

Overview of Units and Progression in the Purple Mash Scheme of Work

Computer Science		Information Technology				Digital Literacy		
Understanding how Computers and networks work, learning foundation principles of Computer Programming.		Using Computers in a purposeful way – research, create, edit, and manage files.				Becoming a responsible digital citizen - understanding digital footprint and how to use and navigate internet safely.		
Computer programming and game creation		How computers/networks work		Data Handling	Creating Digital Media and Content	Presenting Information	Online Safety	Digital awareness & communication
Year 1 Units	1.4 Lego Builders 1.5 Maze Explorers			1.2 Grouping and Sorting 1.3 Pictograms	1.6 Animated Story Books			1.1 Online Safety 1.9 Technology outside of school
Year 1 Coverage	1.4 Follow and write instructions. Understand that computers need precise instructions to follow and that a set of instructions is called an algorithm. Consider how the order of instructions affects an outcome. Begin to understand that correcting errors is called debugging. 1.5 (*works well with bee-bots/ roamers, follows 1.4) use a keypad to input instructions to direct a 'turtle' around a given path.			1.2 Sort sets of objects into groups according to properties. 1.3 (follows 1.2) Collect data and use pictograms to organise and represent it.	1.6 Combine pictures, text and sound, and use simple animation to create an interactive story.			1.1 Understand the need and reason to keep passwords safe, log in, familiarise with the structure of an online environment. Understand that you can save work and communicate online. 1.9 Consider what technology is and how it is used in the wider environment.
Year 1 Cross-curricular	Taught alongside: [e.g. instructional language, recipes, construction]			Taught alongside: [e.g. minibeasts, transport, shape, health and growth, weather]	Taught alongside: [e.g. author focus, traditional tales]			Taught alongside: [e.g. relevant PSHE/RSE topic] Taught alongside: [e.g. my family, people who help us, our local area]
Year 2 Units	2.1 Coding			2.3 Spreadsheets	2.7 Making Music	2.8 Presenting Ideas*	2.2 Online Safety	2.5 Effective Searching
Year 2 Coverage	2.1 Review and consolidate understanding of algorithms and concepts taught in Year 1 (1.4, 1.5, 1.7). Introduce the 'collision detection'			2.3 Review and consolidate understanding of vocabulary and learning from Year 1 (1.8). Use	2.7 Organise different sounds in different ways to create different tunes. Include	2.8* Examine examples of the same traditional tale presented in different ways – a	2.2 Use the search functionality in Purple Mash and apply filter options. Understand that	2.5* Understand what a browser is, what a website is and what a search engine is and does.

	event and using the ‘timer-after’ command. Explore the properties of objects (1.7L5) and understand that different object types (including buttons) have different properties, apply this knowledge when designing, making (and debugging) simple programs.		the spreadsheet to make simple calculations including using the ‘total’ tool adding coin values. Use the ‘move’ tool to create a block graph using a set of data collected.	uploading and recording sounds and understand the impact of adjusting the volume and tempo. Consider how music can be used to express feeling.	concept map, quiz, e-book and fact file. Create a quiz about a story, make a non-fiction fact-file, write a presentation and present it individually or as part if a pair or group, using a chosen/ preferred method. Use clipart and photos and consider how data can be structured in tables. *could be combined with unit 2.5 – effective searching.	work can be shared online, experience this by sharing work to a display board. Understand that email is a form of digital communication (1.1 introduction to the concept of online communication) and experience using email in an email simulation activity. Consider what a digital footprint is and what users would and wouldn’t want in their digital footprint.	Use in internet search engine to perform a search (2.2) and consider how the results can be organised and filtered using given options (e.g. all items, images, news). <i>*if this unit follows 2.2. draw from prior experience using the Purple Mash search in Lesson 1 of that unit.</i> *could be combined with unit 2.8 – presenting ideas.
Year 2 Cross-curricular	Taught alongside: [e.g. instructional language]		Taught alongside: [e.g. minibests, plants, transport, musical instruments]	Taught alongside: [e.g. any planned art project that may include any of these artists/ styles]	Taught alongside: [e.g. topic - Great Fire of London, health and growth]	Taught alongside: [e.g. look at the themed options in 2Email 2Respond and see if any of these link with a planned topic].	Taught alongside: [e.g. any science/ geography/ history topic that may involve research]
Year 3 Units	3.1 Coding		3.3 Spreadsheets		3.9 Presenting (MS PowerPoint or Google Slides)	3.2 Online Safety	3.5 Email
Year 3 Coverage	3.1 Review and consolidate understanding of vocabulary and concepts taught in Year 2. Introduce flowcharts as a way of mapping out algorithms, recap the ‘timer-after’ command and introduce ‘timer-every’ and using the		3.3 Review prior knowledge. Input a table of data and create a graph/ chart that represents it. Use ‘more than’, ‘less than’ and ‘equals’ tools. Use the ‘spin’ tool. Understand that rows and columns		3.9 Understand what either presentation software is and it’s purpose. Create a presentation and present it. Use the following	3.2 Discuss what makes a good password and the importance of keeping passwords safe (1.1). Discuss ways in which the internet can be used to communicate and	3.5 Discuss ways in which the internet can be used to communicate and discuss the strengths/ weaknesses of each method. Write and respond

