LONG TERM PLAN <u>SCIENTIFIC KNOWLEDGE</u> (Frequency of Coverage of Skills)

Singleton C E Primary School

	EYFS YEAR A/B	CLASS 1 YEAR A	CLASS 1 YEAR B	CLASS 2 YEAR A	CLASS 2 YEAR B	CLASS 3 YEAR A	Class 3 Year B
Scientific knowledge BIOLOGY	**<u>PLANTS</u>** They make observations of plants and explain why some things occur, and talk about changes. They talk about the features of their own immediate environment and how environments might vary from one another. Know about similarities and differences in relation to plants. **<u>ANIMALS INCLUDING HUMANS</u>** Children know about similarities and differences in relation to living things. They make observations of living things and explain why some things occur, and talk about changes. Know about similarities and differences in relation to living things	**<u>PLANTS</u>** **Planting Beans** To identify and describe the basic structure of a variety of common flowering plants by planting a bean **I can identify and name common wild plants.** To gather and record data to help in answering questions by finding out which wild plant is the most common. **Terrific Trees** To identify and name a variety of common wild and garden plants, including deciduous and evergreen trees by identifying trees from their leaves **Parts of Plants** To identify and describe the basic structure of a variety of common flowering plants, including trees by making and labelling plant pictures. **How Do Plants Grow** To observe closely, using simple equipment in the context of observing the growth of bean plants. **<u>ANIMALS INCLUDING HUMANS</u>** **My Body** To identify, name, draw and label the basic parts of the human body in the context of drawing and labelling a diagram of the body. **Senses** To say which part of the body is associated with each sense in the context of drawing activities that use the sensory organs. **Sense Detectives** To perform simple tests in the context of investigating each of the five senses. **Grouping Animals** To identify and name a variety of common animals including, fish, amphibians, reptiles, birds and mammals in the context of naming animals. **Animal Bodies** To describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets in the context of describing pictures of common animals. **What Do I Eat?** To identify and name a variety of common animals that are carnivores, herbivores and omnivores in the context of recognising if animals are carnivores, herbivores or omnivores.	**<u>LIVING THINGS AND THEIR HABITATS</u>** **Living, Dead and Never Alive** To explore and compare the differences between things that are living, dead, and things that have never been alive by thinking about life processes. **Local Habitats** To identify and name a variety of plants and animals in their habitats, by mapping a habitat and identifying its inhabitants. **Microhabitats** To identify and name a variety of plants and animals in their habitats, including microhabitats by identifying mini-beasts in microhabitats. **World Habitats** To 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, by researching habitats and the animals that live in them Living, Dead and Never Alive To 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 by considering the adaptations of animals, and how living things in a habitat depend on each other. **Food Chains** 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 by making a variety of food chains. **<u>ANIMALS INCLUDING HUMANS</u>** **Animal Babies** To notice that animals, including humans, have offspring which grow into adults, by describing the changes to animals as they grow. **Growing and Changing** To notice that animals, including humans, have offspring which grow into adults, by learning about how humans grow and change. **Basic Needs** To find out about and describe the basic needs of animals, including humans, for survival (water, food and air), by identifying the ways that different animals meet their basic needs **Healthy Eating** To describe the importance for humans of eating the right amounts of different types of food, by exploring food groups. **Exercise** To describe the importance for humans of exercise, by finding out why humans need to exercise. **Hygiene** To describe the importance for humans of hygiene, by learning about good hygiene habits	**<u>ANIMALS INCLUDING HUMANS</u>** **Types of Nutrition** Identify that they cannot make their own food; they get nutrition from what they eat by comparing how plants and humans obtain food **Amount of Nutrition** Identify that animals, including humans, need the right amount of nutrition in the context of identifying differences and similarities related to simple scientific processes by grouping animals according to their diets **Types of Skeleton** Identify that humans and some other animals have skeletons by investigating skeleton types. **Naming Bones** Identify that humans and some other animals have skeletons by identifying the parts of the skeleton. **Functions of a Skeleton** Identify that humans and some other animals have skeletons for support, protection and movement, by focusing on skeleton types. **Mighty Muscles** Identify that humans and some other animals have muscles for movement by examining how muscles work. **Recording findings** using simple scientific language by writing the results of the practical investigation. **<u>PLANTS</u>** **Observing Plants** To observe closely using simple equipment by recording observations of a variety of plants in the local environment **Seeds and Bulbs** To observe and describe how seeds and bulbs grow into mature plants by planting seeds and bulbs **Life Cycles** To observe and describe how seeds and bulbs grow into mature plants by **What Do Plants Need?** To find out and describe how plants need water, light and a suitable temperature to grow and stay healthy by comparing the growth of seedlings under different conditions. **Plants We Eat** To find out and describe how plants need water, light and a suitable temperature to grow and stay healthy by explaining what conditions plants need to grow well **How Different Plants Grow** To observe and describe how seeds and bulbs grow into mature plants by comparing the growth of seeds and bulbs.	