	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Units	Aut – Fire Fire Spr – Explorers Sum 1 – Victorian Schools Sum 2 – The Outdoors	Aut – Fireworks Spr – Children in WW2 Sum – Under the Sea	Aut – Ancient Egypt Spr – Natural Disasters Sum – My Region	Aut – Ancient Greece Spr – Chocolate Sum – Technology through the ages	Aut – Space Spr – Everest Sum – Settlers & Invaders	Aut – WW2 Spr – Lifecyles Sum – Islamic Civilisation
Science 4 topics per year From NC programme of study	**Plants** 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. **Animals incl humans** Pupils should be taught to: - Identify and name a variety of common animals including fight, 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. **Materials** 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. **Seasonal changes** Pupils should be taught to:	**Plants** 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 **Animals incl humans** 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. **Materials** 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. **Living things and habitats** Pupils should be taught to: - Explore and compare the differences between things are are living, dead and things that have never been alive - Identify that most living things live in habitats to	**Plants** 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 the 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. **Rocks** 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 **Forces and Magnets** Pupils should be taught to: - compare how things move on different surfaces - notice that some forces need contact bwtween two objects, but magnextic forces can act 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	**Animals incl humans** 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* - 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 **States of matter** 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, and measure or research the temperature at which this happens in degrees Celsius - Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. **Sound** 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	**Living things and habitats** 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* - Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird - Describe the life process of reproduction in some plants and animals - *Describe 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.* **Properties and changes of materials** 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	**Evolution and inheritance** 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. **Animals including humans** Pupils should be taught to: - *Describe the changes as humans develop to old age* - Identify and name the man 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. **Light** 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

	- Observe changes across the four seasons - Observe and describe weather associated with the seasons and how day length varies.	which they are suited and describe how different habitats provide for the basic needs to 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 micro-habitats - 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.	- predict whether two magnets will attract or repel each other, depending on which poles are facing. **Light** 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 - recognie 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 a way that the size of shadows change. *Animals incl Humans (Year 4)*	- 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 hat produced it - Recognise that sounds get fainter as the distance from the sound source increases. **Electricity** 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 of 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. *Living things and habitats (Year 5)*	separated, including through filtering, sieving and evaporating - Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic - Demonstrate that dissolving, mixing and changes of state are reversible changes - Explain that some changes result in the formation of new materials and that this kind od change is usually not reversible, including changes associated with burning and the action of acid on bicarbonate of soda **Earth and space** 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 **Forces** 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. *Animals including humans (Year 6)*	shadows have the same shape as the objects that cast them. **Electricity** 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 recognised symbols when representing a simple circuit in a diagram. *Living things and habitats(Year 5)*

History	Events beyond living memory that are significant nationally or globally	Significant historical events, people and places in their own locality.	The achievements of the earliest civilizations	Ancient Greece	Britain's settlement by Anglo-Saxons and Scots	A study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066
	Events beyond living memory that are significant nationally or globally For example - **The Great Fire of London** - The first aeroplane flight - Or events commemorated through festivals or anniversaries. **The lives of significant individuals in the past who have contributed to national and international achievements.** Some should be used to compare aspects of life in different periods For example - Elizabeth I and Oueen Victoria - Christopher Columbus and Neil Armstrong - William Caxton and Tim Berners-Lee - Pieter Bruegel the Elder and LS Lowry - Rosa Parks and Emily Davison - Mary Seacole and/or Florence Nightingale and Edith Cavell **The lives of significant individuals in the past who have contributed to national and international achievements.** Some should be used to compare aspects of life in different periods For example - Elizabeth I and Oueen Victoria - Christopher Columbus and Neil Armstrong - William Caxton and Tim Berners-Lee - Pieter Bruegel the Elder and LS Lowry - Rosa Parks and Emily Davison - Mary Seacole and/or Florence Nightingale and Edith Cavell	**Significant historical events, people and places in their own locality.** - Guy Fawkes/Brocks Firework Factory **Changes within living memory.