	'repeat' command. Apply new and prior knowledge when designing, making (and debugging) programs.		(1.8, 2.3) are labelled with letters and numbers and use these to find specific cells.		features where available: <ul style="list-style-type: none"> - Add and format text - Add shapes/ lines - Change the design of slides - Insert a slide - Insert and edit pictures - Insert video and audio - Use animations - Use timings - Add transitions - Include different media 	contribute a clear and appropriate message to a blog. Consider the authenticity of information on the internet and the impact of exposure to 'fake news' and incorrect information. Create a 'spoof' website, share it to a display board and think about how to 'fact-check' information found online. Identify physical/ emotional effects of playing/ watching inappropriate content/ games, relate cyber-bullying to bullying in the real world and develop strategies for dealing with it.	to emails (2.2) sent within the class, use the address book to select a recipient. Consider ways to email safely. Attach files to emails, understand how CC and BCC are used and when to use them.
Year 3 Cross-curricular	Taught alongside: e.g. topic – see 3.1L5&6 make a game related to topic and/or angles.		Taught alongside: [3.3 Science involving collecting data]		Taught alongside: [e.g. a topic they can present on]	Taught alongside: [e.g. fact/ fiction, information texts]	Taught alongside: [e.g. letter writing, persuasive writing]
Year 4 Units	4.5 Logo	4.8 Hardware investigators		4.6 Animation	4.4 Writing for different audiences		4.7 Effective search <i>(*also relevant to KS2 Information Technology)</i>
Year 4 Coverage	4.5 Use syntax in computer programming. Follow simple Logo instructions. Write Logo instructions and program a 'turtle' to follow them. Use the 'repeat' command (1.5, 3.1L3) and create 'procedures' in Logo programming.	4.8 Name the different parts of a desktop computer and know what their functions are. Create a leaflet the details the functions of the different parts		4.6 Create simple animations (1.6. <i>intro to using animations</i>) – understand and use the following: <ul style="list-style-type: none"> - animation frames - onion skin tool - adding backgrounds and 	4.4 Discuss a variety of written material where the font size and type are tailored to the purpose of the text, use text formatting to make a piece of writing fit for its		4.7 using an online search engine (2.2, 2.5) Structure search queries to locate specific information. Use a search engine to answer a variety of questions. Write

		of a computer.		sounds Discuss understanding of stop-motion and films they know that use it. Create own stop-motion animations by adding photographs to frames and share work.	audience/ purpose. Role-play the job of a journalist in a simulated newsroom (3.7), interpret incoming communications and use them to create a newspaper report. Write a persuasive letter or poster for a community campaign, assess work against criteria judging their suitability for intended audience.		search questions for a friend to solve. Analyse the contents of a web page for clues about the credibility of information (3.2).
Year 4 Cross-curricular	Taught alongside: [4.1. e.g. co-ordinates] [4.5 e.g. angles]	Taught alongside: [e.g. electronics]		Taught alongside: [4.6 animations e.g. water cycle, plant life cycle, sun/shadows] [4.9 relevant music topic]	Taught alongside: [e.g. newspaper writing, persuasive writing]		Taught alongside: [e.g. information texts, metric/ imperial, currency conversion]
Year 5 Units	5.1 Coding		5.4 Databases	5.6 3D Modelling	5.8 Word processing (MS Word or Google Docs)	5.2 Online Safety	
Year 5 Coverage	5.1 Review and consolidate understanding of vocabulary and concepts taught previously. Consider how 'simplified code' can be used to make programming more efficient. Make a computer program that simulates a physical system (3.7, 4.4) e.g. traffic lights, a football game. Learn about decomposition and abstraction and consider it when planning code.		5.4 Use a database (2.5, 4.2). Search a database and use it to answer questions. Contribute to a class database Create own database. Know what a database 'field' and 'record' is and correctly add information and populate the database. Understand how to word questions so that they can be effectively answered using a search	5.6 Explore different viewpoints of 3D models (face, net, 3D shape from different angles). Adapt a template of an existing 3D model. For a purpose, create a 3D model from the starting point of a polygon. Refine designs to prepare for printing and	5.8 Understand what Word Processing is and within the capabilities of the software learn how to: - Create a document - Insert and edit images (including considering copyright) - Add text - Wrap text	5.2 Consider what information is suitable for sharing online (<i>digital footprint</i> , 4.2), know who to tell if something upsetting happens online, use the SMART rules for guidance. Understand the need for strong passwords (3.2). Understand that images can be digitally manipulated	

