'Thrive in the Gift of Life'

Farington Moss St Paul's CE Primary School

Computing Scheme of Work

Information Technology Units

June 2024

Updated July 2024

The updated St Paul's scheme of work for Information Technology is a bespoke curriculum that uses resources from Purple Mash and NCCE Teach Computing. When using lesson plan ideas and resources, use examples from Purple Mash or Teach Computing to teach the skills. Where possible, make links to other cross curricular areas for the half term to create an end of unit outcome.

For each Information Technology unit, pupils' learning and understanding must be supported by building up skills in the area of learning. There should be examples of short tasks that demonstrate children having the opportunity to "tinker" with the new skills learnt.

When planning each unit of work, provide children with many levels of scaffolding to clarify their thinking and practise their skills. Each unit should have an end of unit project which can form part of the teacher assessment. For each end of unit outcome, children should plan what they are trying to achieve, especially at Key Stage 2. The plan could be a formal template to complete or a drawn plan in a book. This planning document can be reviewed, once outcome has been created. Children can then reflect on their learning. The planning document and the end of unit outcome can form part of the teacher assessment.

It is important that children are taught the correct vocabulary for each unit, please refer to the list of vocabulary for each unit of work. Use retrieval activities to help consolidate children's knowledge. There are some examples of assessment activities on the NCCE website.

The main threads within Information Technology are - Computer Systems and Networks, Data and Information and Creating Media.

Scaffolding	Task Type	Examples of how to provide these opportunities
Most scaffolded ↓ Least scaffolded	Introduce the skill to be taught	Introduce the skills to be taught in the unit of work. Use any practical/unplugged activities if relevant.
	Practise using the skills	Give children opportunities to learn the skill with small practise task.
	Plan a project using the skills	Plan a project and how the skills will be used in the project. Use the planning proforma (see appendix).
	Create an end of unit outcome	Create an end of unit outcome (which could have a cross curricular link) using the skills learnt in this unit of work.

Summary of Information Technology Units of Work and Skills Taught

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	Interact and explore their environment using a range of multimedia equipment, including digital cameras, video cameras, microscopes, tablets etc. Take digital pictures on a nature walk and display them on the IWB and iPads. Use a simple paint package to experiment with colour, shapes and tools. Use Mini Mash. Use a Smartboard will allow children to use their fingers in gross motor movements (during continuous provision). Explore ways of listening to sounds using simple programs and devices for example during phonics videos and games.					
Year 1	Computer Systems and Networks - Technology Around Us	Creating Media - Digital Painting		Data and Information - Sorting	Creating Media - Digital Writing	
Year 2	Computer Systems and Networks - Information Technology Around Us	Creating Media - Sound		Data and Information - Branching Databases	Data and Information - Digital Photography	

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	Computer Systems and Networks - Connecting Computers		Creating Media - Desktop publishing		Creating Media - photo editing	Creating Media- Stop frame animation
Year 4		Creating Media - Data Handling Branching Databases	Computer Systems and Networks - The Internet and The World Wide Web	Creating Media - Sound	Creating Media - Video Production	
Year 5	Computer Systems and Networks - Systems and Searching	Data and Information - Databases	Creating Media - Word processing		Creating Media - PowerPoint quizzes	
Year 6			Computer Systems and Networks - The Internet, The World Wide Web and creating collaboratively	Data Handling - Introduction to Spreadsheets	Creating Media - PowerPoint Presentations	

EYFS

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EYFS Information Technology Throughout the Year	
Early Learning Goals	Early Learning Goals: EAD - Share their creations, explaining the process they have used Development Matters: EAD - Explore, use and refine a variety of artistic effects to express their ideas and feelings
End of Unit Outcomes	Interact and explore their environment using a range of multimedia equipment, including digital cameras, video cameras, microscopes, tablets etc. Take digital pictures on a nature walk and display them on the IWB and iPads. Use a simple paint package to experiment with colour, shapes and tools. Use Mini Mash. Use a Smartboard will allow children to use their fingers in gross motor movements (during continuous provision). Explore ways of listening to sounds using simple programs and devices for example during phonics videos and games.
Key Thread	Information Technology - Technology around us and Digital Art

