliving, woodland, ocean, rainforest, food chain, natural. Manmade, manufactured.

3	**Focus:Rocks** **NC ref-** Pupils should be taught to: • compare and group together different kinds of rocks on the basis of their appearance • and simple physical properties • describe in simple terms how fossils are formed when things that have lived are • trapped within rock • recognise that soils are made from rocks and organic matter. **Skills: Science enquiry – comparative fair testing, identifying and classifying and research.** • Setting up simple and comparative fair test. Only changing one factor. • Gathering recording classifying and presenting data in a variety of ways. Must be 2 variables. • Ask relevant questions and using different types of science enquiry to find to the answer to them. **Enhancement:** Geologist visit – Visit the Rotunda **Key Vocabulary:** fossils, sedimentary rock, rock cycle, soil, clay, grains, crystals, rock, slate, granite, sandstone, chalk, soil, clay, marble, texture, sand, mantel, crust, core.	**Focus: forces** **NC ref-** Pupils should be taught to: • 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 **Skills: Science enquiry -research, comparative fair testing and identifying and classifying** • Ask relevant questions and using different types of science enquiry to find to the answer to them. • Setting up simple and comparative fair test. Only changing one factor. • Gathering recording classifying and presenting data in a variety of ways. Must be 2 variables **Enhancement:** visit York train museum. **Key Vocabulary:** attract, repel, magnetic, materials, copper, steel, poles, magnet, metal, iron, copper, aluminum, steel, brass, attract, repel , magnetic, non-magnetic, force, pull, push, stretch, compress.	**Focus: plants** **NC ref**- Pupils should be taught to: • identify and describe the functions of different parts of flowering plants: roots, • stem/trunk, leaves and flowers • explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant • investigate the way in which water is transported within plants • explore the part that flowers play in the life cycle of flowering plants, including • pollination, seed formation and seed dispersal. • **Skills: Science enquiry – observation over time, comparative fair testing and identifying and classifying.** • Look for changes relating to simple scientific ideas and processes- record findings in simple diagrams. • Setting up simple and comparative fair test. Only changing one factor. • Gathering recording classifying and presenting data in a variety of ways. Must be 2 variables **Enhancement:** Visit to the beach- Robin Hoods Bay- plants of the sea. **Key Vocabulary:** dispersed, fertilizing, stamen, stigma, ovary, water transportation, oxygen, carbon dioxide, plants, light, warmth, water, roots, stem growth, grow, height.	**Focus:Animals including humans** **NC ref-** Pupils should be taught to: • identify that animals, including humans, need the right types and amount of nutrition, • and that they cannot make their own food; they get nutrition from what they eat • identify that humans and some other animals have skeletons and muscles for • support, protection and movement **Skills: Science enquiry- identifying and classifying, pattern seeking and research.** • Gathering recording classifying and presenting data in a variety of ways. Must be 2 variables. • Look for changes relating to simple scientific ideas and processes- record findings in simple diagrams. • Ask relevant questions and using different types of science enquiry to find to the answer to them. **Enhancement:** Dr to visit **Key Vocabulary:** Skull, spine., vertebrate, clavicle, shoulder blades, rotate cuff, ribcage, hips,	**Focus: Light** **NC ref-** Pupils should be taught to: • recognise that they need light in order to see things and that dark is the absence of • light • notice that light is reflected from surfaces • recognise that light from the sun can be dangerous and that there are ways to protect • their eyes • recognise that shadows are formed when the light from a light source is blocked by an opaque object • find patterns in the way that the size of shadows change. **Skills: Science enquiry – pattern seeking. Observation over time and identifying and classifying.** • Look for changes relating to simple scientific ideas and processes- record findings in simple diagrams. • Making systematic and careful observations and where appropriate taking accurate measurements. • Gathering recording classifying and presenting data in a variety of ways. Must be 2 variables. **Enhancement:** Measure shadows, Shadow puppet show **Key Vocabulary:** translucent, opaque, transparent, reflective, light angles, blotch, shadow, distance

4	**Focus: States of matter** **NC ref-** Pupils should be taught to: • 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, • 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 **Skills Science enquiry- comparative fair testing, identifying and classifying and observation over time.** • Setting up simple and practical enquiries using a control variable. • Using classifying keys- Linking 2 variables together- for example the more cells in a circuit the brighter the bulb. • Gathering and recording evidence • Making systematic and careful observations and where appropriate take accurate measurements using standard units. **Enhancement:** Evaporation, condensation, vapor experiments, **Key Vocabulary:** Evaporation, condensation, vapor, water cycle, solids, liquids gases, vibrations, melt, freeze, solidity, solution, dissolve, filter, dissolved , separate, sieve mix.	**Focus: Sound** **NC ref-** Pupils should be taught to: • identify how sounds are made, associating some of them with something vibrating • recognise that vibrations from sounds travel through a medium to the ear • find patterns between the pitch of a sound and features of the object that produced it • find patterns between the volume of a sound and the strength of the vibrations that • produced it • recognise that sounds get fainter as the distance from the sound source increases. **Skills: Science enquiry -research, pattern seeking and comparative fair testing.