	Introduce 'functions' and 'strings' – text variables. Apply new and prior knowledge when designing, making (and debugging) programs.		of their database.	create the model by either printing the net and assembling it or sending the design to a 3D printer. Explore the possibilities of 3D printing.	<ul style="list-style-type: none"> - Use a style set - Use bullet points and numbering Insert and edit text boxes - Insert and edit shapes - Format paragraphs (including line spacing and drop capitals) - Add hyperlinks - Add an automated contents page - Use tables - Use pre-made templates - Format a page - Use page breaks, headers and footers 	and that this can have a negative impact. Know to cite sources (4.2) and develop search techniques to find the most relevant and reliable information online. Become aware of choice in communication methods and be able to choose which is the most appropriate for purpose.	
Year 5 Cross-curricular	Taught alongside: [e.g. friction, co-ordinates, angles]		[5.4 topic that could involve investigating data e.g. Solar System, Countries]	Taught alongside: [e.g. shapes and nets]	Taught alongside: [e.g. Science or history/ Geography topics]	Taught alongside: [e.g. relevant PSHE/RSE topic]	
Year 6 Units	6.5 Text Adventures	6.6 Networks		6.7 Quizzing	6.4 Blogging	6.2 Online Safety	6.4 Blogging
Year 6 Coverage	6.5* (6.1L1) Understand what a text-based adventure is and plan a story-based text adventure as a concept map (5.7). Create a text-based adventure using an interactive book creator tool (1.7, 3.7) using ideas from the concept map. Contrast a map-based game with a sequential story-based game. <i>*A text-based adventure is like an online escape room</i>	6.6 Know the different between the 'World Wide Web' and the 'Internet'. Understand what a network is and that there is a network at school. Begin to understand that there are different network types.		6.7 Create a quiz that is pitched appropriately to a given audience. Understand and use different question types in a quiz, create and share quizzes with peers. Use a quiz to answer questions on a given database.	6.4 Understand what a blog is and identify the key features of a blog. Work collaboratively (5.7) to plan a blog. Create a blog or blog post with a specific purpose, written appropriately for an intended audience. Understand that the way in which information is	6.2 Recap risks online including sharing location, secure websites, spoof websites, phishing, and other email scams. Recap the steps that can be taken to protect ourselves online - including protecting our digital footprint, where to go for help,	6.4 Understand that contributions to a shared blog can be subject to an approval process and demonstrate the awareness of issues caused by inappropriate posts and online bullying.* <i>*see full unit description under Information</i>

		Find out about Tim Berners-Lee and consider major changes in technology over a lifetime.			presented has an impact upon the audience. Understand that contributions to a shared blog can be subject to an approval process and demonstrate the awareness of issues caused by inappropriate posts and online bullying.* Be able to assess the effectiveness and impact of a blog. *crosses into Digital Literacy	smart rules and security software. Understand the impact of what is shared online (6.4, 4.2) and the consequences of promoting inappropriate content. Know how to report or stop inappropriate activity. Recognise a need to find a balance between being active and digital activities (4.2L4) and can give reasons for limiting screen time.	<i>Technology</i>
Year 6 Cross-curricular	Taught alongside: [e.g. maps and mapping, adventure stories]	Taught alongside: [e.g. famous people, inventors, change-makers]		Taught alongside: [e.g. and topic that they could create a quiz about to share/ check understanding]	Taught alongside: [e.g. writing for intended audience, diary writing, Anne Frank]	Taught alongside: [e.g. relevant PSHE/RSE topic]	Taught alongside: [e.g. writing for intended audience, diary writing, Anne Frank]