** Where appropriate, these should be used to reveal aspects of change in national life - Children in WW2 - The Titanic	**The achievements of the earliest civilizations** - an overview of where and when the first civilizations appeared and a depth study of one of the following: Ancient Sumer; The Indus Valley; Ancient Egypt; The Shang Dynasty of Ancient China **Changes in Britain from the Stone Age to the Iron Age** This could include: - late Neolithic hunter-gatherers and early farmers, for example, Skara Brae - Bronze Age religion, technology and travel, for example, Stonehenge - Iron Age hill forts: tribal kingdoms, farming, art and culture **A local history study - Buncefield** Examples: - a depth study linked to one of the British areas of study listed above - a study over time tracing how several aspects of national history are reflected in the locality (this can go beyond 1066) - a study of an aspect of history or a site dating from a period beyond 1066 that is significant in the locality	**Ancient Greece** - a study of Greek life and achievements and their influence on the western world **A non-European society that provides contrasts with British history** – - one study chosen from: early Islamic civilization, including a study of Baghdad c. AD 900; **Mayan civilization** c. AD 900; Benin (West Africa) c. AD 900-1300. **The Roman Empire and its impact on Britain** This could include: - Julius Caesar's attempted invasion in 55-54 BC - the Roman Empire by AD 42 and the power of its army - successful invasion by Claudius and conquest, including Hadrian's Wall - British resistance, for example, Boudica - 'Romanisation' of Britain: sites such as Caerwent and the impact of technology, culture and beliefs, including early Christianity	**Britain's settlement by Anglo-Saxons and Scots** This could include: - Roman withdrawal from Britain in c. AD 410 and the fall of the western Roman Empire - Scots invasions from Ireland to north Britain (now Scotland) **Anglo-Saxon invasions, settlements and kingdoms: place names and village life** - Anglo-Saxon art and culture - Christian conversion – Canterbury, Ioano and Lindisfarne **The Viking and Anglo-Saxon struggle for the Kingdom of England to the time of Edward the Confessor** This could include: - Viking raids and invasion - resistance by Alfred the Great and Athelstan, first king of England - further Viking invasions and Danegeld - Anglo-Saxon laws and justice - Edward the Confessor and his death in 1066	**A study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066** Examples: - the changing power of monarchs using case studies such as John, Anne and Victoria - changes in an aspect of social history, such as crime and punishment from the Anglo-Saxons to the present or leisure and entertainment in the 20th Century - the legacy of Greek or Roman culture (art, architecture or literature) on later periods in British history, including the present day - a significant turning point in British history, for example, the first railways or the Battle of Britain **A non-European society that provides contrasts with British history** one study chosen from: - early Islamic civilization, including a study of Baghdad c. AD 900; - Mayan civilization c. AD 900; - Benin (West Africa) c. AD 900-1300.

Geography	Locational Knowledge	Locational Knowledge	Locational Knowledge	Locational Knowledge	Locational Knowledge	Locational Knowledge
	- Name and locate the world's seven continents and five oceans	- Name, locate and identify characteristics of the four countries and capital cities of the United Kingdom and its surrounding seas	- Name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time	- identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night)		- Locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities
	Place Knowledge	**Place Knowledge**	**Place Knowledge**	**Place Knowledge**	**Place Knowledge**	**Place Knowledge**
	- Understand geographical similarities and difference through studying the human and physical geography of a small area of the United Kingdom, and of a small area in a contrasting non-European country -			- Understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom and a region within North or South America		- understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom and a region in a European country
	Human and physical geography	**Human and physical geography**	**Human and physical geography**	**Human and physical geography**	**Human and physical geography**	**Human and physical geography**
	- Identify seasonal and daily weather patterns in the united kingdom and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles	- Use basic geographical vocabulary to refer to: - Key physical features, including beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather - Key human features, including: city, town, village, factory, farm, house, office, port, harbour and shop	- Describe and understand key aspects of: physical geography, including: *rivers* **Human and physical geography** - Describe and understand key aspects of: physical geography, including: *volcanoes and earthquakes*	- Describe and understand key aspects of: physical geography, including: *climate zones, biomes and vegetation belts* - describe and understand key aspects of: physical geography, including: **the water cycle**	- Describe and understand key aspects of: physical geography, including: *mountains* - describe and understand key aspects of: human geography, including: **types of settlement and land use**	- describe and understand key aspects of: human geography, including: economic activity including trade links - describe and understand key aspects of: human geography, including: the distribution of natural resources including energy, food, minerals and water
	Geographical skills and fieldwork	**Geographical skills and fieldwork**	**Geographical skills and fieldwork**	**Geographical skills and fieldwork**	**Geographical skills and fieldwork**	**Geographical skills and fieldwork**
	- Use world maps, atlases and globes to identify the United Kingdom and its countries, as well as the countries, continents and oceans studied at this key stage - Use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features; devise a simple map; and use and construct basic symbols in a key	- Use simple compass directions (North, South, East and West) and locational and directional language [for example, near and far; left and right], to describe the location of features and routes on a map - Use world maps, atlases and globes to identify the United Kingdom and its countries, as well as the countries, continents and oceans studied at this key stage	- Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied - use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world - use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.	- Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied - use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world - use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.	- Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied - use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world - use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.	- Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied - use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world - use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.