**<u>LIVING THINGS AND THEIR HABITATS</u>** **Grouping Living Things** To recognise that living things can be grouped in a variety of ways by sorting living things into a range of groups. **Classifying Vertebrates T**o explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment by generating questions to sort vertebrates in a classification key. **Invertebrate Hunt** To explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment by using keys to identify invertebrates found in the local environment **Classification Keys** To explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment by creating classification keys. **Local Habitat Survey** To recognise that environments can change and that this can sometimes pose dangers to living things by identifying changes and dangers in the local habitat. **Environmental Changes** To recognise that environments can change and that this can sometimes pose dangers to living things by learning about environmental dangers and endangered species. **<u>ANIMALS INCLUDING HUMANS</u>** **Digestive System Parts** To describe the simple functions of the basic parts of the digestive system in humans in the context of identifying the parts of the digestive system **Digestive System Functions** To describe the simple functions of the basic parts of the digestive system in humans by explaining the functions of the different parts of the digestive system. **Types and Functions of Teeth** To identify the different types of teeth in humans and their simple functions by learning about different types of teeth. **Tooth Decay Enquiry** Part 1 To ask relevant questions and use different types of scientific enquiries to answer them by distinguishing between scientific and non-scientific questions and choosing between types of scientific enquiry. **Tooth Decay Enquiry Part 2** To make systematic and careful observations by observing the changes that occur in their enquiry or test. To use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions By presenting findings, making predictions and raising **Digestive System Parts** To construct and interpret a variety of food chains, identifying producers, predators and prey by understanding food chains and the role	**<u>ALL LIVING THINGS AND THEIR HABITATS</u>** **Making New Plants 1** To describe the life process of **reproduction in some plants** and animals by exploring sexual reproduction in plants. **Mammals To describe the life cycle of a mammal** by exploring the life cycles of mammals in different habitats. To describe the life process of reproduction in some plants and animals by describing sexual reproduction in mammals. **To describe the life process of reproduction in some plants and animals** by exploring Jane Goodall's work with chimpanzees. **Metamorphosis** To describe the differences in the life cycles of an amphibian and an insect by exploring complete and incomplete metamorphosis. **Comparing Life Cycles** To describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird by describing and comparing different life cycles, including birds. **<u>ANIMALS INCLUDING HUMANS</u>** **Humans Timeline** Describe the changes as humans develop to old age by drawing a timeline to indicate stages in the growth and development of humans. **Growth of Babies** Describe the changes as humans develop to old age in the context of the development of babies in their first year **Puberty** Describe the changes as humans develop to old age by comparing the changes that take place to boys and girls during puberty. **Changes in Old Age** Describe the changes as humans develop to old age by understanding the changes that take place in old age. **Gestation Periods** Report findings from enquiries, including oral and written explanations of results in the context of the gestation period for animals.	**<u>LIVING THINGS AND THEIR HABITTATS</u>** **<u>Classifying conundrums</u>** Give reason for classifying certain plants and animals based on specific characteristics **<u>Linnaean system</u>** To describe how living things can be classified into broad groups based upon observable characteristics including micro-organisms, plants and animals. **<u>Curious creatures</u>** To describe how living things can be classified into broad groups based upon observable characteristics of mammals, birds, insects, reptiles, amphibians, fish, arachnids, annelids, crustaceans, echinoderms and molluscs **Micro-organisms** Explore helpful and harmful microorganisms and identify the characteristics of micro-organisms **Field work** I can identify micro-organisms in my environment **<u>ANUIMALS INCLDUING HUMANS</u>** **The Circulatory System: Parts To identify and name the main parts of the human circulatory system** by recalling prior knowledge of systems in the human body and labelling a diagram. **The Circulatory System: Functions** To describe the functions of the heart, blood vessels and blood by investigating how the different parts of the circulatory system work. **Transporting Water and Nutrients** To describe the ways in which nutrients and water are transported within animals, including humans in the context of the human body. **Healthy Lifestyle** To recognise the impact of diet and exercise on the way their bodies function by describing the effects of a healthy lifestyle. **Exercise Investigation** To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary taking measurement with increasing accuracy and precision, taking repeat readings when appropriate by creating an enquiry that compares and categorises different forms of exercise and by taking accurate pulse measurements to gather data. **Impact of Drugs and Alcohol** To recognise the impact of drugs on the way their bodies function in the context of drugs and alcohol. **<u>EVOLUTION AND INHERITANCE</u>** **Inheritance** Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents in the context of

