Long Term Plan Computing 2021-22

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year One Skills	Digital Literacy Use their own username and password to get on to the school's network. Develop an understanding of the need to keep their information private. Use an art package on a digital device to create an image. Select purposefully and use a variety of tools in a painting package eg the straight line, geometric shapes and flood fill tools. Open a digital image from a file and add effects.	Use ICT to create pictograms and use them to answer simple questions. Input data into a simple database program and use it to answer simple questions. Complete a table eg a simple spreadsheet and then create a graph to answer a question. Navigate through websites, apps, information on a range of devices. Use simple navigation tools including hyperlinks, menus, index, forward and back buttons e.tc to explore preselected digital information sources purposefully. Select programs and apps, navigate screens and menus. Use a search engine.	Use a keyboard to enter and edit text. Explore a digital text. Combine images, text and sounds to create a simple presentation using appropriate software or app on an appropriate digital device. Use digital effects to change the appearance of text, sound and image to suit a purpose eg font, alignment and formatting.	Control a digital device by giving it instructions eg a beebot. Predict the behaviour of a simple set of instructions Write an algorithm refining the instructions to achieve a desired outcome. Create and debug a simple program to control an on screen object. Use an art package on a digital device to create an image. Select purposefully and use a variety of tools in a painting package eg the straight line, geometric shapes and flood fill tools	Access information on a range of digital devices. Discuss favourite games	.Control a digital device by giving it instructions eg a beebot. Predict the behaviour of a simple set of instructions Write an algorithm refining the instructions to achieve a desired outcome. Create and debug a simple program to control an on screen object.
Year One Knowledge	Esafety – SMART rules Logging on Use an art package on a digital device to create an image. Select purposefully and use a variety of tools in a painting package eg the straight line, geometric shapes and flood fill tools. Use 2 draw to design their own jigsaw puzzle. Make the design using 2draw, print, stick on to card and then make into a puzzle using a pattern Shoe box appeal - Create a design for the packaging. 1 square between 2 collaged together to stick on the box Create design on 2Paint a Picture on Purple Mash (ecollage) repeating pattern	Finding Out – Collect data and use 2graph to input the data and present as a bar chart. Use senses information like favourite smells, colours etc Create pictograms on 2Count and bar charts vertically and horizontally using 2graph. Interpret the data Use simple navigation tools including hyperlinks, menus, index, forward and back buttons e.tc to explore preselected digital information sources purposefully. Select programs and apps, navigate screens and menus. Use a search engine. Find out about guide dogs using a search engine and then https://www.guidedogs.org.uk using the menu bar and the search option	Castles Communicating – producing, editing and showing – Text can be entered and corrected. Text, images and sound may be changed to suit a purpose. Using 2create a story. Set a background and use draw tools to set a scene. Input text, edit and modify. Some may move on to adding sound Safer internet day (whole school)	Growing Plants Computing Models, simulations, control and programming An algorithm is a sequence of instructions which can control a device. Algorithms are implemented as programs on digital devices. Begin with giving clear instructions to a partner. Use to 2go to input instructions through the maize (1 gives instructions and the partner inputs). Select purposefully and use a variety of tools in a painting package eg the straight line, geometric shapes and flood fill tools	Digital simulation Software and apps can be used to create and edit images. Digital simulation allows users to explore options and make choices. Digital devices aid the drawing of more complex shapes and designs. Using 2DIY 3D the children will invent their own computer game	A World of Animals Computing Models, simulations, control and programming An algorithm is a sequence of instructions which can control a device. Algorithms are implemented as programs on digital devices. A digital device may be used to simulate a wide range of environments and situations. Digital simulation allows users to explore options and make choices. Using 2code (first 4 activities) children explore giving clear instructions and correcting incorrect or incomplete instructions

				Make tree patterns and add a character to the wood – Revelation Natural Art.			
