282016-2017

Year group: 5

Term:	AUTUMN		SPRING		SUMMER	
Topic Umbrella and Title	**Let's Investigate**	**Time Travellers**	**Unique Universe**	**Small Surprises**	**Before you were born**	**Wonderful World**
Science	**Brainwave** **Science week** **Life Education Week – linked to PSHE** **Extreme Survivors** **Living things and their habitats:** 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. **Animals including humans:** Describe the changes as humans develop to old age. Pupils should draw a timeline to indicate stages in the growth and development of humans. They should learn about the changes experienced in puberty. Pupils could work scientifically by researching the gestation periods of other animals and comparing them with humans; by finding out and recording the length and mass of a baby as it grows.			**Existing/ endangered/ extinct 3 weeks** **ZOOLAB CLASSIFICATION WORKSHOP** **Living things and their habitats:** 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. **Animals including humans:** Describe the changes as humans develop to old age. Pupils should draw a timeline to indicate stages in the growth and development of humans. They should learn about the changes experienced in puberty. Pupils could work		**Mission to Mars** **Earth and Space: Planetarium Visit** 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.

	Fascinating Forces **Forces: Submarine Museum Trip** 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.			scientifically by researching the gestation periods of other animals and comparing them with humans; by finding out and recording the length and mass of a baby as it grows. **Bake it** **Properties and changes of materials:** 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 materials, including metals, wood and plastic • demonstrate that dissolving, mixing and changes of state are reversible changes • explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.		

Working scientifically	planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary ▯ taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate ▯ recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs ▯ using test results to make predictions to set up further comparative and fair tests ▯ reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations ▯ identifying scientific evidence that has been used to support or refute ideas or arguments.			planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary ▯ taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate ▯ recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs ▯ using test results to make predictions to set up further comparative and fair tests ▯ reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations ▯ identifying scientific evidence that has been used to support or refute ideas or arguments.		planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary ▯ taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate ▯ recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs ▯ using test results to make predictions to set up further comparative and fair tests

						reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations identifying scientific evidence that has been used to support or refute ideas or arguments.
Questionning and enquiring planning	Begin to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Begin to explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically. Begin to recognise some more abstract ideas and begin to recognise how these ideas help them to understand how the world operates. Begin to recognise scientific ideas			Begin to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Begin to explore and talk about ideas, ask their own questions about scientific phenomena, analyse functions, relationships and interactions more systematically. Begin to recognise some more abstract ideas and begin to recognise how these ideas help them to		Begin to plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Begin to explore and talk about ideas, ask their own questions about scientific phenomena, analyse

	change and develop over time. Begin to select the most appropriate ways to answer science questions using different types of scientific enquiry (including observing changes over different periods of time, noticing patterns, grouping and classifying, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information.)			understand how the world operates. Begin to recognise scientific ideas change and develop over time. Begin to select the most appropriate ways to answer science questions using different types of scientific enquiry (including observing changes over different periods of time, noticing patterns, grouping and classifying, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information.)		functions, relationships and interactions more systematically. Begin to recognise some more abstract ideas and begin to recognise how these ideas help them to understand how the world operates. Begin to recognise scientific ideas change and develop over time. Begin to select the most appropriate ways to answer science questions using different types of scientific enquiry (including observing changes over different periods of time, noticing patterns, grouping and classifying, carrying out

						comparative and fair tests and finding things out using a wide range of secondary sources of information.)
Observing and measuring pattern seeking	Begin to take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate. Begin to identify patterns that might be found in the natural environment. Begin to make their own decisions about what observations to make, what measurements to use and how long to make them for and whether to repeat them. Choose the most appropriate equipment and explain how to use it accurately. Begin to interpret data and find patterns. Select equipment on my own. Can make a set of observations and say what the interval and range are. Begin to take accurate and precise measurements – N, g, kg, mm, cm, mins, seconds, cm^2V, km/h, m per sec,			Begin to take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate. Begin to identify patterns that might be found in the natural environment. Begin to make their own decisions about what observations to make, what measurements to use and how long to make them for and whether to repeat them. Choose the most appropriate equipment and explain how to use it accurately. Begin to interpret data and find patterns.		Begin to take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate. Begin to identify patterns that might be found in the natural environment. Begin to make their own decisions about what observations to make, what measurements to use and how long to make them for and whether to repeat them. Choose the most appropriate equipment and explain how to use it accurately. Begin to interpret data and find patterns.