Year 1

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Year 1 Computing Autumn Term 1	
National Curriculum Objectives	Recognise common uses of information technology beyond school Use technology safely and respectfully
End of Unit Outcomes	• Use technology with support to create, store and retrieve digital content such a text and images. • Use technology safely and respectfully • Recognise common uses of information technology beyond school e.g. homes, in libraries and shops.
Key Thread	Computer Systems and Networks – Technology Around Us
Prior Learning	EYFS
Intent	• To understand what the word technology means • To talk about the uses of technology in school and outside of school • To be able to use an iPad • To log onto Purple Mash • To open and save a 2Do • To talk about how to use technology safely
Sequence of Learning	Children will become familiar with the term 'technology'. Children will classify what is and what is not technology in their school and/or classroom. Children will become familiar with examples of technology at home and in the outside word. Children will demonstrate their understanding of how technology helps us in different ways. Children will learn how to turn an iPad on and off and put the iPad away correctly in the trolley. Children will learn about the different parts of the iPad (screen/ buttons to switch on and off). Children will learn how to log onto Purple Mash Children will find a 2Do and open it up to complete a task. Children will learn to save the task in the 2Do and hand it in when completed. Children will be made aware of how important it is to use technology safely
Vocabulary	technology, computer, iPad, keyboard, swipe, screen, logon, Purple Mash 2Do, password
Resources	Purple Mash Unit 1.9 Tech Outside of School NCCE Teach Computing Year 1 Unit 1.1 Technology Around Us – Use ideas from lessons but apply to an iPad
Retrieval/Assessment/ End of Unit Outcome	Teacher observations of children of children using technology Unplugged activities about technology Quizzes to check understanding of vocabulary Photographic evidence of children using technology

Year 1 Computing Autumn Term 2	
National Curriculum Objectives	Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Use technology safely and respectfully, keeping information private.
End of Unit Outcomes	• Use technology with support to create, store and retrieve digital content such a text and images • Use technology safely and respectfully • Use freehand paint tools to create digital art
Key Thread	Creating Media - digital painting
Prior Learning	EYFS
Intent	• To use different paint tools - brush sizes, colours and textures • To use line and shape tools • To use the fill tool • To combine a range of tools to cerate a piece of artwork
Sequence of Learning	Children will be introduced to the freehand paint tools - different size paint brushes, colours and textures Children will experiment with line and shape tools Children will use the fill tool to fill shapes Children will use different paint projects on Purple Mash to experiment using the tools. Children to create a piece of digital art using Purple Mash 2Paint. Make a cross curricular link to another curriculum subject e.g. History the Great Fire of London.
Vocabulary	paint program, tool, paintbrush, erase, fill, undo, shape tools, line tool, fill tool, undo tool, colour, brush style, brush size, pictures, painting
Resources	Purple Mash 2Paint NCCE Teach Computing Year 1 Digital Painting - Use ideas from the plans
Retrieval/Assessment/ End of Unit Outcome	Teacher observations and questioning Photographic evidence Quizzes to check understanding of vocabulary Children to create a piece of digital artwork

Year 1 Computing Spring Term 2	
National Curriculum Objectives	Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Use technology safely and respectfully, identify where to go for help and support when they have concerns about content
End of Unit Outcomes	• Use technology with support to create, store and retrieve digital content such a text and images • Use technology safely and respectfully
Key Thread	Data and Information – Grouping Data
Prior Learning	EYFS
Intent	• To understand objects can be described and labelled in different ways • To sort objects according to their properties • To decide how to group different objects • To present sorted information
Sequence of Learning	Children will begin to understand that objects have many different labels that can be used to put them into groups (unplugged activities). Children will begin to think about grouping objects based on what the objects are. Children will begin to understand that objects can be described in many different ways. They will identify the properties of objects and begin to understand that properties can be used to group objects; for example, objects can be grouped by colour or size Children will choose how they want to group different objects by properties. Children will decide how to group objects to answer questions. Children given examples of objects to drag and drop into the right groups to sort and present the information. Use examples on Purple Mash.
Vocabulary	object, label, group, search, image, property, colour, size, shape, value, data set, more, less, most, fewest, least, the same
Resources	Purple Mash Unit 1.2 NCCE Teach Computing Year 1 Unit 1.4 Grouping Data Barefoot Computing possible idea for unplugged sorting activity https://www.barefootcomputing.org/resources/colourful-kits

Retrieval/Assessment / End of Unit Outcome	Unplugged activities of children sorting objects into groups Photographic evidence Quizzes to check understanding of vocabulary Completed sorting activity on screen.

Year 1 Computing Summer Term 1	
National Curriculum Objectives	Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Use technology safely and respectfully, identify where to go for help and support when they have concerns about content
End of Unit Outcomes	• Use technology with support to create, store and retrieve digital content such a text and images • Use technology safely and respectfully
Key Thread	Creating Media - Digital Writing
Prior Learning	EYFS
Intent	• To know when and how to use the onscreen keyboard on an iPad • To recognise and find keys on the onscreen keyboard • To use a letter, number and space keys on the onscreen keyboard • To use backspace to remove text • To learn how to type a capital letter and full stop. • To explore the toolbar of 2Create a Story My Simple Story Level • To explore an e-book • To create an e-book using text and pictures
Sequence of Learning	Children will learn not to use the on-screen keyboard. Children will use the keyboard to locate letters, numbers and the space key. Children will learn to type words and simple sentences. Children will explore an example of an e-book. Children will create an e-book of their own. Use opportunities to make cross curricular links to English and use a story that they children have already written.
Vocabulary	keyboard, keys, letters, type, numbers, space, backspace, text cursor, capital letters, toolbar, bold, italic, underline, font, typing, writing
Resources	Purple Mash Unit 1.6, NCCE Teach Computing Year 1 Unit 1.5 Creating Media Digital Writing
Retrieval/Assessment/ End of Unit Outcome	Teacher observations and questioning Quizzes to check understanding of vocabulary Children to create an e-book