Year One Vocabulary	Password Log On Private Program Create Image Design Tool Save Print	Pictogram Data Graph Website Search Menu Mouse Click	Keyboard Type Text Image Effect Font Edit	Control Instructions Directions Algorithm (introduced at this stage) Tool Image Line Shape Fill	Code Block Control Instructions Game	Control Instructions Algorithm (intro Program Code Background Object Character	duced at this stage)
Year Two Skills	Digital Literacy Use their own username and password to get on to the school's network. Develop an understanding of the need to keep their information private. Use a keyboard to enter and edit text. Use simple navigation tools including hyperlinks, menus, index, forward and back buttons e.tc to explore preselected digital information sources purposefully. Select programs and apps, navigate screens and menus. Use a search engine. Contribute to a class email or blog.	Use an art package on a digital device to create an image. Select purposefully and use a variety of tools in a painting package eg the straight line, geometric shapes and flood fill tools Open a digital image from a file and add effects Use a keyboard to enter and edit text. Explore a digital text. Combine images, text and sounds to create a simple presentation using appropriate software or app on an appropriate digital device. Use digital effects to change the appearance of text, sound and image to suit a purpose eg font, alignment and formatting. Know how to save copy and paste images from the internet with support from an adult. Sequence, delete and crop images with adult help.	Control a digital device by giving it instructions eg a beebot. Predict the behaviour of a simple set of instructions Write an algorithm refining the instructions to achieve a desired outcome. Create and debug a simple program to control an on screen object.	Access information on a range of digital devices. Navigate through websites, apps, information on a range of devices. Interact with icons in software and apps to create musical sounds and phrases. Arrange a musical sequence where musical phrases are represented by icons. Take a photograph, Video, record a sound using a digital device.	Predict the behaviour of a simple set of instructions Write an algorithm refining the instructions to achieve a desired outcome. Create and debug a simple program to control an on screen object.	program and user questions. Complete a table spreadsheet are to answer a question and user a datable. Take a photogram and using a compare photogram and using a compare photogram and using a compare photogram. Begin to identified everyday device Compare photogram and using a compare photogram and using a compare photogram and user and	and then create a graph estion. In the produce bar charts. In a prod
Year Two Knowledge	Health - Plague Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns	Great Fire of London Use technology purposefully to create, organise, store, manipulate and retrieve digital content	Great Explorers - Aviation Use logical reasoning to predict the behaviour of simple programs Bee Bots Directions 2go	Kings and Queens – Victorians Use technology purposefully to create, organise, store, manipulate and retrieve digital content	Africa - Kenya Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and	Habitats Databases 2 2graph Data logger/time lapse	Diet and Exercise Use technology purposefully to create, organise, store, manipulate and retrieve digital content

	about content or contact on the internet or other online technologies Keyboard/mouse skills 2 Type 2 Blog – welcome to Year 2	Factfile on Purple Mash Powerpoint – Great Fire of London Digital artwork – Great Fire of London	Logo Safer internet day (whole school)	Creating music – 2Sequence Invitation to a ball on photostory adding music	unambiguous instructions Create and debug simple programs 2Code (Purple Mash – Y2 lesson plans) Scratch jr on iPads	videos on iPads of minibeasts	Stop Frame animation – exercise/sport Olympics
Year Two Vocabulary	Username Password ESafety Keyboard Mouse Search engine Blog	Digital image Tool Fill Line Shape Effect Text Image Save Open Edit Copy/Paste Crop Delete	Control Directions Algorithm Forwards Backwards Turn ESafety	Website App Photograph Video Sequence Create Save Open Edit	Algorithm Code Program Instructions Sequence Code Block Debug Character Object Background	Database Data Graph Time-lapse Stop Frame Ar	nimation
Year Three Skills	Create a stop frame animation Manage digital resources on a range of devices. Create a digital text which includes making choices. Find media and download it from the internet. Make use of effects including transitions and animations to enhance their digital texts	Create and manipulate graphics within a graphics package, move, rotate and re-size graphic elements. Use tools to explore the effects of cutting, copying and pasting areas of an image.	Digital Literacy Begin to understand online identities and differences between private or public presence. Develop an understanding of what is acceptable online behaviour. Start to make choices about the way they communicate. Access a website by typing in the url, selecting from favourites or from the history. Find images and text relating to a specific topic by using keywords to search. Skim and scan search engine results and look at their web address for clues as to their usefulness. Answers specific questions on a topic by creating a report or presentation. Create a digital text which includes making choices. Find media and download it from the internet. Make use of effects including transitions and animations to enhance their digital texts	Access a website by typing in the url, selecting from favourites or from the history. Find images and text relating to a specific topic by using keywords to search. Skim and scan search engine results and look at their web address for clues as to their usefulness. Create and manipulate graphics within a graphics package, move, rotate and re-size graphic elements. Use tools to explore the effects of cutting, copying and pasting areas of an image.	Create a program which includes sequence, selection and repetition. Create a program which responds to various forms of inputs and outputs. Write a program to achieve a specific goal. Use logical reasoning to detect and correct errors in algorithms and programs.	selecting from history. Find images ar specific topic b search. Skim and scan and look at the as to their usef Find media and internet. Explore the effivariables in sin to make and te the variables ir a given outcom Record the out	ect of changing the nulations and use them ist predictions, changing a simulation to achieve le. come of choices in a ematically to help

			Technology in the Real World Develop an understanding of where web content comes from. Identify forms of digital media and show preferences to media in different forms.			