	m/ sec Graphs – pie, line			Select equipment on my own. Can make a set of observations and say what the interval and range are. Begin to take accurate and precise measurements – N, g, kg, mm, cm, mins, seconds, cm^2V, km/h, m per sec, m/ sec Graphs – pie, line		Select equipment on my own. Can make a set of observations and say what the interval and range are. Begin to take accurate and precise measurements – N, g, kg, mm, cm, mins, seconds, cm^2V, km/h, m per sec, m/ sec Graphs – pie, line
Investigating	Begin to use test results to make predictions to set up further comparative and fair tests. Begin to recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why. Begin to suggest improvements to my method and give reasons. Begin to decide when it is appropriate to do a fair test.			Begin to use test results to make predictions to set up further comparative and fair tests. Begin to recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why. Begin to suggest improvements to my method and give reasons. Begin to decide when it is appropriate to do a fair test.		Begin to use test results to make predictions to set up further comparative and fair tests. Begin to recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why. Begin to suggest improvements to my method and give reasons. Begin to decide when it is appropriate to do a fair test.

Recording and reporting findings	Begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs. Begin to report and present findings from enquiries. Begin to decide how to record data from a choice of familiar approaches. Begin to choose how best to present data.			Begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs. Begin to report and present findings from enquiries. Begin to decide how to record data from a choice of familiar approaches. Begin to choose how best to present data.		Begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs. Begin to report and present findings from enquiries. Begin to decide how to record data from a choice of familiar approaches. Begin to choose how best to present data.
Identfifying grouping and classfiying	Begin to use and develop keys and other information records to identify, classify and describe living things and materials.			Begin to use and develop keys and other information records to identify, classify and describe living things and materials.		Begin to use and develop keys and other information records to identify, classify and describe living things and materials.
Research	Begin to recognise which secondary sources will be most useful to research their ideas.			Begin to recognise which secondary sources will be most useful to research their ideas.		Begin to recognise which secondary sources will be most useful to research their ideas.
Conclusions	Am beginning to report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in			Am beginning to report and present findings from enquiries, including conclusions, causal relationships and explanations of and		Am beginning to report and present findings from enquiries, including conclusions,

	results, in oral and written forms such as displays and other presentations. Begin to identify scientific evidence that has been used to support or refute ideas or arguments. Begin to draw conclusions based on their data and observations, use evidence to justify their ideas, use scientific knowledge and understanding to explain their findings. Begin to use test results to make predictions to set up further comparatives and fair tests. Begin to look for different causal relationships in their data and identify evidence that refutes or supports their ideas. Use their results to further tests and observations are needed. Begin to separate opinion from fact. Begin to draw conclusions and identify scientific evidence. Can use simple models. Know which evidence proves a scientific point.			degree of trust in results, in oral and written forms such as displays and other presentations. Begin to identify scientific evidence that has been used to support or refute ideas or arguments. Begin to draw conclusions based on their data and observations, use evidence to justify their ideas, use scientific knowledge and understanding to explain their findings. Begin to use test results to make predictions to set up further comparatives and fair tests. Begin to look for different causal relationships in their data and identify evidence that refutes or supports their ideas. Use their results to further tests and observations are needed. Begin to separate opinion from fact. Begin to draw conclusions and identify scientific evidence. Can use simple models. Know which evidence proves a scientific point.		causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Begin to identify scientific evidence that has been used to support or refute ideas or arguments. Begin to draw conclusions based on their data and observations, use evidence to justify their ideas, use scientific knowledge and understanding to explain their findings. Begin to use test results to make predictions to set up further comparatives and fair tests.