R.E	Christianity – Christmas Christianity – St Paul's Cathedral	Christianity – Easter Judaism linked with WWII children	Christianity – Christmas Local religions	Christianity – Easter Christianity linked with Romans	Christianity – Christmas Buddhism linked with Everest	Christianity – Easter Early Islamic Civilisation
	Aims This curriculum for Religious Education aims to ensure that all pupils develop knowledge and understanding of sources of wisdom and their impact whilst exploring personal and critical responses. **A. Sources of wisdom and their impact** All pupils should: • know, understand and explore the significance and impact of sacred texts, other sources of wisdom and ways of expressing meaning • express ideas and insights about the nature of beliefs, values and practices and their impact upon the identity of individuals and communities • recognise and explore the diversity which exists within and between religious traditions **B. Personal and critical responses** All pupils should: • express with increasing discernment their personal reflections, critical responses and connections to faith and belief enquiring into philosophical, moral and ethical issues • engage with the questions and answers offered by religions and worldviews concerning ultimate questions and human responsibility • develop the skills required to engage with others in dialogue and to cooperate in society with respect and compassion					
D&T	**Cooking and Nutrition** - Healthy Food **Construction & Mechanisms** - Creating houses linked with Fire of London **Textiles -**	**Cooking and Nutrition** - **Construction & Mechanisms** - Building firework rockets **Textiles** - Making money wallets for evacuees	**Cooking and Nutrition** - Egyptian cooking **Construction & Mechanisms** - Earthquake machine **Textiles** -	**Cooking and Nutrition** - Create chocolate product **Construction & Mechanisms** - Making a catapult **Textiles** -	**Cooking and Nutrition** - Bread **Construction & Mechanisms** - Rocket Launch **Textiles** - Prayer flag	**Cooking and Nutrition** - Seasonal foods **Construction & Mechanisms** - Anderson Shelters **Textiles** - Prayer mat
	Key stage 1 Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should be taught to: Design - design purposeful, functional, appealing products for themselves and other users based on design criteria - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology Make - select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] - select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Evaluate - explore and evaluate a range of existing products - evaluate their ideas and products against design criteria Technical knowledge - build structures, exploring how they can be made stronger, stiffer and more stable - explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to: Key stage 1 - use the basic principles of a healthy and varied diet to prepare dishes - understand where food comes from.		Key stage 2 Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. When designing and making, pupils should be taught to: Design - use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups - generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design Make - select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately - select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities Evaluate - investigate and analyse a range of existing products - evaluate their ideas and products against their own design criteria and consider the views of others to improve their work - understand how key events and individuals in design and technology have helped shape the world Technical knowledge - apply their understanding of how to strengthen, stiffen and reinforce more complex structures - understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] - understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] - apply their understanding of computing to program, monitor and control their products. Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to: Key stage 2 - understand and apply the principles of a healthy and varied diet - prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques - understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.			

