Year 4 Long Term Planning

	Place Value	Addition and Subtraction	Multiplication and Division	Fractions inc decimals	Measurement	Shape	Position and direction	Statistics
Maths	Count in multiples of 6, 7, 9, 25 and 1000. Find 1000 more or less than a given number. Count backwards through zero to include negative numbers. Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). Order and compare numbers beyond 1000. Identify, represent and estimate numbers using different representations. Round any number to the nearest 10, 100 or 1000. Solve number and practical problems that involve all of the above and with increasingly large positive numbers. Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. Estimate and use inverse operations to check answers to a calculation. Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	Recall multiplication and division facts for multiplication tables up to 12 × 12. Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. Recognise and use factor pairs and commutativity in mental calculations. Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.	Recognise and show, using diagrams, families of common equivalent fractions. Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. Add and subtract fractions with the same denominator. Recognise and write decimal equivalents of any number of tenths or hundredths. Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. Round decimals with one decimal place to the nearest whole number. Compare numbers with the same number of decimal places up to two decimal places.	Convert between different units of measure. Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. Find the area of rectilinear shapes by counting squares. Estimate, compare and calculate different measures, including money in pounds and pence. Read, write and convert time between analogue and digital 12- and 24-hour clocks. Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. Identify acute and obtuse angles and compare and order angles up to two right angles by size. Identify lines of symmetry in 2-D shapes presented in different orientations. Complete a simple symmetric figure with respect to a specific line of symmetry.	Describe positions on a 2-D grid as coordinates in the first quadrant. Describe movements between positions as translations of a given unit to the left/right and up/down. Plot specified points and draw sides to complete a given polygon.	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

English	**Writing to entertain**	**Writing to inform**	**Writing to persuade**
	Text Types	**Text Types**	**Text Types**
	Stories Descriptions Poetry Character/Settings	Explanation Newspaper article Non-chronological report If time: Recount	Advertising Letter Speech
	Text Features	**Text Features**	**Text Features**
	Paragraphs Detailed description	Paragraphs to group related ideas Subheadings	Use of 2nd person Planned repetition Facts
	Grammar and Punctuation	**Grammar and Punctuation**	**Grammar and Punctuation**
	Fronted adverbials Expanded noun phrases Subordinate clauses Conjunctions Apostrophe for possession Use of commas	Subordinating conjunctions Expanded noun phrases Commas in a list Present perfect Bullet points Inverted commas Use of commas	Imperative verbs for urgency Rhetorical questions Noun phrases Relative clauses Punctuation - !?
	Multicultural British Author		