Year Three Knowledge	Select, use and combine a variety of software PIVOT animation	Out of the Darkness Digital drawing and painting Graphics and resizing images using Revelation Natural art	Nottingham Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact Internet safety safer internet day (whole school) Use search technologies. Create leaflet/brochure about the local area – Nottingham, Goose Fair, Robin Hood Purple Mash 2Simulate – online simulations on Purple Mash	Fairtrade Select, use and combine a variety of software video links for recipes and Podcast videos Use a graphics programme to create Fairtrade logo art	Humans and Animals Design, write and debug programs Use 2Code (Y3 planning) to create a sequence of events that requires programming	Ancient Egyptians Purple Mash Digital text about the Egyptians Powerpoint presentations about the Egyptians Nottingham
Year Three Vocabulary	Animation Stop Frame Frame Save	Digital Art Create Tool Save Open Graphic Cut Copy Paste Fill Line Re-size Move Rotate	ESafety Responsible Respect Acceptable/Unacceptable Search Website Keyword Download Save Simulation Outcome Choice Systematic Solution	Logo Graphics Tools Search Engine Keyword Search Website Image Cut Copy Paste Fill Line Re-size Move Rotate	Algorithm Sequence Event Object Action Debug Input Output Code Program Repeat Timer Selection Variable If	Report Text Presentation Powerpoint Slide Image Insert Text Font
Year Four Skills	Create a program which includes sequence, selection and repetition. Create a program which responds to various forms of inputs and outputs. Write a program to achieve a specific goal. Use logical reasoning to detect and correct errors in algorithms and programs.	Create a stop frame animation which includes a soundtrack. Capture video using a range of devices. Create and manipulate graphics within a graphics package, move, rotate and re-size graphic elements. Use tools to explore the effects of cutting, copying and pasting areas of an image.	Capture video using a range of devices. Use simple photo and video editing tools to change the appearance of images. Import video and sound into editing software and combine clips to make longer sequences. Find media and download it from the internet.	Use a variety of graphs to display the information, including pie charts, and discuss which type of graph works best for different kinds of data. Realise that information needs to be collected and entered accurately Take readings as part of a science or humanities activity using a simple	Create a program which includes sequence, selection and repetition. Create a program which responds to various forms of inputs and outputs. Write a program to achieve a specific goal. Use logical reasoning to detect and correct errors in algorithms and programs.	Open a prepared database, and identify the main features: records, types of fields etc. Use the search tool on a simple database to find out the answers to questions by ordering records by a key field. Create a simple database with different types of fields and records. Find media and download it from the internet.

		Access a website by typing in the url, selecting from favourites or from the history. Find images and text relating to a specific topic by using keywords to search. Skim and scan search engine results and look at their web address for clues as to their usefulness.	video independently. Make use of effects including transitions and animations to enhance their digital texts. Create and edit music and sound tracks using music apps or software. Use video to communicate as a class. Digital Literacy Begin to understand online identities and differences between private or public presence. Develop an understanding of what is acceptable online behaviour. Start to make choices about the way they communicate.	computer or data logger. Use appropriate sensors attached to a computer or data logging device to take readings to investigate a specific question or theory. Consider how technology is used to control the environment in which we live. Understand how sensors in the environment control devices. Create a program which includes sequence, selection and repetition. Create a program which responds to various forms of inputs and outputs. Write a program to achieve a specific goal. Use logical reasoning to detect and correct errors in algorithms and programs. Share digital outcomes with a wider audience on the internet through a range of methods eg learning platform, blogs, podcast.	attached to a computer or data logging device to take readings to investigate a specific question or theory. Consider how technology is used to control the environment in which we live. Understand how sensors in the environment control devices.	selecting from favourites or from the history. Find images and text relating to a specific topic by using keywords to search. Skim and scan search engine results and look at their web address for clues as to their usefulness. Answers specific questions on a topic by creating a report or presentation. Share information on a range of devices using cloud based technologies. Evaluate an online game. Technology in the Real World Who creates games? What's involved eg design and programming. How do computers help in the design process?