Year 2

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Year 2 Computing Autumn 1	
National Curriculum Objectives	Recognise common uses of information technology beyond school Use technology safely and respectfully
End of Unit Outcomes	• Know what it means to use technology safely • Know the rules for keeping safe online. • Identify uses of technology in school, at home and in the wider world.
Key Thread	Computer Systems and Networks – IT Around Us
Prior Learning	Year 1 Autumn 1.
Intent	• Children will develop their understanding of what information technology (IT) is and will begin to identify examples. • Children will discuss where they have seen IT in school and beyond, in settings such as shops, hospitals, and libraries. • Children will then investigate how IT improves our world, and they will learn about the importance of using IT responsibly.
Sequence of Learning	Children will develop their understanding of what information technology (IT) is. Children will consider common uses of information technology Children will begin to explore IT in environments beyond school, including home and familiar places such as shops. Children will explore the benefits of using IT in the wider world. Children will consider how they use different forms of information technology safely, in a range of different environments. Children will think about the choices that are made when using information technology, and the responsibility associated with those choices.
Vocabulary	Information technology (IT), computer, barcode, scanner/scan
Resources	NCCE Teach Computing Unit 2.1 Computer Systems and Networks IT Around Us
Retrieval/Assessment / End of Unit Outcome	Quizzes to check children's understanding of vocabulary. Children to understand the different forms of IT and use them safely.

Year 2 Computing Autumn 2	
National Curriculum Objectives	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.
End of Unit Outcomes	• Use technology with purpose to create, store, organise, retrieve and manipulate digital content. • Learn to make a range of simple digital assets such as presentations, movies, audio files and graphs.
Key Thread	Creating Media - Digital Music
Prior Learning	No prior learning.
Intent	• To be introduced to making music digitally • To explore, edit and combine sounds • To add sounds to a tune to improve it • To think about how music can be used to express feelings and create tunes which depict feelings. • To upload a sound from a bank of sounds • To record their own sound and upload it • To create their own tune using the sounds which they have uploaded
Sequence of Learning	Children explore Purple Mash 2Sequence software. Children learn this software can be used to make musical sounds. Children explore simple sound patterns using bells and chimes. Children will add additional instruments e.g. drums. Children will experiment with changing the tempo and volume of their sound patterns. Children will edit and improve pre-set up sound patterns and their own creations. Children will record their own sounds. Children will upload their sounds to create their own piece of music which represents an animal of their choice
Vocabulary	beat, tune, speed, compose, sound effect, tempo, note, soundtrack, volume
Resources	Purple Mash 2 Sequence, Purple Mash 2.7 Making Music, NCCE Teach Computing Year 2 Unit 2.5 Digital Music
Retrieval/Assessment/ End of Unit Outcome	Quizzes to check understanding of vocabulary Children to create a piece of music of their own

Year 2 Computing Spring 2	
National Curriculum Objectives	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.
End of Unit Outcomes	• Use technology with purpose to create, store, organise, retrieve and manipulate digital content. • Learn to make a range of simple digital assets such as presentations, movies, audio files and graphs.
Key Thread	Data and Information – Pictograms/Branching Databases
Prior Learning	No prior learning.
Intent	• To use simple graphic tools to create a pictogram • To use graphing software to enter data • To sort and classify a group of items • To use a branching database to sort and identify items
Sequence of Learning	Children are shown that the information provided on pictograms is of limited use beyond answering simple questions. Children will use yes/no questions to separate information. Children will construct a binary tree to separate different items. Children will use 2Question (a binary tree) to answer questions Children will use a database to answer more complex search questions. Children will use the Search tool to find information.
Vocabulary	binary tree, field, record, data, pictogram, search, database, question, sort
Resources	Purple Mash Purple Mash Unit 2.4 Questioning
Retrieval/Assessment/ End of Unit Outcome	Quizzes to assess children's understanding of vocabulary Children to use a branching database to answer questions