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					of different plants and animals within them.		inheritance. **Adaptation** Identify how animals and plants are adapted to suit their environment in different ways in the context of environmental variation **Theory of Evolution** Identifying scientific evidence that has been used to support or refute ideas or arguments; Identify how adaptation may lead to evolution by examining the theories of evolution constructed by Darwin and Wallace. **Evidence for Evolution** Identifying scientific evidence that has been used to support or refute ideas or arguments; Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago in the context of the evolution of plants and animals. **Evidence for Evolution**: Humans Identifying scientific evidence that has been used to support or refute ideas or arguments; Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago in the context of the evolution of human beings. **Adaptation, Evolution and Human Intervention** Identify how adaptation may lead to evolution by examining the advantages and disadvantages of specific adaptations and the role of human intervention in the process of evolution.
Scientific knowledge **CHEMISTRY**	**EVERYDAY MATERIALS** Children know about similarities and differences in relation to objects and materials. They make observations explain why some things occur, and talk about changes	**EVERYDAY MATERIALS** **Naming Materials** To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock by matching a material to its name. **Objects and Materials** To distinguish between an object and the material from which it is made by naming objects and identifying the material which they are made from **Properties** To distinguish between an object and the material from which it is made by looking and touching different materials. **Testing Properties** To describe the simple physical properties of a variety of everyday materials by testing different objects. **Umbrella Investigation** To observe closely by watching what happens to teddy. **Sorting** To compare and group together a variety of everyday materials on the basis of their simple physical properties by sorting objects.	**USE OF EVERYDAY MATERIALS** **Identifying Uses** 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, by identifying the uses of different materials. **Out and About To identify and classify the uses of everyday materials**, in the context of the local area. **Comparing Suitability** 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, by exploring the purposes of different objects **Changing Shape** To find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching, by changing the shape of objects. **Recycling** To find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching, in the context of recycling. **Discovering New Materials** To find out about people who have developed new materials, by learning about John McAdam. • I can tell you about the inventor John McAdam.	**ROCKS** **Types of Rocks** Compare different kinds of rocks based on their appearance in the context of understanding the difference between natural and human-made rocks. ***IGNEOUS METAMORPHIC SEDIMENTARY*** **Grouping Rocks** Making systematic and careful observations by examining different types of rocks **Fantastic Fossils** Describe in simple terms how fossils are formed when things that have lived are trapped within rock by explaining the fossilisation process and by comparing fossils to the animals they belong to **Mary Anning** Identifying changes related to simple scientific ideas in the context of theories about fossils. **Soil Formation** Recognise that soils are made from rocks and organic matter by explaining how soil is formed **Soil Profiles** Making systematic and careful observations in the context of investigating the permeability of different soils.	**STATES OF MATTER** **Solid, Liquid or Gas?** To compare and group materials together, according to whether they are solids, liquids or gases by sorting and describing materials into solids, liquids and gases. **Investigating Gases** To compare and group materials together, according to whether they are solids, liquids or gases by investigating gases and their uses **Heating and Cooling** To 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) by investigating how heating and cooling can change a material's state **Wonderful Water** To 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) by exploring how water can change its state to a solid, liquid or a gas. **Evaporation Investigation** To associate the rate of evaporation with temperature by investigating the effect of temperature on drying washing. To make systematic, careful and accurate observations and measurements and report on findings from enquiries by displaying results and conclusions by investigating the effect of temperature on drying washing **The Water Cycle** To identify the part played by evaporation and condensation in the water cycle by creating a model of the water cycle.	**PROPERTIES AND CHNAGES OF MATERIALS** **Properties of Materials** To compare and group together everyday materials on the basis of their properties, including their hardness, transparency and response to magnets by sorting and classifying materials according to their properties. **Keeping Cool** To give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic by investigating thermal conductors and insulators. To compare and group together everyday materials on the basis of their thermal conductivity by investigating thermal conductors and insulators. **Brighter Bulbs** To give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic by investigating the best electrical conductors. To compare and group together everyday materials on the basis of their electrical conductivity by investigating the best electrical conductors. **Disappearing or Dissolving**? To know that some materials will dissolve in liquid to form a solution by investigating dissolving. To compare and group together everyday materials on the basis of their solubility by investigating dissolving. **Separating Mixtures** To use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating by separating different mixtures. To demonstrate that dissolving, mixing and changes of state are reversible changes by separating different mixtures. To describe how to recover a substance from a solution by separating different mixtures.	