Computing	**Digital Literacy: e-safety, research and organising ideas**				
	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	I can use menus, indexes, search tools and key words to find particular information on a website. I can talk about and question the relevance and reliability of content on the World Wide Web. I can think about who owns content online and use tools to include or link from my own work as appropriate.	Talk about the Internet as a network of connected computers and the World Wide Web as a collection of websites that are stored on these computers. • compare the internal school network and content to WWW • discuss Unique Source Locator (URLs) and how these are used to locate a webpage and provide useful information. • discuss the range of sites and search engines and consider in terms of relevance, fact, fiction and opinion. Model the different strategies used to access digital information sources and compare to printed media. • use keywords to search for relevant content • use skimming & scanning reading skills to identify appropriate and useful information, ownership etc. • compare to other sites to check for accuracy • demonstrate use of tool e.g copy & paste, hyperlink	
	Hardware PC, laptop, netbook, tablet	**Software** Create and save content to share with a known audience via e-mail, website, VLE	**Online** Swiggle http://www.swiggle.org.uk KidRex http://www.kidrex.org/ Gogooligans http://www.gogooligans.com/ Searchy Pants http://searchypants.com/ SMART Crew What is reliable? What is the Internet? Tree Octopus Dog Island		
	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	I can describe some of the risks and benefits of the Internet. I know how to behave in order to protect myself online. I understand how to create and use a secure password and keep it private. I can use approved online tools to exchange information and collaborate with others within and beyond my school. I know what to do if online content, words or activity makes me feel uncomfortable.			
	Creative Technology: communication and collaboration				
			Text	**Images**	**Sound**
	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	I can organise information in different ways.	Use different font sizes, colour and effects to communicate meaning for a given audience.	Acquire, store and retrieve images from cameras, scanners and the internet and begin to use paint packages or photo-manipulation software to change an image *(e.g. apply different effects)*	Use ICT to select and record voice and sounds – (e.g. Dictaphone, digital voice recorder, Sound recorder in IWB software)
		I understand that data can be collected to answer questions.	Use layout, format, graphics and illustrations for different purposes or audiences	Select specific areas of a painting, copy and paste to make repeating patterns. Resize elements. Investigate symmetry and reflection tools.	Use recorded sound files in other applications
		I understand the need to ask appropriate questions to find answers.	Insert and edit simple tables	Begin to independently capture, store, retrieve and edit a digital image	Locate and use sound files from Internet, CD ROM, learning platform and Multimedia software (e.g. IWB software)
		I can consider whether data is plausible.	Use page setup to select different page sizes and orientations	Develop greater control over the digital stills video camera and use the enhanced tools (Macro, Landscape, Zoom)	Select, import and edit existing sound files in sound editing software (e.g. Audacity).

		I can choose appropriate tools to collect data.	Use Cut, copy and paste to refine and reorder content	Discuss and evaluate the quality of their own and others' captured images and make decisions (e.g. keep, delete, change)	Use music software to experiment capturing, repeating and reordering sound patterns.
		I can start to edit and organise my ideas to achieve a specific outcome.	Select suitable text, sounds and graphics from electronic resources and use it appropriately their own work	Capture "footage" from camcorders into simple movie editing software. Arrange, trim and cut clips to create a short film that convey meaning	Use ICT to create and perform sounds or music that would otherwise not be possible live – e.g. playing a multi-part piece or a very fast piece
			Select and import sounds from their own recording, create their own effects and music and import from other sources	Import music and stills into video editing software and add to film projects.	
			Select and import graphics from digital cameras, graphics packages and other sources and prepare for use (cropping, resizing, editing)	Add simple titles and credits	
			Create a range of hyperlinks and produce a non-linear, interactive presentation		
			Recognise key features of layout and use design features such as text boxes, columns, borders		
	Computer Science and Understanding Networks: programming and exploring				
	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts 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	I understand that efficient procedures are important for effective outcomes. I can build efficient procedures to carry out specific outcomes.		Talk about examples of programming in the world around, relate to efficiency of being able to repeat sets of instructions. • Setting a recorder to record a series • Repeating tasks in a manufacturing process • Space missions, bomb disposal, underground pipes Discuss format and efficiency in giving/recording/grouping instructions, link this to idea of shorthand-simple code • Include opportunities for children to have real experiences of giving and following shorthand instructions. • Explore the link between instructions, code and action for both floor and screen turtles and the need to check and edit • Provide a variety of experiences/resources to extend understanding and knowledge of programming	
	Hardware Probot Lego We Do kit & software	**Software** Probotix software 2simple NXT Textease Turtle		**Online** (F) TES iboard Spider Web, Mole Maze, Chameleon (F) Dog Walk activity (F) Sums Online Cross the Maze also app (F) Daisy the Dinosaur app for i-pad/i-phone (F) Hour of Code https://studio.code.org/hoc/1	

