

Science teaching sequences nursery:

Autumn		Spring		Summer	
Understanding the World					
All About Me	Journeys	Dinosaurs	Growing and changing	Animals and their Babies	Heroes and Adventurers
<p>Learning sequence:</p> <ul style="list-style-type: none"> The season of Autumn, leaves changing colour and falling from trees. Animals begin to prepare for colder weather and hibernation e.g. squirrels bury nuts in the ground. Temperatures getting colder as winter approaches. 	<p>Learning sequence:</p> <ul style="list-style-type: none"> Plan a journey to the local park, or around the school grounds what would we see? What grows in our school, what grows in the park? People journey around the world to see different places and environments; Ernest Shackleton and his journey to the South Pole. Contrasting environments; journeys to cold places, what would we need to take with us? Look at some recent memorable journeys, e.g. Perseverance landing on Mars. (Children will learn more about space in Reception) 	<p>Learning sequence:</p> <ul style="list-style-type: none"> We know about dinosaurs because people have found fossils in the ground. Rocks can sometimes contain fossils that palaeontologists can study. The dodo is an animal that is now extinct. It could not fly and so died out because of loss of habitat and introduction of animals to its island home. 	<p>Learning sequence:</p> <ul style="list-style-type: none"> Plants need water and light to grow (this will be built upon throughout the curriculum) Grow 'beanstalks'; plant and observe plants growing e.g. sunflowers, cress etc. Talk about how the plants change. Investigate materials to create stable structures (wheat, sticks, blocks) Make observations of the world around them, describe things they have seen e.g. plants, animals, natural objects and man-made objects. Recognise the season of Spring and notice new plants growing. 	<p>Learning sequence:</p> <p>Recognise and use the following vocabulary:</p> <ul style="list-style-type: none"> Farm Animals: cow/calf, pig/piglet, sheep/lamb, chicken/chick, horse/foal Pets: dog/puppy, cat/kitten Wild animals: kangaroo/joey, lion/cub Life cycles: chicks, caterpillars, tadpoles 	<p>Learning sequence:</p> <ul style="list-style-type: none"> Ice investigation- (link to South Pole – Shackleton). Ice changes from a solid to a liquid when it melts. Boats in water – explore floating and sinking. How many pennies can my boat hold? Contrasting space with our local environment

West Road Primary Academy
 Science Teaching Sequence

Key vocabulary: Head, shoulders, arms, knees, hands, feet, ankles, wrists, elbows, knuckles, Spring, summer, autumn, winter, temperature, warmer, cooler, sun, rain, snow, wind	Key vocabulary: metal, wood, rubber, steam, power, burn, coal, heat, billowing, depart, diesel, electricity.	Key vocabulary: Jurassic, Tyrannosaurus Rex, Stegosaurus, Diplodocus, Velociraptor, land, jaws, teeth, arms, back legs, tail, claws, skin, carnivore, triceratops, hunt, fossils	Key vocabulary: Spring, summer, autumn, winter, sun, snow, wind, rain, warmth, light, soil, plant, seed, bean,	Key vocabulary: As above	Key vocabulary: Ice, cold, temperature, float, sink, solid, liquid
Notable people:	Notable people: <ul style="list-style-type: none"> • Ernest Shakleton 	Notable people: <ul style="list-style-type: none"> • Mary Anning 	Notable people:	Notable people:	Notable people: <ul style="list-style-type: none"> • Ernest Shakleton

Science teaching sequences reception:

Autumn		Spring		Summer	
Understanding the World					
All About Me	Transport	Space	Growing and changing	Kings and Queens	Heroes and Adventurers
<p>Learning sequence:</p> <ul style="list-style-type: none"> The human body: Facial features, body parts, the senses Seasons of the year; Autumn. Deciduous and evergreen trees Observing leaves using magnifying glasses, leaves changing colour. 	<p>Learning sequence:</p> <ul style="list-style-type: none"> Forces: push, pull, twist Air transport Water transport Seasons of the year: Winter. Animal hibernation, why do some animals hibernate? How do other animals survive winter? Transport in the winter; snow ploughs, gritting roads, snow tyres. Changing state of matter; frost and ice- looking closely at ice, what happens when it warms? Why can we see our breath when it is cold? 	<p>Learning sequence:</p> <ul style="list-style-type: none"> Our planet Earth, land and sea, plants and animals, weather, gravity. The moon, the sun, the planets in our solar system, space travel, astronauts. Seasons of the year: Spring. The first signs of spring; snowdrops, cherry blossom, buds and flowers, birds nesting, bees, lighter evenings. 	<p>Learning sequence:</p> <ul style="list-style-type: none"> Growing and changing; how people change as they grow, how animals change as they grow. Life cycles of a butterfly and/or frog. Identify and draw the following animals and their babies including but not limited to: Sheep and Lamb Cows and Calf Horse and foal Butterfly and Caterpillar Frog and tadpole Dog and puppy Cat and kitten Plants; how they grow from seeds and bulbs. What plants need to grow. Identify parts of plants including roots, stem and leaves. 	<p>Learning sequence:</p> <ul style="list-style-type: none"> Seasons of the Year: Summer. Signs of summer; flowers, warmer days, light evenings, butterflies, bees, birds. Design a garden for the Queen; what could we grow? What would we include? Sketch some ideas and write about the design. 	<p>Learning sequence:</p> <ul style="list-style-type: none"> Seasons of the Year: Summer. How we stay safe in the sun; sunscreen, hats, sunglasses. Safety around water. Changing state of matter; Why do our ice lollies melt?

West Road Primary Academy
 Science Teaching Sequence

			<ul style="list-style-type: none"> Identify trees and plants growing locally on the school grounds or in local parks. Draw pictures of local plants. 		
<p>Key vocabulary: Bones, muscles, skin, brains, skulls, sensory, physical, impairment, deaf, blind, Autumn, cooler, darker, deciduous, evergreen, brown, gold, yellow, red, dark, light, dry.</p>	<p>Key vocabulary: Push, pull, Winter, Autumn, Spring, Summer, hibernation, snow, ice, frost,</p>	<p>Key vocabulary: Earth, planet, land, ocean, gravity, sun, daylight, night time, orbit, astronomer, telescope, Galileo, Caroline Herschel, comets, stars, planets, rocket, shuttle, astronaut, space suit, space boots, helmet, gravity, oxygen.</p>	<p>Key vocabulary: Plants, growing, mature, seed, healthy diet, clean, life cycle, mammal, insect, amphibian, reptile, bird, fish</p>	<p>Key vocabulary: Summer, flower, day, night, butterflies, birds, insects, bees, garden, pollen,</p>	<p>Key vocabulary: Matter, state, melt, ice, heat, warm, Summer, safe, Sun,</p>
<p>Notable people:</p>	<p>Notable people:</p> <ul style="list-style-type: none"> George Stevenson 	<p>Notable people:</p> <ul style="list-style-type: none"> Tim Peake Galileo Caroline Herschel 	<p>Notable people:</p>	<p>Notable people:</p>	<p>Notable people:</p> <ul style="list-style-type: none">

West Road Primary Academy
Science Teaching Sequence

<ul style="list-style-type: none"> identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense (NC Yr1) 	<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) (NC Yr1) 	<ul style="list-style-type: none"> observe changes across the 4 seasons observe and describe weather associated with the seasons and how day length varies (NC Yr1) 		<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 	<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
<p>Key vocabulary:</p> <ul style="list-style-type: none"> human senses eyes ears mouth nose skin sensory impairment 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> animal mammal amphibian reptile bird fish pet omnivore carnivore herbivore 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Spring Summer Autumn Winter Rain gauge Thermometer Weather vane Data Clouds Flood Hurricane 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> natural resources manufactured resources renewable non-renewable pollution environment recycle conserve 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> plant root stem leaves seed deciduous evergreen 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Material Properties Transparent Opaque Magnet Attract Repel Purpose