Year 2 Computing Summer 1	
National Curriculum Objectives	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.
End of Unit Outcomes	• Use technology with purpose to create, store, organise, retrieve and manipulate digital content. • Learn to make a range of simple digital assets such as presentations, movies, audio files and graphs.
Key Thread	Creating Media - Digital Photography
Prior Learning	EYFS
Intent	Children will learn to recognise that different devices can be used to capture photographs Children will gain experience capturing, editing, and improving photos. Children will use this knowledge to recognise that images they see may not be real.
Sequence of Learning	Children will learn that many devices can be used to take photographs. Children will capture their own photographs. Children will explore taking photographs in landscape or portrait format. Children will discover what constitutes good photography composition and put this into practice by composing and capturing photos of their own. Children will investigate the effect that good lighting has on the quality of the photos they take.
Vocabulary	device, camera, photograph, capture, image, digital, landscape, portrait, framing, subject, compose, light sources, flash, focus, background, editing, filter, format, framing, lighting
Resources	NCCE Teach Computing Unit 2.2 Digital Photography iPads
Retrieval/Assessment / End of Unit Outcome	Quizzes to assess children's understanding of vocabulary Children create take a range of photographs on a theme (cross curricular link) Print off a photograph and children evaluate the photograph/skills learnt.

Year 3

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Year 3 Computing Autumn 1	
National Curriculum Objectives	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.
End of Unit Outcomes	• Develop their search strategies by refining their use of keywords and starting to use appropriate key phrases and questions. • Use the internet safely and responsibly. • Begin to understand how networks can provide opportunities for communication.
Key Thread	Computer Systems and Networks – Connecting Computers
Prior Learning	This lesson introduces the concepts of input, process, and output and how to protect devices using secure passwords.
Intent	Children will develop their understanding of digital devices, with an initial focus on inputs, processes, and outputs. Children will compare digital and non-digital devices. Children will be introduced to computer networks, including devices that make up a network's infrastructure, such as wireless access points and switches. Children will discover the benefits of connecting devices in a network.
Sequence of Learning	Children will be introduced to the concepts of input, process, and output and how to protect devices using secure passwords. Children will develop their knowledge of the relationship between inputs, processes, and outputs and apply it to devices they are familiar with Children will learn the benefit of connecting digital devices is that it allows information to be shared between users and systems. Children will be introduced to key network components Children will see examples of network infrastructure in a real-world setting Children will experience computers being connect via a networks by sending and receiving emails within the class
Vocabulary	digital device, input, process, output, program, digital, non-digital, connection, network, switch, server, wireless access point, cables, sockets
Resources	NCCE Teach Computing Unit 3.1 Purple Mash 2Email. Purple Mash Unit 3.5 Email (Don't use all the lesson plans focus on sending and receiving an email so children can see a real-life example of computers being connected to communicate). Use BBC Micro bit as an example to show the children examples of the results of simple inputs and outputs.
Retrieval/Assessment/ End of Unit Outcome	Quizzes to assess children's understanding of vocabulary Children to create a map of the school network.

Year 3 Computing Spring 1	
National Curriculum Objectives	Use Search technologies effectively. 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.
End of Unit Outcomes	• Use a variety of software and devices to create digital assets such as programs, graphs and multimedia content for a defined purpose. • Develop their search strategies further by refining their use of keywords and starting to use appropriate key phrases and questions.
Key Thread	Creating Media - Learning to use key word searches, desktop publishing creating an information poster or magazine cover
Prior Learning	Year 1 Summer 2
Intent	• To use a range of child friendly search engines • To develop key questions and key words to search for specific information • To learn how text and images can be used to communicate meaning • To learn how to change the size, font and colour of text • To learn how to insert a picture • To learn how to set out text boxes, text and pictures to create
Sequence of Learning	Children will use key words to find information (possible cross curricular link to work on rocks and fossils). Children will develop their key word searches and evaluate their search results. Children will learn how text and pictures can communicate meaning Children will experiment and make careful choices to change fonts, size and colour on a pre-set-up template. Children will use the shift, backspace and return keys plus appropriate punctuation Children will insert a picture into a pre-set-up template Children will learn how to use a blank template to add text and picture boxes Children will create a magazine front cover for a Science magazine or an information poster (link to work on rocks and fossils) choosing text and picture locations.
Vocabulary	text, images, advantages, disadvantages, communicate, font, style, landscape, portrait, orientation, template, layout, content, desktop publishing, copy, paste, purpose.
Resources	Children friendly search engines - Kidddle, Swiggle Refer back to information Purple Mash Unit 2.5 Effective Searching as a resource

	NCCE Unit 3.5 Desk Top Publishing Unit for information on the main concepts to teach Purple Mash 2 Publish plus - set up a template for the children to edit Purple Mash Use blank templates 2 Publish plus
Retrieval/Assessment/ End of Unit Outcome	Quizzes to access children's understanding of vocabulary Children to create a poster/magazine front cover