	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	I can hyperlink to relevant content stored locally and online I can begin to use appropriate tools to collaborate and communicate on the Internet	Look at the insides of an old computer and discuss the parts that will allow you to connect to the Internet. Model accessing different parts of a device, the school network and online to store information, talk about the different resources they can access, including the Internet. Model the use of search engines to research information • discuss reliability of information and who it belongs to. The importance of choosing the first few links after you search. • model skimming and scanning reading skills to identify appropriate and useful sources of information. Provide opportunities to use appropriate resources to collaborate online including e-mail, video-messaging, blogs, forums and talk about responsible use.
	Hardware Old PCs and devices to take apart	Software MS PowerPoint e-book creator Google Chrome/Internet Explorer	Online http://www.teachingideas.co.uk/welcome/internet/page1.htm Wordle Tagxedo J2E Purple Mash School VLE Search engines: Google, Bing, Kiddle

	Working Scientifically	Living things	Animals	States of matter	Sound	Electricity
Science	Asking relevant questions and using different types of scientific enquiries to answer them. Setting up simple practical enquiries, comparative and fair tests. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Identifying differences, similarities or changes related to simple scientific ideas and processes. Using straightforward scientific evidence to answer questions or to support their findings.	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 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.	Compare and group materials together, according to whether they are solids, liquids or gases. Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C). Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of a sound and features of the object that produced it. Find patterns between the volume of a sound and the strength of the vibrations that produced it. Recognise that sounds get fainter as the distance from the sound source increases.	Identify common appliances that run on electricity. Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors.

		Stone Age	Romans	Anglo-Saxons	Vikings	Local History	Theme	Civilizations	Ancient Greeks	World History
History	• Continue to develop a chronologically secure knowledge and understanding of British, local and world history, establishing clear narratives within and across the periods they study. • Note connections, contrasts and trends over time and develop the appropriate use of historical terms. • Regularly address and sometimes devise historically valid questions about change, cause, similarity and difference, and significance. • Construct informed responses that involve thoughtful selection and organisation of relevant historical information. • Understand how our knowledge of the past is constructed from a range of sources. *In planning to ensure the progression described above through teaching the British, local and world history outlined below, teachers should combine overview and depth studies to help pupils understand both the long arc of development and the complexity of specific aspects of the content.*			Britain's settlement by Anglo-Saxons and Scots	The Viking and Anglo-Saxon struggle for the Kingdom of England to the time of Edward the Confessor					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

Chronological understanding	Interpretations of History	Historical Enquiry - Questioning	Communication and Organisation
• Place events from period studied on a time line. • Use terms related to the period and begin to date events. • Understand more complex terms such as BCE/AD.	• Identify some of the different ways in which the past is represented, e.g. artist's pictures, museum displays, writing. • Gain historical perspective by placing their growing knowledge into different contexts. • Answer questions about change, cause, similarity and difference and significance.	• Begin to research, select and combine information from sources of information about the past so that they can find answers to historical questions, and test hypotheses.	• Use dates and terms to do with the passing of time, e.g. century, decade, BC, AD, when they write down the knowledge and understanding of what they have learned. • Understand and use special words correctly, e.g. invasion, settlement, monarch, trade • Begin to produce structured writing, making appropriate use of the dates and special words which they know and understand.

	Locational knowledge	Place knowledge	Human and physical geography	Geographical skills and fieldwork
Geography	• Locate the main countries of South America and the major cities, identifying key physical and human features. • Name and locate the main counties of the United Kingdom, geographical regions and their identifying human and physical characteristics and key topographical features (including hills, mountains, coasts and rivers). • Linking with History, locate and describe UK land use patterns and understand how some of this has changed over time. • Identify the position and significance of latitude, adding the Arctic and Antarctic Circle.	• Understand geographical similarities and differences through the study of a region of the United Kingdom with a region in South America.	• Describe and understand key aspects of: ➢ Physical geography, including: climate zones, biomes and vegetation belts and the water cycle ➢ Human geography, including: types of settlements in Saxon Britain and the distribution of natural resources including energy, food, minerals and water	• Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied. • Use the eight points of a compass, four-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.