** • Using straight forward scientific evidence to answer questions or support their findings. • Identify similarities and differences or changes relating to simple scientific ideas and processes. • Setting up simple and practical enquiries using a control variable. **Enhancement:** Music instruments **Key Vocabulary:** pitch, volume, tempo, vibrations, distance, pace, insulation, materials ,	**Focus: Electricity** **NC ref:** Pupils should be taught to: • 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. **Skills Science enquiry- pattern seeking, identifying and classifying and research**. • Identify similarities and differences or changes relating to simple scientific ideas and processes. • Using classifying keys- Linking 2 variables together- for example the more cells in a circuit the brighter the bulb. • Gathering and recording evidence • Using straight forward scientific evidence to answer questions or support their findings **Enhancement:** experiment using circuits **Key Vocabulary:** simple series circuits, components, bulbs, buzzers motors, switches, cells, positive, negative electricity, circuit, battery, bulb, crocodile clip, buzzer, motor, conduct, conductor, insulate, insulator, switch, break, power, bright, brightness, dim, brightness.	**Focus- Animals including humans** **NC ref-**pupils should be taught to: • 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 **Skills Science enquiry- identifying and classifying, comparative fair testing and research.** • Using classifying keys- Linking 2 variables together- for example the more cells in a circuit the brighter the bulb. • Gathering and recording evidence • Setting up simple and practical enquiries using a control variable. • Using straight forward scientific evidence to answer questions or support their findings **Enhancement:** Make poo! **Key Vocabulary:** digestive system, mouth, tongue, teeth, esophagus, stomach and small and large intestine	**Focus:Living things and their habitats** **NC ref-** Pupils should be taught to: • 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. **Skills Science enquiry- observation over time, identifying and classifying and research.** • Making systematic and careful observations and where appropriate take accurate measurements using standard units. • Using classifying keys- Linking 2 variables together- for example the more cells in a circuit the brighter the bulb. • Gathering and recording evidence • Using straight forward scientific evidence to answer questions or support their findings. **Enhancement:** pond dipping **Key Vocabulary:** vertebrate animals into groups such as fish, amphibians, reptiles, birds, and mammals; and invertebrates into snails and slugs, worms, spiders, and insects.

5	**Focus: Properties of materials** **NC ref: Pupils should be taught to:** • 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 **Skills Science enquiry- comparative fair test, identifying and classifying and pattern seeking.** • Identify how and when to use tests • Recognize and control variables • Make predictions based on previous test results. • Use complex classifying keys to identify casual relationships with increasing complexity. • Begin to make their own decisions about what observations to make and measurements to use, how to make them for and if to repeat them. **Enhancement:** Trip to recycling center **Key Vocabulary**: Comparative investigations, Comparative investigations, properties, transparency, conductivity, thermal, dissolve, solution, substance, solids, liquids and gases, mixtures, filtering, evaporating.	**Focus Earth and Space** **NC ref: Pupils should be taught to:** • 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. **Skills Science enquiry- research, pattern seeking and observation over time.** • Explore how Scientific ideas have developed over time. • Begin to make their own decisions about what observations to make and measurements to use, how to make them for and if to repeat them. • Accurately and precisely measure using standard units. **Enhancement:** Dalby forest exploration dome. **Key Vocabulary:** Sun is a star at the centre of our solar system and that it has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune, axis, rotation	**Focus: Forces** **NC ref- Pupils should be taught to:** • explain that unsupported objects fall towards the Earth because of the force of • gravity acting between the Earth and the falling object • identify the effects of air resistance, water resistance and friction, that act between • moving surfaces • recognise that some mechanisms, including levers, pulleys and gears, allow a • smaller force to have a greater effect. **Skills Science enquiry- pattern seeking, comparative fair testing and research.** • Begin to make their own decisions about what observations to make and measurements to use, how to make them for and if to repeat them. • Identify how and when to use tests • Recognize and control variables • Make predictions based on previous test results. • Explore how Scientific ideas have developed over time. **Enhancement:** Make and race cars! Egyptian pulley system. **Key Vocabulary:** Galileo Galilei, Isaac Newton theory of gravitation.	**Focus-Living things and their habitats** **NC ref- Pupils should be taught to:** • 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. **Skills Science enquiry- observation over time, identifying and classifying and research.** • Accurately and precisely measure using standard units. • Use complex classifying keys to identify casual relationships with increasing complexity. • Explore how Scientific ideas have developed over time. **Enhancement:** Compare 2 different locations a pond and a river. **Key Vocabulary:** Hatching, reproduce,	**Focus Animals including humans** **NC ref- Pupils should be taught to:** • describe the changes as humans develop to old age. **Skills Science enquiry- identifying and classifying, research and pattern seeking.** • Use complex classifying keys to identify casual relationships with increasing complexity. • Explore how Scientific ideas have developed over time. • Begin to make their own decisions about what observations to make and measurements to use, how to make them for and if to repeat them. **Enhancement:** Grandparent assembly/ tea **Key Vocabulary:** Growth, puberty, changes over time, development, timelines	**ocusProperties of materials** **F: NC ref- Pupils should be taught to** • 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. **Skills Science enquiry- comparative fair test, identifying and classifying and pattern seeking.** • Identify how and when to use tests • Recognize and control variables • Make predictions based on previous test results. • Use complex classifying keys to identify casual relationships with increasing complexity. • Begin to make their own decisions about what observations to make and measurements to use, how to make them for and if to repeat them. **Enhancement:** build own compost center. **Key Vocabulary:** Comparative investigations, properties, transparency, conductivity, thermal, dissolve, solution, substance, solids, liquids and gases, mixtures, filtering, evaporating.