West Road Primary Academy
Science Teaching Sequence

		<ul style="list-style-type: none">• Meteorologist			
Notable people: <ul style="list-style-type: none">• Helen Keller	Notable people:	Notable people:	Notable people:	Notable people:	Notable people:

West Road Primary Academy
Science Teaching Sequence

<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> differences between living, dead and 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 (NC Yr2) 	<ul style="list-style-type: none"> This unit goes beyond the requirements of the National Curriculum for Year 2. It has been written and included in our partnership to teach some important background knowledge that will help children in Year 4, when electricity features again to access curriculum content at greater depth. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> This unit has been written in addition to the National Curriculum content in Science for Year 2. It has been included to give pupils some prior knowledge which will be useful when they study astronomy again in Year 5.
<p>Key vocabulary:</p> <ul style="list-style-type: none"> skeleton joint muscles digest red blood cell arteries veins germs Edward Jenner Louis Pasteur 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Alive Dead Habitat# Microhabitat Adaptation Food chain Producer Consumer 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Electricity Electrical current Electric shock Circuit Battery Light bulb Switch Wire Conductor Insulator 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Plant Root Stem Leaves Seed Seedling Bulb Germinate Crops 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Matter Solid Liquid Atoms Materials Properties Transparent Opaque 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Material Properties Transparent Opaque Magnet Attract Repel Purpose
<p>Notable people:</p>	<p>Notable people:</p>	<p>Notable people:</p>	<p>Notable people:</p>	<p>Notable people:</p>	<p>Notable people:</p> <ul style="list-style-type: none"> Azophi

West Road Primary Academy
Science Teaching Sequence

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Science teaching sequences Y3:

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Human Body	Cycles in Nature	Light	Plants	Rocks	Forces and Magnets
<p>Teaching sequence:</p> <ul style="list-style-type: none"> To know that we can control our voluntary muscles, but we do not control our involuntary muscles. To know our bones help us to move and protect some parts of our bodies. To know that the brain is the centre of the nervous system. To understand how the brain and mouth start the digestive process. To describe the simple functions of the basic parts of the digestive system in humans To be able to describe one of the many systems in our body. 	<p>Teaching sequence:</p> <ul style="list-style-type: none"> To know that our natural environment changes as the seasons change. To understand how plants can change through the seasons To know that plants grow, live and reproduce. To know that some animals migrate. To recognise the different stages in the life cycle of a frog. To understand that there are cycles in nature 	<p>Teaching sequence:</p> <ul style="list-style-type: none"> To understand that we need light in order to see things. To know that transparent materials let light through and opaque materials block light from passing through. To understand that mirrors can reflect light in different ways depending on their shape. To demonstrate that our shadows change size throughout the day. To know that light is essential for life on earth. 	<p>Teaching sequence:</p> <ul style="list-style-type: none"> To know that flowering plants all have roots, a stem or trunk, leaves and flowers but not all flowering plants look the same. To know that different plants need different things in order to thrive. To understand that water moves from the roots of a plant, upwards via the stem. To know that pollination is needed for flowering plants to reproduce. To understand that plants spread their seeds in many different ways to reproduce 	<p>Teaching sequence:</p> <ul style="list-style-type: none"> To know there are many different types of rocks. To know that geologists sort rocks into three main groups. To understand that some rocks allow water to pass through, but others do not. To know that some rocks contain fossils which can tell us about life millions of years ago. To recognise that soils are made from rocks and organic matter To explain rocks and what they can tell us about our planet. 	<p>Teaching sequence:</p> <ul style="list-style-type: none"> To know a force is a push or a pull. To understand that friction is the force between two surfaces. To know that magnets have an invisible push or pull force. To know that magnets have poles and a magnetic field. To know that magnetic forces are not all the same strength. To be able to explain that we cannot see forces, but we can see the impact they have, using examples of gravity, friction and magnetism.
<p>Links to NC:</p> <ul style="list-style-type: none"> identify that animals, including 	<p>Links to NC:</p> <ul style="list-style-type: none"> identify and describe the 	<p>Links to NC:</p> <ul style="list-style-type: none"> Recognise that they need light in 	<p>Links to NC:</p> <ul style="list-style-type: none"> identify and describe the 	<p>Links to NC:</p> <ul style="list-style-type: none"> compare and group together 	<p>Links to NC:</p>