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Vocabulary	Am beginning to read, spell and pronounce scientific vocabulary correctly. Am beginning to use relevant scientific			Am beginning to read, spell and pronounce scientific vocabulary correctly.		Am beginning to read, spell and pronounce scientific

	language and illustrations to discuss, communicate and justify scientific ideas. Am beginning to confidently use a range of scientific vocabulary. Am beginning to use conventions such as trend, rogue result, support prediction and -er word generalisation. Am beginning to use scientific ideas when describing simple processes. Am beginning to use the correct science vocabulary			Am beginning to use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas. Am beginning to confidently use a range of scientific vocabulary. Am beginning to use conventions such as trend, rogue result, support prediction and -er word generalisation. Am beginning to use scientific ideas when describing simple processes. Am beginning to use the correct science vocabulary		vocabulary correctly. Am beginning to use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas. Am beginning to confidently use a range of scientific vocabulary. Am beginning to use conventions such as trend, rogue result, support prediction and -er word generalisation. Am beginning to use scientific ideas when describing simple processes. Am beginning to use the correct science vocabulary
Understanding	I am beginning to talk about how scientific ideas have changed over time. Am beginning to explain the positive and negative effects of scientific development. Am beginning to see how science is			I am beginning to talk about how scientific ideas have changed over time. Am beginning to explain the positive and negative effects of scientific development. Am beginning to see how science is useful in		I am beginning to talk about how scientific ideas have changed over time. Am beginning to explain the positive and

	useful in everyday life. Am beginning to say which parts of our lives rely on science.			everyday life. Am beginning to say which parts of our lives rely on science.		negative effects of scientific development. Am beginning to see how science is useful in everyday life. Am beginning to say which parts of our lives rely on science.
Geography **Location**			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 Identify the position and significance of latitude/longitude and the Greenwich Meridian. Linking with science, time zones, night and day.			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 Identify the position and significance of latitude/longitude and the Greenwich Meridian. Linking with science, time zones, night and day.
Place			Compare a region in UK with a region in N. or S. America with significant differences and similarities. Eg. Link to Fairtrade of			Compare a region in UK with a region in N. or S. America with significant differences and similarities. Eg. Link to Fairtrade of

			bananas in St Lucia (see Geography.org etc for free and commercially available packs on St Lucia focussing on Geography).			bananas in St Lucia (see Geography.org etc for free and commercially available packs on St Lucia focussing on Geography).
Human and physical			Describe and understand key aspects of : physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water.			Describe and understand key aspects of : physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water.
Geographical skills and fieldwork			Use maps, atlases, globes and digital/computer mapping (Google Earth) to locate countries and describe features studied. Use the eight points of a compass, eight figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom in the past and present.			Use maps, atlases, globes and digital/computer mapping (Google Earth) to locate countries and describe features studied. Use the eight points of a compass, eight figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom in the past and present.

			Use fieldwork to observe, measure and record the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.			Use fieldwork to observe, measure and record the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.
History- include coverage		An aspect or theme of British history that extends pupils' chronological knowledge beyond 1066			The Roman Empire and its impact on Britain The achievements of the earliest civilizations; depth study of one of: • Ancient Greece – life, achievements, influence	
Knowledge/ understanding of British History		The Roman Empire and its impact on Britain				
Knowledge/ understanding of Wider World History					The achievements of the earliest civilizations; depth study of one of: • Ancient Greece – life, achievements, influence	
The ability to		Continue to develop chronologically secure knowledge of history • Establish clear narratives within and across periods studied • Note connections,				

		contrasts and trends over time • Develop the appropriate use of historical terms • Regularly address and sometimes devise historically valid questions • Understand how knowledge of the past is constructed from a range of sources • Construct informed responses by selecting and organising relevant historical information • Understand that different versions of the past may exist, giving some reasons for this (Not explicitly stated but is natural progression between KS1 and KS3)				
Computing	**5.1 Developing an interactive game** Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	**5.2 Cracking Codes** Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	**5.3 Fusing geometry and art** • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.	**5.4 Creating a website about cyber safety** Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they	5.5 Sharing experiences and opinions Understand computer networks including the internet; how they can provide multiple services, such as the world wide web;	**5.6 Creating a virtual space** Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in

	• Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals… **Child Friendly** • Create original artwork and sound for a game. • Design and create a computer program for a computer game, which uses sequence, selection, repetition and variables. • Detect and correct errors in their computer game. • Use iterative development techniques (making and testing a series of small changes) to improve their game.	• Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. **Child Friendly** • Be familiar with semaphore and Morse code. • Understand the need for private information to be encrypted. • Encrypt and decrypt messages in simple ciphers. • Appreciate the need to use complex passwords and to keep them secure. • Have some understanding of how encryption works on the web.	• Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. **Child Friendly** Develop an appreciation of the links between geometry and art. • Become familiar with the tools and techniques of a vector graphics package. • Develop an understanding of turtle graphics. • Experiment with the tools available, refining and developing their work as they apply their own criteria to	offer for communication and collaboration. • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. **Child Friendly** Develop their research skills to decide what information is appropriate.	and the opportunities they offer for communication and collaboration. • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. • … be discerning in evaluating digital content. **Child Friendly** Become familiar with blogs as a medium and a genre of writing. • Create a sequence of blog posts on a theme.	evaluating digital content. • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. **Child Friendly** Understand the work of architects, designers and engineers working in 3D. • Develop familiarity with a simple CAD (computer aided design) tool. • Develop spatial awareness by exploring and experimenting with a 3D virtual environment. • Develop greater aesthetic awareness.

			evaluate it and receive feedback from their peers. • Develop some awareness of computer-generated art, in particular fractal-based landscapes.	• Understand some elements of how search engines select and rank results. • Question the plausibility and quality of information. • Develop and refine their ideas and text collaboratively. • Develop their understanding of online safety and responsible use of technology.	• Incorporate additional media. • Comment on the posts of others. • Develop a critical, reflective view of a range of media, including text.	
eSafety	The pupils need to consider copyright when sourcing images or media for their games and/or uploading their own work to the Scratch community site. Searching for content for their games or viewing others' games also offers an opportunity to develop safe search habits. If the pupils participate in the Scratch community, they need to think about what information they can share and how to participate positively in an online community, as well as obtaining parental permission. The pupils might also consider some personal implications of playing games, perhaps including violent computer games.	The pupils learn how information can be communicated in secret over open channels, including the internet, using cryptography. They learn about the public key system used to sign and encrypt content on the web, and how they can check the security certificates of encrypted websites. They learn about the importance of password security for online identity and consider what makes a secure password.	The unit provides an opportunity to reinforce messages around safe searching and evaluating the quality of online content. If the pupils upload their work for others to see, they should consider the importance of protecting personal information as well as recognising that they are sharing their own copyrighted work with an audience.	Online safety forms the focus of this unit, with the pupils working collaboratively to develop a website in which they present their own authoritative content on a broad range of issues around the safe and responsible use of technology. In doing so, they consider the reliability and bias of online content, how to contribute positively to a shared resource, and how to use search engines safely and effectively.	The pupils write content for their own or a shared blog, thinking carefully about what can be appropriately shared online. They consider issues of copyright and digital footprint as well as what constitutes acceptable behaviour when commenting on others' blog posts. The pupils also think about the importance of creating high-quality online content and become more discerning in evaluating content as they review others' blogs. If the pupils' blogs are publicly accessible, it is important that any comments are moderated	The pupils should observe good practice when searching for and selecting digital content. If the pupils choose to locate their 3D models geographically, they should avoid sharing private information. The pupils should think about copyright when adding content to their model or publishing images or videos of their model.