Year 3 Computing Summer 1	
National Curriculum Objectives	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.
End of Unit Outcomes	• Use a variety of software and devices to create digital assets such as programs, graphs and multimedia content for a defined purpose.
Key Thread	Creating Media – photo editing
Prior Learning	Year 2 Summer 1
Intent	To improve and edit an image To experiment with changing colour effects To add to the composition of an image by cloning To experiment with tools to select and copy To combine text and images to create a project
Sequence of Learning	Introduce the children to the concept of editing images and discuss whether or not editing is ethical. Children will go on to explore when we need to rotate and crop an image as well as how to use an image editor to make these changes. Children will look at the effect that different colours and filters can have on an image. Children will be introduced to the cloning tool and its use in both changing the composition of a photo and photo retouching. Children will learn how to use different tools to select areas of an image. Children will use the cloning tool to combine two different photographs. Childrenwill apply all the skills they have learnt in the unit so far. They will start by reviewing some images and considering what makes an image look real or made up. Children will review the photographs that they have created.
Vocabulary	image, edit, digital, crop, rotate, undo, save, adjustments, effects, colours, hue, saturation, sepia, vignette, image, retouch, clone, select, combine, made up, real, composite, cut, copy, paste, alter, background, foreground, zoom, undo, font
Resources	iPads Use photo editing facilities/app on iPads Alternative resource Paint.net: https://www.getpaint.net/download.html
Retrieval/Assessment/ End of Unit Outcome	Quizzes to access children's understanding of vocabulary Children to create an edited photography (link the photograph to another area of the curriculum) Print off photograph and children to evaluate the skills learnt

Year 3 Computing Summer 2	
National Curriculum Objectives	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.
End of Unit Outcomes	• Use a variety of software and devices to create digital assets such as programs, graphs and multimedia content for a defined purpose.
Key Thread	Creating Media - Stop Frame Animation
Prior Learning	Year 2 Summer 2
Intent	• To learn how animations are created. • To find out how animations can be created using technology. • To learn about onion skinning in animations • To add backgrounds and sounds to animations
Sequence of Learning	Children will learn how animations are created. Children will learn how to create a simple animation using frames. Children will understand how to use the onion skinning tool to create an animation. Children will add backgrounds and sounds to their animation. Children to create an end of unit animation linked to a cross curricular topic.
Vocabulary	animation, flip book, stop-frame, frame, sequence, image, photograph, setting, character, events, onion skinning, consistency, evaluation, delete, media, import, transition.
Resources	iPads Use Purple Mash 2 Animate (digital photographs can be uploaded into 2 Animate to create more complex animations) Purple Mash Unit 4.6 NCCE Teach Computing Unit 3.2 Stop Frame Animation
Retrieval/Assessment / End of Unit Outcome	Quizzes to access children's understanding of vocabulary End of unit outcome a stop motion animation

Year 4

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Year 4 Computing Autumn 2	
National Curriculum Objectives	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.
End of Unit Outcomes	• Use and combine a variety of software and devices with increasing independence, to create a range of digital assets such as programs, databases, systems and multimedia content.
Key Thread	Data and Information – Data Handling Branching Databases
Prior Learning	Year 2 Spring 2
Intent	• To sort data into yes/no questions • To use a branching database to analyse information • To edit/complete a branching database • To plan and set up a branching database
Sequence of Learning	Children will learn how to sort information by asking yes/no questions. Children will learn how to use a branching database to analyse information. Children will edit existing branching databases. Children will plan and set up a branching database using their own data. *Children will also use BBC Micro Bit as a data logger in science to record sound levels.
Vocabulary	attribute, value, questions, table, objects, branching, database, objects, equal, even, separate, structure, compare, order, organise, selecting, information, decision tree
Resources	Purple Mash Purple Mash unit 3.6 Branching Databases NCCE Teach Computing 3.4
Retrieval/Assessment/ End of Unit Outcome	Understanding of key vocabulary. Correct the errors in a branching database. Children to produce a branching database of their own. Cross curricular link for the subject of the branching database.