West Road Primary Academy
Science Teaching Sequence

<p>humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat</p> <ul style="list-style-type: none"> • identify that humans and some other animals have skeletons and muscles for support, protection and movement. 	<p>functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers (NC Yr3) • explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal (NC Yr3)</p>	<p>order to see things and that dark is the absence of light</p> <ul style="list-style-type: none"> • 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. 	<p>functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <ul style="list-style-type: none"> • 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. 	<p>different kinds of rocks on the basis of their appearance and simple physical properties</p> <ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • compare how things move on different surfaces • notice that some forces need contact between 2 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 2 poles • predict whether 2 magnets will attract or repel each other, depending on which poles are facing
<p>Key vocabulary:</p> <ul style="list-style-type: none"> • Voluntary • Involuntary 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> • Cycle • Seasonal cycle 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> • Light • Dark 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> • Plant • Root 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> • Geology • Permeable 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> • Force • Contact force

West Road Primary Academy
 Science Teaching Sequence

<ul style="list-style-type: none"> • Joint • Spinal cord • Reflex • Oesophagus • Incisor • Canine 	<ul style="list-style-type: none"> • Deciduous • Evergreen • Dormant • Nutrients • Decay • Metamorphosis • Frogspawn • Tadpole • Pollen • Seed 	<ul style="list-style-type: none"> • Light source • Transparent • Opaque • Reflect • Shadow 	<ul style="list-style-type: none"> • Stem • Leaves • Flowers • Nutrients • Absorb • Pollination • Dispersal 	<ul style="list-style-type: none"> • Impermeable • Fossils • Soil • Sediment 	<ul style="list-style-type: none"> • Magnet • Magnetism • Magnetic field • Magnetic poles • Lodestone
Notable people:	Notable people:	Notable people:	Notable people: <ul style="list-style-type: none"> • Joseph Banks • George Washington Carver 	Notable people: <ul style="list-style-type: none"> • Mary Anning 	Notable people:

West Road Primary Academy
Science Teaching Sequence

<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 (NC Yr3) • describe the simple functions of the basic parts of the digestive system in humans (NC Yr4) • identify the different types of teeth in humans and their simple functions (NC Yr4) 	<ul style="list-style-type: none"> • recognise that living things can be grouped in a variety of ways (NC Yr4) • explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment (NC Yr4) • 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 (NC Yr6) • give reasons for classifying plants and animals based on specific characteristics (NC Yr6) 	<ul style="list-style-type: none"> • recognise that environments can change and that this can sometimes pose dangers to living things. • construct and interpret a variety of food chains, identifying producers, predators and prey. 	<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. (NC Yr4) 	<ul style="list-style-type: none"> • 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"> • 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
<p>Key vocabulary:</p> <ul style="list-style-type: none"> • Digestion 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> • Vertebrate 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> • Habitat 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> • Vibrations 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> • Cycle 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> • Electricity

West Road Primary Academy
 Science Teaching Sequence

<ul style="list-style-type: none"> • Salivary glands • Peristalsis • Oesophagus • Stomach • Small intestine • Large intestine • Urethra • Vitamins 	<ul style="list-style-type: none"> • Invertebrate • Fish • Amphibian • Reptile • Bird • Mammal • Insects • Arachnids • Molluscs • Flowering • Non-flowering 	<ul style="list-style-type: none"> • Producer • Consumer • Decomposer • Ecosystem • Pollution 	<ul style="list-style-type: none"> • Sound waves • Pitch • Volume • Larynx • Sound barrier • Supersonic • Ear drum 	<ul style="list-style-type: none"> • Solid • Liquid • Gas • Water vapour • Evaporation • Condensation • Precipitation 	<ul style="list-style-type: none"> • Circuit • Electrical current • Battery • Light bulb • Filament • Switch • Wire • Conductor • Insulator
Notable people:	Notable people: <ul style="list-style-type: none"> • Carl Linnaeus 	Notable people:	Notable people:	Notable people:	Notable people: <ul style="list-style-type: none"> • Thomas Edison • Lewis Latimer