					by their teacher; it is worth discussing with the pupils why the comments should be moderated.	
Art	Drawing – Work with a wider range of media/mixed media to achieve desired effects. Work from a variety of sources including observation, photographs and digital images. Use a sketchbook to collect and develop ideas. Make and drawings (painting) from observations/experiences and imagination with the emphasis on first-hand experience Compose work and effect use of space/scale/size. Choosing the style of drawing to match the purpose. And the expr4ssion of the ideas and feelings. Develop techniques to enable the use of the key elements and further consider to proportion and simple perspective. Look at and consider the work of great artists / architects / craft makers and designers in history. Continue to make links to their own work and have an increasing awareness of different kinds of art, craft and design. Describe what they achieved and how it was produced using language of how media/ tools equipment/ processes of working in the context of the key elements. Make drawing using the computer. Use sketchbooks to collect and record visual					

	information from different sources. Recording/ exploring and experimenting. To improve their mastery of drawing with a range of materials.					
	Painting Use the primary colours, black and white to mix a full range of hues and tones. Choosing the style of painting to match the purpose. Use sketchbooks to collect and record visual information from different sources. Recording/ exploring and experimenting. To improve their mastery of painting with a range of materials.					
	Sculpture Design and create and plan the sculpture and think ideas about materials / techniques and tools to use: -use clay and consider a range of techniques for building, joining and decorating Choose materials appropriate to the subject Use and combine a wider range of tools to cut/shape and impress patterns and textures into a range of materials. Create simple shapes from paper and card. Create papier-mache and use it to model 3D shapes. Working on a range of scales and sizes. Talk about materials, how they have been worked and the final results. To improve their mastery of sculpture with a range of materials. Look at the work of a range of artist/ craft makers and designers. Describe the difference s and similarities between different practises and disciplines and make					

	links to their own work and working in 3 dimension.					
	Printing/collage/textiles					
DT December/March 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.		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.		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.		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]		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]		
Cooking and Nutrition		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		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.		discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.		
PE	Master different movements – running, throwing, catching, as well as agility, balance and co-ordination. Apply these across a range of activities. Team games, attacking and defending. Perform dances using simple patterns.					
Music	Use voices expressively – chants and rhymes. Play tuned and untuned instruments musically. Listen to and concentrate with recorded and live music. Experiment with and explore a range of inter related dimensions music.					
PSHE	• To be able to work collaboratively towards one goal. • To recognise and respond to others feelings. • To identify the skills needed to maintain a positive/healthy relationship. • To recognise signs of an unhealthy relationship and who to talk to for support. • To know different physical contact is acceptable and unacceptable and how to respond appropriately. • To know that actions affect ourselves and others.	To identify what gives people positive and negative physical, mental and emotional health. • To identify why a balanced diet might be difficult to maintain. • To know that people may have pressure to behaviour in an unacceptable way. • To know what the term habit means. • To know that some drugs are legal and	• To identify what gives people positive and negative physical, mental and emotional health. • To identify why a balanced diet might be difficult to maintain. • To know that people may have pressure to behaviour in an unacceptable way. • To know what the term habit means. • To know that	**Relationships** • To be able to work collaboratively towards one goal. • To recognise and respond to others feelings. • To identify the skills needed to maintain a positive/healthy relationship. • To recognise signs of an unhealthy relationship and who to talk to for support.	• To discuss topical issues and offer recommendations. • To know why different rules are needed in different situations. • To make decisions by solving differences looking at others point of view • To realise the consequences of anti-social behaviour. • To know the	• To understand the terms, 'interest and loan.' • To know that economic choices affect individuals. • To know skills used to make someone enterprising. • To know the different responsibilities in the community. • To understand about the lives of people in other places.

	• To identify strategies to resolve disputes through negotiation. **Relationships**	others illegal. • To know how to keep emotionally safe. • To know why high aspirations and goals are important. **Health and well- being**	some drugs are legal and others illegal. • To know how to keep emotionally safe. • To know why high aspirations and goals are important. **Health and well- being**	• To know different physical contact is acceptable and unacceptable and how to respond appropriately. • To know that actions affect ourselves and others. • To identify strategies to resolve disputes through negotiation.	varied institutions that support communities nationally. **Living in the wider world**	• To know that resources can be allocated in different ways and this affects community and environments. • To explore how the media present information. **Living in the wider world**

I hour of PSHE and 1 hour of growth mindset