Year 4 Computing Spring 1	
National Curriculum Objectives	Use Search technologies effectively. 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.
End of Unit Outcomes	• Use and combine a variety of software and devices with increasing independence, to create a range of digital assets such as programs, databases, systems and multimedia content. • Understand how Boolean operators can change searches and select appropriate information for their tasks. Use models and simulations to produce graphs and explore patterns and relationships.
Key Thread	Computer Networks and Systems – The Internet
Prior Learning	Year 1 Autumn 1, Year 2 Autumn 1, Year 3 Autumn 1
Intent	• To learn that computers are joined in a network and the Internet is part of a network • To learn the about World Wide Web and where websites are stored • To use key words to search effectively for information • To use information searched on the World Wide Web to create a leaflet
Sequence of Learning	Children will learn about networks and the Internet is part of a big network Children will learn about the World Wide Web and where websites are stored Children will analyse the key parts of a website Children will use their knowledge of key word searches to find information (cross curricular link to Science). Children will use researched information to type up paragraphs of text into a leaflet template. *Children will also use BBC Micro Bit as a data logger in science to record temperature.
Vocabulary	Internet, webpage, website, keyword search, network, World Wide Web, web address, web browser, wireless access point
Resources	https://www.bbc.co.uk/bitesize/topics/z7wtb9q/articles/z3tbgk7 https://www.bbc.co.uk/bitesize/topics/z7wtb9q/articles/ztbjq6f Purple Mash Science Writing Project Healthy Teeth leaflet template Purple Mash Unit 4.7 Effective Searching NCCE Teach Computing Unit 4.1 The Internet
Retrieval/Assessment/ End of Unit Outcome	Quizzes to assess children's understanding of key vocabulary Children will use effective key word searches to create an information booklet. Use the template on Purple Mash. Cross curricular link to Science.

Year 4 Computing Spring 2	
National Curriculum Objectives	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.
End of Unit Outcomes	• Use and combine a variety of software and devices with increasing independence, to create a range of digital assets such as programs, databases, systems and multimedia content.
Key Thread	Information Technology - Sound
Prior Learning	Year 2 Autumn 2
Intent	• To understand and experiment with rhythm and tempo • To create a compose a piece of electronic music
Sequence of Learning	Children will use experiment with rhythm, tempo and melody (using Purple Mash Busy Beats). Children will create examples of different beats, rhythms and melodies using Purple Mash Busy Beats. Children will create a piece of electronic music - a sound effect for a story
Vocabulary	melody, rhythm, pitch, dynamics, tempo, rippler, ripples, samples, synth board
Resources	Purple Mash Purple Mash 4.9 Making Music
Retrieval/Assessment/ End of Unit Outcome	Quizzes to assess children's understanding of key vocabulary Children create a piece of music with a beat, rhythm and melody. The melody will be a soundtrack for a scene from a story (cross curricular link to English).

Year 4 Computing Summer 1	
National Curriculum Objectives	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.
End of Unit Outcomes	• Use and combine a variety of software and devices with increasing independence, to create a range of digital assets such as programs, databases, systems and multimedia content.
Key Thread	Creating Media - Video Production
Prior Learning	Year 3 Summer 1, Year 3 Summer 2
Intent	• To learn what video format is and the techniques used to make a short film • To learn how to create short videos • To plan a storyboard for a short video • To develop the skills of capturing video • To manipulate and edit video using video editing software
Sequence of Learning	Children will be introduced to video as a format Children will experiment with an iPad to capture video experimenting with different camera angles. Children will use a storyboard to explore a variety of different filming techniques Children will plan a video by creating a storyboard. Their storyboard will describe each scene, and will include a script, camera angles, and filming techniques. Children will shoot the remaining scenes of their video, and then import their content to video editing software. Children will edit the video removing an unwanted content Put a request in for a Stem Ambassador
Vocabulary	video, audio, camera, talking head, panning, close up, video camera, microphone, lens, mid-range, long shot, moving subject, side by side, angle (high, low, normal), static, zoom, pan, tilt, storyboard, filming, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share.
Resources	iPads iMovie NCCE Teach Computing Unit 5.2
Retrieval/Assessment / End of Unit Outcome	Quizzes on topic vocabulary Children to evaluate their planned storyboard Children to create a short video - cross curricular link to Geography.

Year 5

Updated July 2024

Year 5 Computing Autumn 1	
National Curriculum Objectives	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.
End of Unit Outcomes	• Understand about the use of operators in searching and continue developing their effective search techniques by using Boolean operators in their searches.
Key Thread	Computer Systems and Networks - Systems and Searching
Prior Learning	Year 4 Spring 2
Intent	• Children will develop their understanding of computer systems and how information is transferred between systems and devices. • Children will consider small-scale systems as well as large-scale systems. They explain the input, output, and process aspects of a variety of different real-world systems. • Children will discover how information is found on the World Wide Web, through learning how search engines work (including how they select and rank results) and what influences searching, and through comparing different search engines.
Sequence of Learning	Children are introduced to the concept of a system. Children consider how larger computer systems work. Children are introduced to a range of search engines. They are given the opportunity to explain how to search, before they write and test instructions. Children gain an understanding of why search engines are necessary to help them find things on the World Wide Web. Children take part in an unplugged activity to find out about how a webpage's content can influence where it is ranked in search results. Children explore how someone performing a web search can influence the results that are returned, and how content creators can optimise their sites for searching.
Vocabulary	digital device, input, process, output, program, digital, non-digital, connection, network, switch, server, wireless access point, cables, sockets
Resources	NCCE Teach Computing 5.1 Chromebooks/laptops