Science teaching sequences Y5:

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Human Body	Materials	Living Things	Forces	Astrology	Meteorology
<p>Teaching sequence:</p> <ul style="list-style-type: none"> To know the stages of human growth To know that the human body changes as it goes through puberty To identify physical and mental changes to the human body that happen from adulthood to old age To know that humans reproduce To know what the endocrine system is and the role of some of the glands in the body To show my understanding of the human reproductive and endocrine system and their role in human development. 	<p>Teaching sequence:</p> <ul style="list-style-type: none"> To understand that materials can be grouped according to their properties and to know the definitions of some properties To know that thermal conductivity means heat can be transferred through a material. To understand that a solution is a mixture of a solid in a liquid where the solid has broken into parts too small to see. To know methods for separating mixtures including solutions To understand that all changes are either reversible or irreversible and be able to distinguish between them. 	<p>Teaching sequence:</p> <ul style="list-style-type: none"> To recognise how plants and animals in our local area change throughout the year. To know that mammals and Amphibians have different life cycles. To know that insects and Birds have different life cycles. To know that flowering plants need pollen to reproduce. To know that Jane Goodall and David Attenborough have dedicated their lives to studying the natural world and communicating their findings. 	<p>Teaching sequence:</p> <ul style="list-style-type: none"> To know a force is either a push or a pull. To know that friction occurs when two objects move against each other. To understand that objects with a large surface area will have greater air resistance than objects with a small surface area. To know simple machines help us to increase the force we apply to an object to help us move it. 	<p>Teaching sequence:</p> <ul style="list-style-type: none"> To know that astronomers believe the universe began with the Big Bang, and that it is still expanding today To understand that gravity is a force that holds objects together To know the planets of our Solar System To understand the Moon's phases To understand that the Solar System is just a small part of our universe To demonstrate knowledge of astronomy 	<p>Teaching sequence:</p> <ul style="list-style-type: none"> To know the atmosphere protects Earth and enables life To know that human actions can impact the Earth's atmosphere To know that the UK experiences six air masses affecting the weather To know a weather front is a boundary where warm and cold air meet To know thunder and lightning is caused by electrical charge moving through the air.

West Road Primary Academy
Science Teaching Sequence

<p>Links to NC:</p> <ul style="list-style-type: none"> describe the changes as humans develop to old age. 	<p>Links to NC:</p> <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 	<p>Links to NC:</p> <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. 	<p>Links to NC:</p> <ul style="list-style-type: none"> 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. (NC Yr5) 	<p>Links to NC:</p> <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. 	<p>Links to NC:</p> <ul style="list-style-type: none"> This unit is in addition to NC science content
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West Road Primary Academy
Science Teaching Sequence

	<p>materials, including metals, wood and plastic</p> <ul style="list-style-type: none"> demonstrate that dissolving, mixing and changes of state are reversible changes (NC Yr5) 				
<p>Key vocabulary:</p> <ul style="list-style-type: none"> Foetus Gestation period Adolescence Puberty Hormone Growth stage 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Physical property Mixture Dissolve Solvent Solute Saturated Reversible Evaporation Filtering 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Life cycle Reproduction Interconnection Mammal Amphibian Metamorphosis Hibernate Incubate Larva 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Force Gravity Friction Air resistance Water resistance Buoyancy Upthrust Streamline 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Astronomer Astronomy Universe Galaxy Star Solar System Orbit Light year Big Bang Theory Gravity Satellite The Milky Way 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Meteorology Meteorologist Atmosphere The Ozone Layer Weather Climate Maritime climate Air mass Front Anemometer Lightning Thunder
<p>Notable people:</p>	<p>Notable people:</p>	<p>Notable people:</p> <ul style="list-style-type: none"> Jane Goodall David Attenborough 	<p>Notable people:</p>	<p>Notable people:</p> <ul style="list-style-type: none"> Neil Armstrong Buzz Aldrin 	<p>Notable people:</p>

