

Computing Topic List

KEY STAGE	YEAR	TOPIC NAME	ENQUIRY QUESTION	MAIN CURRICULUM FOCUS	BIG FINISH
KEY STAGE 1	YEAR 1	Online Safety & Exploring Purple Mash	How can we safely login? How can we use Purple Mash?	Use technology safely and respectfully.	Create an online safety poster
		Grouping & Sorting	How do we sort objects?	Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	Design a Venn diagram of the 2D shapes by grouping and sorting them into the right category
		Pictograms	How can we represent data?	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Use your data to produce a pictogram using the 2Count program
		Lego Builders	What is an instruction and why do we need to debug code?	Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	Put the instructions for a cooking recipe in order
		Maze Explorers	How can we create instructions?	Create and debug simple programs.	Create a maze challenge for your friend using the 2Go program
		Animated Story Books	How can we create a story using animation?	Use technology purposefully to create and manipulate digital content.	Complete and share your animated story on a display board on Purple Mash
		Coding	How can we use code?	Create and debug simple programs.	Create a sequence of coding blocks
		Spreadsheets	What is a spreadsheet and how can you use one?	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Create a speaking counting machine
		Technology outside school	What is the technology and how does it make our lives easier?	Recognise common uses of information technology beyond school.	Create a poster on how technology helps you in school or at home
	YEAR 2	Coding	What is coding?	Understand how algorithms are implemented as programs on digital devices. Use logical reasoning to predict the behaviour of simple programs. Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	Produce algorithm flowchart posters
		Online Safety	How can we safely communicate online?	Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	Design Blue-Bot challenges for peers to complete

LOWER KEY STAGE 2		Spreadsheets	How can we use a spreadsheet to make calculations?	Use technology purposefully to create and manipulate digital content.	Participate in an email correspondence with 'Grandma' who resides abroad
		Questioning	How can we sort pictures using a binary tree?	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Create a database using the binary tree to answer questions
		Effective Searching	How to form a question so the search in a browser is more precise?	Recognise common uses of information technology beyond school.	Create a leaflet to help people understand the Internet and how to search for information
		Creating Pictures	How do you create surrealist art using drawing and clipart?	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Create your surreal eCollage
		Making Music	How can we record sounds and compose tunes digitally?	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Compose a piece of body music using 2Sequence on Purple Mash
		Presenting Ideas	How can you present information digitally?	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Create a presentation on the topic of your choice
	YEAR 3	Coding	What is coding?	Use sequence, selection and repetition in programs. Work with variables.	Program a scene with animated actors, music and sound effects
		Online Safety	How can we stay safe online?	Collecting, analyzing, evaluating and presenting data and information.	Write a report identifying eating habits and trends within the class
		Spreadsheets	How can data be presented?	Understand the opportunities networks offer for communication and collaboration.	Create a photo report in a team
		Touch Typing	What is touch typing and why is it important?	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.	Design an instruction text on how to touch type like a Pro
		Email (inc. email safety)	How can I communicate online?	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.	Write an email to the Headteacher asking them about their day and share how your day was Attach a photo of your favourite pet CC one of your friends, BC your class teacher Remember to use the correct register and tone
		Branching Databases	How can data be presented?	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.	Create a branching database on the topic of your choice and publish it to the blog on Purple Mash

		Simulations	What are simulations and how can we use them?	Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	Use 2Create A Story ('My Adventure Story') to create a multi-page story with choices to make on each page
		Graphing	What is graphing?	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.	Solve an investigation and present the results in graphic form
		Presenting	What software can I use to present information?	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Create a presentation in Google Slides on a topic of your choice and share it with your class and your teacher on Google Classroom
	YEAR 4	Coding	What are the main programs used for coding?	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	Design and Make a Game with a Score
		Online Safety	How can we convince others to stay safe online?	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Design a digital screen time study. Include the positive and negative aspects of screen time. Include data analysis.
		Spreadsheets	What are spreadsheets and what do we use them for?	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.	Create an interactive place value resource that can be used in math lessons (2calculate program)
		Writing for Different Audiences	What does polite and efficient online communication look like?	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.	Produce different materials – letter, poster or email to persuade the audience (community campaign writing for a safe playground)
		Logo	What is a logo in computing and what does good logo programming look like?	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	Using programming language, design a colourful logo for our school
		Animation	Can I make an animation that serves a purpose?	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	Create a physical contraption from the construction material provided that has a moveable feature to it

UPPER KEY STAGE 2				information.	
		Effective Searching	How do I form my question and what filter settings do I use to search effectively online?	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Blog about your search for 'Easter eggs (a hidden search, intentional joke, hidden message)' in computer software. Use the google search engine
		Hardware Investigators	What is hardware and what is it used for?	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	Design a digital leaflet on the parts of the computer
		Making Music	What software can we use to make music?	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.	Create your music for a specific purpose (alarm track, ring tone, calming down, motivational track) and evaluate it (Purple Mash-Busy Beats)
	YEAR 5	Coding	How can further develop our code?	Understand how networks can provide multiple services, such as the world wide web.	Create web pages detailing differences between WWW and the Internet
		Online Safety	How can I keep myself, and others, safe online?	Select, use and combine a variety of software (including internet services) on a range of digital devices.	Create your very own mobile app about the Alpine region
		Spreadsheets	How powerful are spreadsheets for organising data?	Controlling or simulating physical systems.	Develop their simple computer control application.
		Databases	Why do we use databases?	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.	Create a topic database (cross-curricular link) (2Investigate)
		Game Creator	How do we design, create and evaluate a game for our peers?	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.	Create an advertisement for your game
		3D Modelling	How do we design and create 3D models?	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.	Make a 3D Model (use the print of the design's net)
		Concept Maps	How do we create and use concept maps?	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	Create a Concept Map linked to your current learning in Science or History

YEAR 6				accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	
		Word Processing	How do we design, create, and manipulate Google documents?	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.	Create a newspaper front page and link it to the current events taking place in school e.g. Music Concert, Poetry Assembly, Safer Internet Day, World Book Day, etc.
	YEAR 6	Coding	Can I design a game with code?	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solving problems by decomposing them into smaller parts.	Create a Web page that will feature high in search engine rankings
		Online Safety	How can I keep myself safe online?	Select, use and combine a variety of software (including internet services) on a range of digital devices.	Produce a film for the Childnet competition
		Spreadsheets	How can spreadsheets help us in everyday life?	Use sequence, selection and repetition in programs; work with variables.	Challenge peers to complete robot obstacle courses
		Blogging	What is a blog?	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Publish a blog entry on Purple Mash or Google Classroom (cross-curriculum links)
		Text Adventures	Why is it important to plan a text-based adventure?	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	Create a text-based adventure in 2code and share it with a wide audience (blog on Purple Mash)
		Networks	What are networks and how do networks such as the Internet work?	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.	Create a digital information text (google slides) on the origins of the world wide web
		Quizzing	What Purple Mash tools can I use to create quizzes on different topics and for different audiences?	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.	Create a quiz show quiz based on a curriculum area
		Understanding Binary	What is the binary system and how to write digital data that involves just 0's and 1's?	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	Sketch a simple design for a program that uses a variable set to 0 or 1 to control the on or off state of an aspect of the program.