	Design	Make	Evaluate	Technical knowledge	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 discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.	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.	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.	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.	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.
D.T.	• Work confidently within a range of contexts, such as imaginary, story-based, home, gardens, playgrounds, local community, industry and the wider environment • Describe the purpose of their products • Indicate the design features of their products that will appeal to intended users • Gather information about particular needs of individuals and groups • Develop their own design criteria and use these to inform their own ideas • Share and clarify ideas through discussion • Use annotated sketches to develop and communicate their ideas • generate realistic ideas, focusing on the needs of the user and share these ideas through discussion	• Select tools and equipment suitable for the task • Select materials and components suitable for the task • Explain their choices of materials and components according to functional properties and aesthetic qualities • *Order the main stages of making* • Follow procedures for safety and hygiene • Incorporate a circuit with a bulb or buzzer into a model • Measure and mark square selection, strip and dowel according to 1cm • Use lolly sticks/cards to make levers and linkages • Use linkages to make movement larger or more varied • Use and explore complex pop ups	• Refer to their design criteria as they design, make and evaluate their completed project • Identify the strengths and areas for development in their ideas and products • Consider the views of others, including intended users, to improve their work • About inventors, designers, engineers, chefs and manufacturers who have developed ground breaking products • Who designed and made the products • Where/when products were designed and made • Whether products can be recycled or reused • How well products have been designed and made • Why materials have been chosen • What methods of construction have been used • How well products work and achieve their purpose	• How to use learning from science to help design and make their products work • How to use learning from mathematics to help design and make their products work • That materials have both functional properties and aesthetic qualities • That mechanical and electrical systems have an input, process and output • How mechanical systems such as levers and linkages or pneumatic systems create movement • How simple electrical circuits and components can be used to create functional products	• That food is grown (such as tomatoes, wheat and potatoes) reared (such as pigs,chickens and cattle) and caught (such as fish) in the Uk, Europe, and the wider world • How to prepare and cook a variety of predominantly savoury dishes safely and hygienically, including, where appropriate, the use of a heat source • How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking • that to be active and healthy, food and drink are needed to provide energy for the body

	National Curriculum	Exploring and Developing Ideas	Evaluating and Developing Work	Drawing	Digital Media	Painting	Printing	Textiles	3-D	Collage
Art	Create sketch books to record their observations and use them to review and revisit ideas. Improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]. Learn about great artists, architects and designers in history.	Select and record from first hand observation, experience and imagination, and explore ideas for different purposes. Question and make thoughtful observations. Explore the roles and purposes of artists (different times and cultures.)	Compare ideas and approaches in their own and others' work and say what they think and feel about them. Adapt their work according to their views and describe how they might develop it further. Annotate work in sketchbook.	Experiment with ways in which surface detail can be added. Use sketchbooks to collect and record visual information from different sources. Experiment with different grades of pencil and other implements to draw different forms and shapes.	Record and collect visual information using digital cameras and iPads. Experiment with colours and textures by making appropriate choices to create images for a particular purpose.	Work on a range of scales. Mix colours and know which primary colours make secondary colours. Mix and use tints and shades.	Create repeating patterns.	Develop skills in stitching, cutting and joining.	Plan, design and make models from observation or imagination. Create surface patterns and textures in a malleable material.	Experiment with a range of collage techniques such as tearing, overlapping and layering to create images and represent textures.

	National Curriculum	
Music	Play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression. Improvise and compose music for a range of purposes using the inter-related dimensions of music. Listen with attention to detail and recall sounds with increasing aural memory. Use and understand staff and other musical notations. Appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians. Develop an understanding of the history of music.	• Use voice, sounds, technology and instruments in creative ways. • Sing and play confidently and fluently, maintaining an appropriate pulse. • Suggest, follow and lead simple performance directions. • Sing within an appropriate vocal range with clear diction, mostly accurate tuning, control of breathing and appropriate tone. • Demonstrate musical quality – e.g. clear starts, ends of pieces / phrases, technical accuracy etc. • Maintain an independent part in a small group when playing or singing (e.g. rhythm, ostinato, drone, simple part singing etc.). • Create simple rhythmic patterns, melodies and accompaniments. • Communicate ideas, thoughts and feelings through simple musical demonstration, language, movement and other art forms, giving simple justifications of reasons for responses. • Offer comments about own and others' work and ways to improve; accept feedback and suggestions from others. • Aurally identify, recognise, respond to and use musically (as appropriate) basic symbols (standard and invented), including rhythms from standard Western notation (e.g. crotchets, quavers) and basic changes in pitch within a limited range.