6	**Focus: Light** **NC ref: Pupils should be taught to:** • 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 **Skills: Science enquiry. Comparative fair test, research, pattern seeking.** • Identify how and when to use test. • Recognize and use control variables • Make predictions based on previous test results. • Identify evidence that supports and refutes casual relationships • Explore how Scientific ideas have developed over time. • Make own decisions about what to observe • To collect measurements using standard units of their own choice • To know how long to make them for and how long to make them for • To choose their own equipment and how to use it accurately. **Enhancement: Eureka trip!** **Key Vocabulary:** fractation, prisms, angle deflection, recap previous unit Year 3 vocabulary	**Focus: Evolution and inheritance.** **NC ref: Pupils should be taught to:** • recognise that living things have changed over time and that fossils provide • information about living things that inhabited the Earth millions of years ago • recognise that living things produce offspring of the same kind, but normally offspring • vary and are not identical to their parents • identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution **Skills: Science enquiry -observation over time, identifying and classifying and research.** • Accurately and precisely measure using standard unit of their own choice • Take repeat readings when appropriate and choice appropriate data presentation I.E Scatter graphs. • Develop classifying keys • Identify evidence that supports and refutes casual relationships. • Identify evidence that supports and refutes casual relationships • Explore how Scientific ideas have developed over time. **Enhancement:** **Key Vocabulary:** paleontologists such as Mary Anning and about how Charles Darwin and Alfred Wallace developed their ideas on evolution, Chromosomes	**Focus: Living things and their habitats.** **NC ref- Pupils should be taught to:** • 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. **Skills: Science enquiry – identifying and classifying, research and comparative fair testing.** • Develop classifying keys • Identify evidence that supports and refutes casual relationships. • Identify evidence that supports and refutes casual relationships • Explore how Scientific ideas have developed over time. • Identify how and when to use test. • Recognize and use control variables • Make predictions based on previous test results. **Enhancement:** habitat walk (with a train) / crucial crew **Key Vocabulary:** Classification, species, biodome, ecosystem, micro-organisms, fauna and flora, Carl Linnaeus	**Focus: Animals including humans** • **NC ref- Pupils should be taught to:** identify and name the main parts of the human circulatory system, and describe the • functions of the heart, blood vessels and blood • recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies • function • describe the ways in which nutrients and water are transported within animals, including humans. **Skills: Science enquiry – pattern seeking, comparative fair test and research.** • Make own decisions about what to observe • To collect measurements using standard units of their own choice • To know how long to make them for and how long to make them for • To choose their own equipment and how to use it accurately • Identify how and when to use test. • Recognize and use control variables • Make predictions based on previous test results • Identify evidence that supports and refutes casual relationships • Explore how Scientific ideas have developed over time. **Enhancement** **Key Vocabulary:** scientific research about the relationship between diet, exercise, drugs, lifestyle and health	**NC ref- Electricity.** **Focus: Pupils should be taught to:** • 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 recognized symbols when representing a simple circuit in a diagram **Skills Science enquiry- research, pattern seeking and comparative fair test.** • Identify evidence that supports and refutes casual relationships • Explore how Scientific ideas have developed over time. • Make own decisions about what to observe • To collect measurements using standard units of their own choice • To know how long to make them for and how long to make them for • To choose their own equipment and how to use it accurately. • Identify how and when to use test. • Recognize and use control variables • Make predictions based on previous test results. **Enhancement:** Make an operation style game/ alarm Electrician to visit and talk. **Key Vocabulary:** Alarm, circuits, components, switches, bulbs, buzzers and motors