Retrieval/Assessment / End of Unit Outcome	Quizzes to access children's understanding of vocabulary and screenshots of search engines Children to use their knowledge of online searching to find out information for another curriculum subject (cross curricular link)

Year 5 Computing Autumn 2	
National Curriculum Objectives	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.
End of Unit Outcomes	• Combine a range of software and use a wider range of devices to create a variety of digital assets such as programs, systems, databases, spreadsheets and multimedia content for a defined purpose.
Key Thread	Data and Information – Databases
Prior Learning	Year 2 Spring 2, Year 4 Autumn 2
Intent	• To understand what a database is • To understand different ways to search a database • To use a database to search for answers to a question • To work collaborative and contribute to a class database • To create a database using 2Investigate
Sequence of Learning	Children will create a paper record with fields. Children will understand the term record and field. Children will create a paper version of a record card database and physically sort the cards to answer questions. Children will use 2Investigate to search for information on an existing database. Children will look at how data is set up in a database – records, fields. Children will sort and group information into tables and graphs. Children will work collaboratively to contribute to a class database. Children will choose a topic and create their own database. Children will choose fields and add records to their database. Children will look at an example of a "real life" database to search for specific information.
Vocabulary	record, field, data, database, record, search, sort, collaborative, group
Resources	Purple Mash Purple Mash Unit 5.4 Databases Additional resources NCCE Teach Computing Unit 5.4 (last lesson gives databases a real life context)
Retrieval/Assessment/ End of Unit Outcome	Quizzes to access children's understanding of vocabulary. Screen shots from 2 Investigate. Children to create their own database with fields and records. Databases could be created collaboratively in small groups with children adding specific records to the group database.

Year 5 Computing Spring 1	
National Curriculum Objectives	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.
End of Unit Outcomes	• Combine a range of software and use a wider range of devices to create a variety of digital assets such as programs, systems, databases, spreadsheets and multimedia content for a defined purpose.
Key Thread	Creating Medica - Word Processing
Prior Learning	Year 1 Summer 1, Year 3 Spring 1,
Intent	• To know what a word processor is used for • To add and edit images in a word document • To use word wrap with images and text • To change the look of the text - formatting, fonts, justification, text boxes, bullet points, line spacing • To add tables of information • To word process a document
Sequence of Learning	Children will learn what a word processor is used for and how to create and save a new document. Children will learn to add text and images into a document. Children will learn how to present information using text wrap, fonts, justification, bullet points, line spacing. Children will learn how to add a table to their document. Children will word process a document incorporating all the skills learnt liked to a cross curricular topic e.g. a newspaper article, a science report.
Vocabulary	Font, text, word process, copy, paste, document, Word Art, format, keyboard short cuts, images, tables.
Resources	MS Word Purple Mash Unit 5.8 Word processing
Retrieval/ End of Unit Outcome	Quizzes to access children's understanding of vocabulary. Screen shots from MS Word. Children to word process a document using the skills taught. If a document has multiple pages, children could work collaboratively to create a page of the document.

Year 5 Computing Summer 1	
National Curriculum Objectives	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.
End of Unit Outcomes	• Combine a range of software and use a wider range of devices to create a variety of digital assets such as programs, systems, databases, spreadsheets and multimedia content for a defined purpose.
Key Thread	Creating Media - Creating an interactive Quiz on PowerPoint
Prior Learning	Year 1 Summer 2, Year 2 Summer 1, Year 4 Spring 1
Intent	• To learn how to set up a PowerPoint slide • To add a text box and choose a suitable font to create a title page and headings • To add a text box and choose a suitable font for a list of question/answers • To add bullet points/numbers • To include suitable pictures • To change the background of a slide • To add hyperlinks to link the pages within the presentation
Sequence of Learning	Children will learn how to create a PowerPoint file. Children will learn the skills by setting up a title page, pages with a heading and questions and/or answers using suitable fonts. Children will add a background, suitable pictures and create text boxes and hyperlinks to other slides. Children will create a practise document to practise and show progression of these skills. Children will design an interactive quiz on paper. Children will use MS PowerPoint to create an interactive quiz with slides with headings, text, pictures, a background, hyperlinks links to correct and incorrect answers. The theme of the quiz will be cross curricular to another subject taught this half term.
Vocabulary	quiz, PowerPoint, hyperlinks, fonts, slides, title, headings, text, background, picture
Resources	MS PowerPoint Laptops/Chrome books https://support.microsoft.com/en-gb/office/add-hyperlinks-to-slides-6f37e08a-43a8-40fe-a1d3-3adf6c592fa9
Retrieval/Assessment/ End of Unit Outcome	Vocabulary quiz, quiz about different skills learnt on PowerPoint using screen shots Children create an interactive quiz on MS PowerPoint with hyperlinked slides to questions and correct/incorrect answers. The quiz will have a cross curricular theme.