	Inspirational People	**Celebrations**	**Beliefs and practices**	**Journeys of Life and Death**	**Celebrations**	**Beliefs in Action**
R.E.	Who was the Buddha? What are the symbols of belonging?	How does the life of Jesus compare to the Buddha? What is the most significant part of the nativity story?	What did the Buddha teach?	What are Buddhist views on Karma and Nirvana?	What is Wesak and how do Buddhists celebrate his life today?	How does a Buddhist show that they belong to their faith? Who has shown a belief in non-violence

	Health and Wellbeing	Relationships	Living in the wider world
P.S.H.E. & C. (Non-statutory)	I can explain terms, 'risk', 'danger' and 'hazard' **I can assess risks in different situations** **I can say what is meant by the term 'habit' and explain why habits can be hard to change.** I can reflect on and celebrate my achievements, identify my strengths and areas for improvement, set high aspirations and goals.	I know what to do if I am a witness of bullying. I can listen to other children and respond appropriately whether I agree or disagree with that viewpoint. I can protect myself against Cyber Bullying. I can recognise and challenge stereotypes. **I have extended my vocabulary to enable me to explain more emotions and feelings.**	**I understand that it may not be possible to have everything you want, straight away, if at all.** **I understand the benefits of giving to charities – to how I feel and to the charities.** I know what religious and ethnic identities live throughout the UK I am aware of a range of different environmental concerns, ~~both locally (y3)~~ ~~and~~ **globally** (y4) I am able to research, discuss and debate issues related to the environment

P.E.	• Use running, jumping, throwing and catching in isolation and in combination. • Play competitive games, modified where appropriate [for example, badminton, basketball, cricket, football, hockey, netball, rounders and tennis], and apply basic principles suitable for attacking and defending. • Develop flexibility, strength, technique, control and balance [for example, through athletics and gymnastics]. • Perform dances using a range of movement patterns. • Take part in outdoor and adventurous activity challenges both individually and within a team. • Compare their performances with previous ones and demonstrate improvement to achieve their personal best. • Swim competently, confidently and proficiently over a distance of at least 25 metres. • Use a range of strokes effectively [for example, front crawl, backstroke and breaststroke]. • Perform safe self-rescue in different water-based situations.

MFL	• Listen attentively to spoken language and show understanding by joining in and responding • Explore the patterns and sounds of language through songs and rhymes and link the spelling, sound and meaning of words • Engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help* • Speak in sentences, using familiar vocabulary, phrases and basic language structures • Develop accurate pronunciation and intonation so that others understand when they are reading aloud or using familiar words and phrases* • Present ideas and information orally to a range of audiences* • Read carefully and show understanding of words, phrases and simple writing • Appreciate stories, songs, poems and rhymes in the language • Broaden their vocabulary and develop their ability to understand new words that are introduced into familiar written material, including through using a dictionary • Write phrases from memory, and adapt these to create new sentences, to express ideas clearly • Describe people, places, things and actions orally* and in writing • Understand basic grammar appropriate to the language being studied, including (where relevant): feminine, masculine and neuter forms and the conjugation of high-frequency verbs; key features and patterns of the language; how to apply these, for instance, to build sentences; and how these differ from or are similar to English. *The starred (*) content above will not be applicable to ancient languages.*