Year Four Knowledge	Select, use and combine a variety of software Programming 2code – following Y4 scheme of work	The Ruthless Romans Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact Mosaics (Purple Mash)Stop frame animation- chariot race2 Lego Movie 2 app on ipads 2 email – Roman Soldier 2 Quiz – Roman quiz (computing)	Roman Remains Use sequence, selection, and repetition in programs Esafety – safer internet day (whole school) Creating music – 2sequence Incredibox Editing sound /video editing & Green screen / communicating via video	Eco Heroes Use search technologies 2blog ECO Blog 2graph – waste data collection and graphs Lego WeDo 2.0 – programming – links to Science	Anglo Saxons Design, write and debug programs Anglo Saxons – City Creator Programming – Lego WeDo 2.0 continued	Select, use and combine a variety of software Branching Databases – animal classification Mindmaps – 2connect Creating a game – themed around the Amazon – using 2DIY on Purple Mash, building on skills learned in Y1 and adding more details and effects including media found on the internet. Share games with others and evaluate.

Year Four Vocabulary	Algorithm Action Alert Code Design Control Command Debug Design Event If, If/Else Input Output Object Repeat Selection Timer Variable	Stop Frame Animation App Email Compose Send Inbox Message Report Acceptable/Unacceptable Attachment Quiz Question Multiple Choice	Esafety Personal Information Private Public Online Identity Avatar Communication Sequence Edit Create Sound Sound track Clip Video Effect Green screen	Search engine Graph Data Input Accurate Blog Post Comment Share Algorithm Action Control Command Debug Design Input Output Repeat Timer Sensor Motor	Algorithm Action Control Command Debug Design Input Output Repeat Timer Sensor Motor	Database Field Branching Database Search Record Evaluate
Year Five Skills	Create a digital text which includes a range of elements for a specific purpose. Evaluate the design and layout of digital texts and use their findings to support the planning and design in their work. Digital Literacy Evaluate games and design their own including rules.	Digital Literacy As a class make use of video technologies to work collaboratively. Use text, sound, image, video camera angles and framing editing tools and techniques to create a desired effect. Work collaboratively on an online document. Use software to analyse and interpret data collected locally and remotely to investigate specific questions or theories.	As a class make use of video technologies to work collaboratively. Use text, sound, image, video camera angles and framing editing tools and techniques to create a desired effect. Create a presentation for a specific audience by gathering information from a selection of websites. Create a digital text which includes a range of elements for a specific purpose. Evaluate the design and layout of digital texts and use their findings to support the planning and design in their work. Produce a program to accomplish a specific goal which includes variables and a range of inputs and outputs. Use logical reasoning to explain how a simple algorithm works. Build up a system that controls events in response to changing conditions.	Download files from websites. Use the web based tools to ask a question, find out information or submit information or opinion. Understand online identities and differences between private or public presence. Know what acceptable online behaviour is. Make choices when and when not to use ICT. Select the most appropriate way to communicate ideas Produce content for a web page. Critically evaluate web content.	Choose when to search when to sort and when to use a graph to answer questions. Create tables and graphs with more than one variable. Create a database using more complex setup tools (eg Keywords) to answer specific questions. Recognise when data is implausible by checking data for accuracy against predicted or expected outcomes. Use the features of a spreadsheet to answer questions by producing graphs using sort and filter features. Refine search techniques. Find specific information by searching an online database. Analyse information by transferring it into an appropriate data handling package eg Spreadsheets. Enter labels, numbers & formulae into a spreadsheet. Design & create a simple spreadsheet model using information from experiments and real life situations eg predict shadow length at different times of the day from initial measurements, convert one value to another. Change data in a spreadsheet to answer 'what if?' questions and check predictions.	Solve a problem by decomposing into smaller parts. Produce a program to accomplish a specific goal which includes variables and a range of inputs and outputs. Use logical reasoning to explain how a simple algorithm works. Use a range of devices to create music.