Year 6

Updated July 2024

Year 6 Computing Autumn 2	
National Curriculum Objectives	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.
End of Unit Outcomes	• Combine a range of software and use a wider range of devices to create a variety of digital assets such as programs, systems, databases, spreadsheets and multimedia content for a defined purpose.
Key Thread	Data and Information – Introduction to Spreadsheets
Prior Learning	No prior learning
Intent	• To learn how data is organised in columns and rows • To learn how data is formatted to support calculations • To be introduced to formulas and learn how formulas can be used to produce calculated data • To apply formulas that include a range of cells, and apply formulas to multiple cells by duplicating them. • To use spreadsheets to plan an event and answer questions. • To create charts, and evaluate their results in comparison to questions asked.
Sequence of Learning	Children will collect and organise data and present the data in a table in a spreadsheet. Children will develop their understanding of the structure of a spreadsheet. Children will use and create formulas to use in a spreadsheet. Children will calculate data using the operations of multiplication, subtraction, division, and addition. They will use these operations to create formulas in a spreadsheet. Children will plan the cost of an event using a spreadsheet. Children will learn how to create charts.
Vocabulary	data, collecting, table, structure, spreadsheet, cell, cell reference, data item, format, formula, calculation, spreadsheet, question, data set, organised, chart, evaluate, results, sum, comparison
Resources	NCCE Teach Computing Unit 6.4 Introduction to Spreadsheets MS Excel laptops
Retrieval/ End of Unit Assessment	Quizzes to assess children's understanding of vocabulary Screen shorts of MS Excel Create a spreadsheet with formulas to plan an event. Children will create charts using the data.

Year 6 Computing Spring 1	
National Curriculum Objectives	Use Search technologies effectively. 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.
End of Unit Outcomes	• Combine a range of software and use a wider range of devices to create a variety of digital assets such as programs, systems, databases, spreadsheets and multimedia content for a defined purpose. • Understand about the use of operators in searching and continue developing their effective search techniques by using Boolean operators in their searches. Create simple spreadsheet models to investigate real life problems.
Key Thread	Computer Systems and Networks - The Internet, the World Wide Web and Communicating Collaboratively
Prior Learning	Year 1 Summer 2, Year 2 Summer 1, Year 3 Spring 1, Year 4 Spring 1, Year 4 Summer 1, Year 6 Autumn 1
Intent	• To understand the different parts that make up a computer • To find out what a LAN and WAN are. • To find out how we access the internet in school. • To learn how data is communicated over the internet using IP addresses and protocols • To learn how the internet can be used to work collaboratively • To research about the creation of the Internet and Tim Berners-Lee
Sequence of Learning	Children learn about the main parts of a computer. Children understand the terminology WAN and LAN. Children investigate the school's LAN and find out how the Internet is accessed in school. Children learn about the difference between the Internet and the World Wide Web. Children to understand how data is communicated over the internet. Children to learn how the internet can enable people collaboratively Children to research information about the Internet and the World Wide Web for a class/group collaborative project.
Vocabulary	CPU, graphics card, hard drive, motherboard, network card, RAM, software, input, output, screen, keyboard, mouse, mousepad, Internet, network, Wi-Fi, WAN, LAN, hub, router, World Wide Web, IP address, domain name

Resources	Purple Mash Purple Mash 4.8 Hardware - parts of a Computer Purple Mash 6.6 Networks NCCE Teach Computing Unit 6.1 Communication and Collaboration
Retrieval/End of Unit Outcome	Quizzes to assess children's understanding of topic vocabulary and part of a computer End of unit outcome children use research to create a collaborative piece of information about the Internet.

Year 6 Computing Summer 1	
National Curriculum Objectives	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.
End of Unit Outcomes	• Combine a range of software and use a wider range of devices to create a variety of digital assets such as programs, systems, databases, spreadsheets and multimedia content for a defined purpose.
Key Thread	Information Technology/Digital Literacy - advanced key word searches, Digital Art, PowerPoint Presentation
Prior Learning	, Year 3 Spring 1, Year 4 Spring 1, Year 4 Summer 1, Year 5 Summer 1
Intent	• To use advanced key word searches to research information • To recap previously taught skills using PowerPoint • To create PowerPoint presentation using researched information
Sequence of Learning	Children will learn continue to develop advanced search techniques to find specific information (cross curricular link). Children will recap skills - setting up a title page, pages with a heading, choosing suitable fonts, adding a background, suitable pictures and create text boxes. Children will learn how to create transitions and animations for their presentation. Children will create a PowerPoint Presentation on a researched subject.
Vocabulary	Keyword search, search engine, Boolean operators,
Resources	MS PowerPoint laptops