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						Irreversible Changes To 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 by identifying and observing irreversible chemical changes.	
Scientific knowledge **PHYSICS**	**SEASONAL CHANGES** Children know about similarities and differences in relation to places. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations and explain why some things occur, and talk about changes.	**SEASONAL CHANGES** **Winter to Spring** To observe and describe how day length varies in the context of winter to spring. **Seasonal Weather** To observe and describe weather associated with the seasons by observing the weather in spring. **Spring Walk** To observe changes across the four seasons by going on a spring walk **Spring Summer** To observe and describe how day length varies in the context of spring to summer. **Seasonal Weather** (Summer) To observe and describe weather associated with the seasons by observing and recording the weather in summer. **Staying Safe in Summer** Observe and describe weather associated with the seasons in the context of the summer sun. **SCIENTISTS AND INVENTORS** **Lego** To describe the simple physical properties of a variety of everyday materials, by identifying the properties of plastic in the context of Lego. **Mae Jemison** To ask simple questions and use simple secondary sources to find answers, by role playing an interview with Mae Jemison. **Zoos** To describe and compare the structure of a variety of common animals, by sorting animals according to their features. **Sensory Garden** To identify and name a variety of common wild and garden plants, by exploring a range of sensory plants. **Measuring the Weather** To observe and describe weather associated with the seasons, by measuring rainfall with a rain gauge they have made **At the Vets** To describe and compare the structure of a variety of common animals, including pets, by exploring the work of vets. **Wrapping up Warm** To perform simple tests, by testing the insulating properties of different materials. **Super Senses** To say which part of the body is associated with each sense, by finding out about the scientist who discovered how we smell things.	**LIGHT** **Light and Dark** To recognise that we need light in order to see things and that dark is the absence of light by taking part in a 'feely bag' investigation **Reflective Surfaces** To notice that light is reflected from surfaces by choosing the most reflective material for a new book bag. **Marvellous Mirrors** To notice that light is reflected from surfaces by playing mirror games **Sun Safety** To recognise that light from the sun can be dangerous and that there are ways to protect our eyes by designing and advertising a pair of sunglasses or a sun hat. **Changing Shadows** To find patterns in the way that the size of shadows change by investigating what happens when you change the distance between the object and the light source.	**FORCES AND MAGNETS** **Pushes and pulls** To know that some forces need contact between two materials by identifying the different types of forces. **Faster or slower** To investigate friction by seeing the speed at which a car travels **Magnetism** scrap yard challenge to notice the some forces can act at a distance eg magnetism **Magnetic strength** to investigate attraction and repulsion and magnetic strength **Magnetic poles** to Describe magnets as having two poles which attract and repel	**SOUND** **Good Vibrations** To identify how sounds are made, associating some of them with something vibrating, by identifying and explaining sound sources around school. **Hearing Sounds** To identify how sounds are made, associating some of them with something vibrating, by performing a dramatisation of how sounds travel. To find patterns between the volume of a sound and the strength of the vibrations that produced it, by performing a dramatisation of how sounds travel. To recognise that vibrations from sounds travel through a medium to the ear, by performing a dramatisation of how