Science teaching sequences Y6:

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Human Body	Classification of Living Things	Electricity	Light	Reproduction	Evolution
<p>Teaching sequence:</p> <ul style="list-style-type: none"> To understand that the heart is formed of two sets of chambers To understand that blood vessels transport blood around the body To understand that blood is made up of different components To understand how the heart rate can speed up or slow down, depending on what the body is doing To know that there are many things that can be varied and changed in an experiment, we call the things we can change variables. 	<p>Teaching sequence:</p> <ul style="list-style-type: none"> To know there are five kingdoms of organisms. To know that plant and animal cells are different. To know that taxonomy is used to show how organisms are related to each other To know that vertebrates are classified into five groups: fish, amphibians, reptiles, birds and mammals. To understand that scientists divide invertebrates into groups including insects, arachnids and molluscs. To be able to classify animals based on specific characteristics and give reasons. 	<p>Teaching sequence:</p> <ul style="list-style-type: none"> To know that electricity flows in a circuit. To understand that the brightness of a lamp or the volume of a buzzer depends on the number and voltage of cells used in a circuit. To demonstrate that switches control the flow of electricity in a circuit. To know that circuits can be used to make electrical toys. To independently design and make a circuit for a purpose 	<p>Teaching sequence:</p> <ul style="list-style-type: none"> To know that light is a source of illumination that allows us to see. To know that light enters our eyes, allowing us to see. To test the hypothesis that shadows are always the same shape as the object that made them. To understand what light is made of and how a prism works. A periscope uses mirrors to reflect an image of something out of sight. To understand how light behaves. 	<p>Teaching sequence:</p> <ul style="list-style-type: none"> To know that asexual reproduction does not require male and female cells. To understand sexual reproduction in flowering plants. To know that many plants clothe their seeds with fruit. To understand sexual reproduction in animals. To know that different animals have different growth stages. To know how plants and animals reproduce. 	<p>Teaching sequence:</p> <ul style="list-style-type: none"> To know fossils are physical evidence of life from long ago To know offspring are usually similar to, but not identical to their parents To know living things can adapt to suit their environment To know who Charles Darwin was and what natural selection is To know who Alfred Wallace was and understand his contribution to the theory of evolution

West Road Primary Academy
Science Teaching Sequence

<p>Links to NC:</p> <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. Describe the ways in which nutrients and water are transported within animals, including humans. 	<p>Links to NC:</p> <ul style="list-style-type: none"> describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals give reasons for classifying plants and animals based on specific characteristics (NC Yr6) 	<p>Links to NC:</p> <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 	<p>Links to NC:</p> <ul style="list-style-type: none"> 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. 	<p>Links to NC:</p> <ul style="list-style-type: none"> This unit goes beyond National Curriculum requirements and builds on knowledge of reproduction from Year 5 	<p>Links to NC:</p> <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.
<p>Key vocabulary:</p> <ul style="list-style-type: none"> Circulatory system Transport Atria Ventricles Valves Aorta Arteries Veins 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Classification Organism Animal Plant Taxonomy 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Electricity Electrical current Electric shock Circuit Battery Light bulb Switch Wire 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Light Speed of light Mirror Shadow Reflection Prism 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Reproduction Asexual reproduction Sexual reproduction Germinate Pollination Fertilisation 	<p>Key vocabulary:</p> <ul style="list-style-type: none"> Fossil Palaeontologist Anthropologist Adaptation Variation Evolution Inheritance Natural selection

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<ul style="list-style-type: none"> • Capillaries • Pulse rate 		<ul style="list-style-type: none"> • Conductor • Insulator 		<ul style="list-style-type: none"> • Foetus • Gestation 	<ul style="list-style-type: none"> • Species • Extinct • Wallace line • Theory
Notable people:	Notable people: <ul style="list-style-type: none"> • Carl Linnaeus 	Notable people:	Notable people:	Notable people:	Notable people: <ul style="list-style-type: none"> • Charles Darwin • Alfred Wallace