Year Five Knowledge	The Vikings Create digital text which includes a	Atrocious Alchemy Digital literacy:	Masters Of Space Moviemaker through Literacy – WoTW music.	Magnificent Mayans Create digital text which includes a	Careering Around the Commonwealth!	Magnificent Architecture(Industrial Revolution)
	range of elements for a specific purpose:		Create own story of TWOTW (using movie maker or iMovie)	range of elements for a specific purpose:	Create digital text which includes a range of	Use a range of devices to create music:

	Create own quizzes – 2Quiz with a focus on evaluating final product. Viking games – play and evaluate a Viking game based on the battles looked at News Report (Lindasfarne Raid)	Stop frame animation for Frankenstein story 2animate Online document — collaborative news report 2Write Mathletics data in school, nationally and globally and analyse Mathletics competition	Planet research - Powerpoints Safer internet day (whole school) Lego WeDo 2.0 Space Vehicle project	E- safety Google expedition using Google Earth Produce content for a webpage	elements for a specific purpose: Flights Database and Excel - Spreadsheets	Wonder rooms (appropriate music to accompany) 2Code – Year 5 scheme of work for coding on Purple Mash
Year Five Vocabulary	Quiz Question Answer Multiple Choice Evaluate Text Design Layout	Stop Frame Animation Onion Skinning Save Insert Collaborative Statistics Data Analyse Graph National Global Data	Video Film Frame Scene Text Sound Image Edit Clip Cut Effect Presentation Slide Hyperlink Insert Image Layout ESafety	ESafety Public Private Personal Information Online Identity Digital Footprint Social Media Webpage/Website Content	Database Spreadsheet Field Search Data Label Formulae Variable	Algorithm Action Alert Bug Code, Code design Control Command Debug Design Event Input/Output If, If/Else Object Repeat Selection Variable Sequence Timer
Year Six Skills		Vorld evolved. s used to control the	Communicating Create a digital text which inclusion for a specific purpose. Evaluate the design and layout their findings to support the platwork. Create a presentation for a specific purpose and layout their findings to support the platwork. Create a presentation for a specific pattern of the platwork and the platwork of the platwork of the platform of the platfo	of digital texts and use nning and design in their ecific audience by election of websites. In and finding answers tion. put on the internet. priate information from . In and the impact its form to conference, forum, or	Computing Solve a problem by decomposing into smaller parts. Produce a program to accomplish a specific goal which includes variables and a range of inputs and outputs. Use logical reasoning to explain how a simple algorithm works. Understand how companies use the internet for marketing their products. Select appropriate graphics tools to fulfil a design brief eg create an image for an advert. Use the layers tool in graphics software to create a complex design with several graphical elements. Digital Literacy Understand online identities and differences between private or public presence. Know what acceptable online behaviour is. Make choices when and when not to use ICT. Select the most appropriate way to communicate ideas.	

Year Six Knowledge	Pivot stick – stop frame animations – building on skills from Y3, creating more complicated animations. Adding backgrounds, extra characters etc. Creating own games using 2DIY on Purple Mash and evaluating them,	use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content extensions. Adding backgrounds, extra acters etc. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. Powerpoint –creating presentations about the Greeks – internet research Safer internet day (whole school)		Mountains and Rivers Design, write and debug programs Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs Use sequence, selection, and repetition in programs 2Code – Year 6 scheme of work for coding on Purple Mash Internet Safety-Google scheme of work Creating artwork/graphics using Artweaver – using more complex tools and layers to create their artwork.		
Year Six Vocabulary	Create Animate Frame Background Character Level Platform	Effect Presentation Slide Hyperlink Insert Image Layout	Algorithm Action Alert Bug Code, Code design Control Command Debug Design Event Input/Output If, If/Else Object Repeat Selection Variable Sequence Timer Function ESafety Public Private Personal Information Online Identity Digital Footprint Social Media Phishing	Graphic Tool Shape Layer Select/Selection Copy Paste Crop Opacity Filter Effect		