sounds travel. **Higher and Lower** To recognise that vibrations from sounds travel through a medium to the ear, by exploring how high and low sounds are created. To find patterns between the pitch of a sound and features of the object that produced it, by exploring and creating musical instruments, and explaining how they change pitch. **String Telephone** To recognise that sounds get fainter as the distance from the sound source increases, by exploring how sounds change over distance. To recognise that vibrations from sounds travel through a medium to the ear, by making string telephones. **Soundproofing** To recognise that vibrations from sounds travel through a medium to the ear, by investigating the best material for absorbing sound. **Data logger** with sound sensor per group, if required **Making Music** To recognise that vibrations from sounds travel through a medium to the ear, by making a musical instrument and explaining how it works. To find patterns between the pitch of a sound and features of the object that produced it, by making a musical instrument and explaining how it works	**EARTH AND SPACE** **Spherical Bodies** Describing the Sun, Earth and Moon as approximately spherical bodies by understanding how this knowledge has been attained. **The Planets** Describing the movement of the Earth, and other planets, relative to the Sun in the solar system by learning the order of the plants and how they move in the solar system. **Geocentric Versus Heliocentric** Describing the movement of the Earth, and other planets, relative to the Sun in the solar system by examining the geocentric and heliocentric theories. **Night and Day** Using the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky by examining why the sun appears to move and the arguments for the Earth's rotation **Movement of the Moon** Describing the movement of the Moon relative to the Earth by explaining how the Moon orbits the Earth. **FORCES** **Gravity** Explain that unsupported objects fall to earth – measure the force of gravity **To identify the effects of air resistance** by investigation of a parachute **Water resistance** and up thrust to investigate the impact of water resistance and **up thrust** **Friction** To investigate the impact of friction	**LIGHT** **How We See** To recognise that light appears to travel in straight lines by creating a model of light travelling. To 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 by creating a model of light travelling. To 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 by creating a light documentary. **To able to label and explain how the human eye works** **Reflecting Light** To recognise that light appears to travel in straight lines by investigating the angles of incidence and reflection. To 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 by creating a periscope and explaining how it works. To 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 by creating a periscope and explaining how it works. **Spectacular Spectrum** To recognise that light appears to travel in straight lines by exploring prisms and creating colour wheels. **Seeing Colours** To 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 by investigating how we see colours. To 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 by investigating how we see colours. **Shadow Theatre** To use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them by performing a shadow puppet show about Isaac Newton. To identify scientific evidence that has been used to support or refute ideas or arguments by performing a shadow puppet show about Isaac Newton. ***ELECTRICITY (WITHIN DT PROJECT)*** ***Exciting Electricity*** *To report on findings, including oral and written explanations in the context of preparing a presentation on how electricity is generated* ***Use recognised symbols*** *when representing a circuit* ***Voltage*** *– identify the effect of voltage in a circuit* ***Compare and give reason for variation*** *in the brightness of a build of loudness of a buzzer in a range of circuits* ***Construct series circuits*** ***Conductors and Insulators*** *Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers*