Computing	Let's Create	Getting Creative	Bringing Images to Life	Accuracy Counts	Data Matters	Information Models
Herts Computing Scheme Version 5 - Brockswood	- Children begin to explore digital texts, using varied devices and software to create digital content. They investigate differences between input and output and hardware and software. They explore the idea of a network related to computers at home and school, logging on to their area with support. They use unplugged computing approaches to explore the devices they use. They consider eSafe practice.	- Children build understanding of digital texts. They use varied devices and software with increased precision to create digital content. They revisit differences between input and output and hardware and software. They develop understanding of networks related to computers at home and school, logging on to their areas. They build understanding of algorithms using unplugged approaches. They develop eSafe practice.	- Children develop understanding of digital images. They transform and edit images, respecting copyright and ownership. They explore stop animation creating their own versions. They produce programmed animations, using sequence, repeat and selection.	- Children discuss computer networks including the internet and the services it offers. They explore how search engines work and what influences results, evaluating search engines and using sources. They learn about the threat from computer viruses and develop understanding of intellectual property and relate this to their own content. They use spreadsheet software to create graphs and to explore number patterns.	- Children investigate the concept of "big data" and its use in the world. They review file types and protection. They explore binary form and develop understanding of computer networks. They search more efficiently and investigate their digital footprints (or 'digital tattoos'), building safe and responsible use of online spaces. They create and search flat-file databases, developing accuracy and efficiency.	- Children develop expertise in spreadsheets, using both formulae and functions. They import and analyse data collected on dataloggers. They use conditional formatting to vary the format of cells and create tools for specific user needs. They create models, identifying variables and using what-if modelling.
	Visual Information	**Starting Research**	**Keeping Informed**	**Programming and Games**	**Staying Connected**	**Sound Works**
	- Children investigate how we derive information from different sources. They create graphs and charts and make general statements. They use dataloggers to explore environmental conditions. They organise objects using branching databases. They explore how computers might sort objects, noting the process of Repeat. They build eSafe practice.	- Children develop understanding of researching using non-digital and digital sources, including the World Wide Web. They understand the need to check their research results. They present their research. They use charts, graphs and mind maps. They begin to respect copyright and ownership and know who to talk to if they are worried.	- Children understand the difference between data and information. They use sensors, data loggers and other tools as part of their investigations. They use branching and flat-file databases to enter, organise and search data, deriving information which they present in different forms.	- Children explore simulations, investigating the structure and exploring how they might be programmed. They begin to note that abstraction can simplify them. They decompose tasks, creating and debug algorithms and understanding how algorithms support the programming process. They write, test, debug and refine programs to achieve specific objectives, using sequence, repetition and procedures. They explore selection in digital and natural systems.	- Children develop safe and appropriate use of online technologies, considering what they can use and what information is shared about them. They create blogs for school projects, checking and uploading digital content. They understand how a wiki works and the benefits of collaborative working. They know the school's eSafety rules and are proactive in encouraging other children to keep safe online.	- Children review how digital sound is used in the world and how it has developed over time. They create multi-track sound recordings for specific audiences, incorporating different content and demonstrating their understanding of the rules for copyright. They use programming languages to create their own sound clips.
	Discovering Programming	**Messages and virtual worlds**	**Developing Communication**	**Authoring**	**Morphing Images**	**Robotics and Systems**
	- Children name the main external parts of a computer and explore how they work together. They explore programmable devices relating their understanding of inputs and outputs to natural and digital systems. They use unplugged approaches and simple onscreen and physical devices to develop understanding of algorithms and programming, They develop their own skills in open programming time.	- Children explore ways of sending messages using digital and non-digital systems. They investigate the history of messages. As a class, they send and receive emails and read and comment on blogs. They explore simple virtual worlds. They create algorithms linked to their simulations. They program onscreen characters. They develop eSafe practice understanding the need to keep personal information private.	- Children use online communication tools such as email and blogs to support collaborative learning, safely and respectfully. They begin to investigate the technology used in digital communication networks. They use simple sound editing software to record and manipulate sound clips.	- Children investigate computing storage capacities and ways of saving data. They develop understanding of the school network and operating systems. They use varied resources to create digital content, creating and manipulating images and words. They select and use software to create non-linear content for specific audiences and objectives.	- Children use 3D graphical modelling to create and explore objects. They review operating systems. They evaluate films and animations, going on to create live film or animations for specific audiences. They demonstrate their understanding of copyright and ownership.	- Children investigate automated systems in the wider world and the use of sensors within them. They consider natural systems and use abstraction to represent them. They create, test, debug and refine algorithms, pseudocode and the related programs using sequence, selection, repetition and variables. They program physical devices, controlling inputs and outputs, relating to their study of automated systems.