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Vocabulary	**PLANTS** ➢ Tree ➢ Plant ➢ Fruit ➢ vegetable ➢ environment ➢ soil ➢ sun ➢ water **ANIMALS INCLUDING HUMANS** ➢ Fish ➢ birds ➢ human ➢ Body parts **EVERYDAY MATERIALS** ➢ materials ➢ hard ➢ waterproof ➢ shiny **SEASONAL CHANGES** ➢ Autumn ➢ Spring ➢ Summer ➢ Winter ➢ weather	**PLANTS** ➢ buds ➢ bulbs ➢ deciduous ➢ evergreen ➢ trunk ➢ vegetable ➢ wild plants ➢ environment ➢ blossom ➢ petals ➢ branches **ANIMALS INCLUDING HUMANS** ➢ Fish ➢ amphibians ➢ reptiles ➢ birds ➢ mammals ➢ carnivore ➢ herbivore ➢ omnivore ➢ tame ➢ wild ➢ nocturnal **EVERYDAY MATERIALS** ➢ materials ➢ wood ➢ plastic ➢ metal ➢ liquid ➢ gas ➢ stretch ➢ stiff ➢ bend ➢ waterproof ➢ shiny **SEASONAL CHANGES** ➢ Autumn ➢ Spring ➢ Summer ➢ Winter ➢ fall ➢ weather ➢ temperature ➢ thermometer ➢ weather symbol ➢ deciduous ➢ coniferous	**LIVING THINGS AND THEIR HABITATS** ➢ dinosaur ➢ indigenous ➢ rivers ➢ woodland ➢ ponds ➢ sea ➢ rainforest ➢ desert ➢ species ➢ microhabitats **ANIMALS INCLUDNING HUMANS** ➢ healthy ➢ diet ➢ off-spring ➢ exercise ➢ exercise ➢ proteins ➢ carbohydrates ➢ fats ➢ nutrition ➢ survival ➢ hygiene **USE OF EVERYDAY MATERIALS** ➢ metal ➢ plastic ➢ Charles ➢ Macintosh ➢ John Dunlop ➢ wood ➢ squashing ➢ bending ➢ bending ➢ twisting ➢ stretching ➢ John McAdam **LIGHT** ➢ reflection ➢ shadows ➢ light source ➢ opaque ➢ refraction ➢ periscope ➢ nocturnal ➢ orbits ➢ convex	**ANIMALS INCLUDNG HUMANS** ➢ nutrition ➢ skeleton ➢ muscles ➢ diet ➢ joint ➢ pelvis ➢ cartilage ➢ rib cage ➢ tendon ➢ spine **ROCKS AND FORCES AND MAGNETS** ➢ fossil ➢ soil ➢ crystals ➢ sedimentary ➢ metamorphic ➢ igneous ➢ Magnetic pole ➢ organic matter ➢ attract and repel ➢ concave **PLANTS** ➢ roots ➢ crown ➢ deciduous ➢ evergreen ➢ blossom ➢ bulb ➢ trunk ➢ stem ➢ woodland ➢ habitat ➢ oxygen	**LIVING THINGS AND THEIR HABITATS** ➢ Vertebrates ➢ Invertebrates **ANIMALS INCLUDING HUMANS** ➢ pancreas ➢ oesophagus ➢ intestine ➢ organ ➢ molars ➢ canine ➢ food chain ➢ predators ➢ prey ➢ salivary gland **STATES OF MATTER** ➢ water vapour ➢ condensation ➢ precipitation ➢ evaporation ➢ substance ➢ matter ➢ lava ➢ solid ➢ liquid ➢ gas ➢ substance **SOUND** ➢ vibrating ➢ pitch ➢ volume ➢ insulation ➢ outer, middle and inner ear ➢ cochlea ➢ auditory ➢ frequency ➢ hammer	**LIVING THINGS AND THEIR HABITATS & ANIMALS INCLUDING HUMANS** ➢ puberty ➢ gestation ➢ classification ➢ precision ➢ reproduction ➢ teenager ➢ obese ➢ toddler ➢ embryo ➢ roots ➢ stem ➢ nutrients ➢ pollination ➢ seed dispersal ➢ fertiliser ➢ seed formation ➢ seed formation ➢ stigma ➢ anther ➢ soil **PROPERTIES AND MATERIALS** ➢ solubility ➢ conductivity ➢ transparency ➢ thermal ➢ evaporation ➢ dissolve ➢ bicarbonate of soda ➢ thermal ➢ filtering ➢ melting ➢ separate **EARTH AND SPACE** ➢ orbit ➢ solar system ➢ astronomical ➢ planet ➢ rotation ➢ spherical ➢ crescent moon ➢ gibbous moon ➢ eclipse ➢ lunar ➢ lunar **FORCES** ➢ friction ➢ gravity ➢ air resistance ➢ intestine ➢ water resistance ➢ levers ➢ pulleys ➢ gears ➢ parachute ➢ Galileo ➢ Newton ➢ UP THRUST	**LIVING THINGS AND THEIR HABITATS** ➢ micro-organism ➢ vertebrates ➢ invertebrates ➢ species ➢ fungi ➢ monera ➢ bacteria/micro organisms ➢ Linnaean system **ANIMALS INCLUDING HUMANS THE CIRCULATORY SYSTEM** ➢ blood vessels ➢ drugs ➢ atriums ➢ intestine ➢ Cardiovascular ➢ ultrasound ➢ cardiologists ➢ capillaries ➢ pulse ➢ ventricles **EVOLUTION AND INHERITANCE** ➢ off-spring ➢ adaptation ➢ evolution ➢ inheritance ➢ palaeontologist ➢ Charles Darwin ➢ Charles Darwin ➢ genes ➢ chromosomes ➢ syndrome ➢ genotype **LIGHT** ➢ light wave ➢ light source ➢ concave ➢ convex ➢ filters ➢ lens ➢ retina ➢ cornea ➢ iris ➢ pupil **ELECTRICITY** ➢ circuit ➢ buzzers ➢ conductor ➢ battery ➢ cells ➢ switch ➢ socket ➢ appliance ➢ appliance ➢ series circuit ➢ insulator ➢ conductor ➢ insulator ➢ socket ➢ series circuits ➢ cells ➢ volts ➢ generator

							➢ turbine ➢ fuses ➢ Thomas Edison