	Computing KS2 overview					
No timetabled computing sessions Purple Mash Unit Online safety Digital Media/Art – Cross Curricular link	Unit 1	Unit 2	Unit 3 Online safety week (Whole school) (Theme TBC)	Unit 4	Unit 5	Unit 6
Year 3	Internet safety Year 3 Unit 3.2 (3weeks) Unit 3.4 Touch typing (3 weeks)		Unit 3.5 Emailing (6 weeks)	Digital media (6 weeks) Creating an Iron Man – introduction to Paint techniques	Coding (6 weeks) Year 3 Crash course in Coding	
Year 4	Coding (6 weeks) Year 4 Crash course in Coding		Unit 4.7 Searching (3 Weeks) Unit 4.6 Animation (3 weeks)		2 x lessons per week Digital media (6 weeks) Film making (over 6 weeks)	
Year 5	Digital media (4 weeks) Sculpture silhouettes Purple Mash Year 5 unit 5.6 Lesson 1-2 Creating 3D images	Internet safety (Unplugged) Project Evolve (Yr5) (1 week) Game Creator Purple Mash Year 5 Unit 5.5 (5 Weeks)		Coding (6 weeks) Year 5 Crash course in Coding		Internet Safety (Unplugged) (1 week) Project Evolve (Yr 5) How can I communicate safely online? (5 weeks) Databases Unit 5.4
Year 6	Digital media (2 weeks) A Monster Calls (Weeks 5 + 6)	Spreadsheets (3 weeks x 2) Year 6 Spreadsheet catch-up	Digital media (6 weeks) Climate Change/ Warhol inspired posters	SATS Revision (Time slot TBC) WARNING ZONE E safety afternoon	Networks (2 weeks – 1 afternoon) (Unplugged) Unit 6.6 – Networks SATS Revision (Time slot TBC)	Internet safety (Unplugged) Project Evolve (3 weeks) Digital footprints/ Mobile devices Coding (6 Weeks) Year 6 Crash course in Coding (Taught AM post SATs)
After School Opportunities	Parent internet safety workshops?	School reading event – Promoting online safety Be internet awesome	Parent internet safety workshops?	School reading event- using green screen to create photo images (Fundraising for Year 6?)		

KS2 Skills Coverage					
National Curriculum Objective	Strand	Year grou	p/ unit cover	ed	
Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	Computer Science	Year 3 Unit 5	Year 4 Unit 1	Year 5 Unit 2 Unit 4	Year 6 Unit 6
Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	Computer Science	Unit 5	Unit 1	Unit 4	-
Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Computer Science	Unit 5	Unit 1	Unit 4	Unit 6
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.	Computer Science	Unit 3	Unit 3	Unit 2	Unit 5
Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Information Technology		Unit 3		Unit 5
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.	Information Technology	Unit 1 Unit 3 Unit 4	Unit 1 Unit 3 Unit 5	Unit 1 Unit 3 Unit 4 Unit 6	Unit 1 Unit 2 Unit 3 Unit 6
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Digital Literacy	Unit 1 Unit 3	Unit 3	Unit 2 Unit 3 Unit 6	Unit 3 Unit 4

	Year 3 Long Term Plan	https://www.purplemash.com/#tab/Teachers/com
		puting_sow/computing_sow_y3
Unit	Objectives	Resources
Internet safety	1) To know what makes a safe password, how to keep passwords safe and the consequences	Laptops
Year 3 Unit 3.2	of giving your passwords away.	
(3 weeks)	To understand how the Internet can be used to help us to communicate effectively. To	https://static.purplemash.com/mashcontent/appli
	understand how a blog can be used to help us communicate with a wider audience.	cations/schemes of work/computing schemes of
(Lesson 3 of Purple	2) To look at some 'spoof' websites. To create a 'spoof' webpage.	work/computing sow year3 unit 3 4/Unit%203
Mash Unit – PEGI	To think about why these sites might exist and how to check that the information is accurate.	.4%20Touch%20Typing%2019.pdf
ratings)	3) To learn about the meaning of age restrictions symbols on digital media and devices.	
	To discuss why PEGI restrictions exist.	Online safety
	To know where to turn for help if they see inappropriate content or have inappropriate	https://www.purplemash.com/#tab/Teachers/com
	contact from others	puting sow/computing sow y3/computing sow
		<u>y3 3-2</u>
	1) How can the internet be used to communicate using blogs?	
	How can I make my password secure and what happens if I give it away?	
	2) What is a spoof webpage and how accurate is the information presented?	
	3) What are PEGI ratings and how do they keep us safe?	
Unit 3.1	1) To introduce typing terminology. Understand the correct way to sit at the keyboard. To	
	learn how to use the home, top and bottom row keys.	
Unit 3.4	2) To practice and improve typing for home, bottom and top rows.	
Touch typing	3) To practice the keys typed with the left hand	
(3 weeks/ lessons)	4) To practice the keys typed with the right hand	
	1) How do I type on a regular keyboard and where are the location of different keys?	
	2) How can I practise my typing using the position of the rows?	
	3) Which keys do I need to type with my left hand? Which keys do I need to type with my right	
	nana? (Do both lesson 3+4 together)	
Unit 3.2 – No timetabled		
Computing		
Unit 3.3	1) To think about different methods of communication.	Laptops
	2) To open and respond to an email.	
Unit 3.5	To write an email to someone using an address book.	https://static.purplemash.com/mashcontent/appli
Emailing	3+4) To learn how to use email safely.	cations/schemes_of_work/computing_schemes_of
(6 weeks/ lessons)	5) To send an attachment to an email.	work/computing sow year3 unit 3 5/Unit%203
	6) To explore a simulated email scenario.	<u>.5%20Email.pdf</u>

	1) How do we communicate in different ways?	
	2) How to I read emails and reply to them?	
	3+4) How can I use email safely?	
	5) How do I add attachments to an email?	
	6) What would you do in this email scenario?	
Unit 3.4 - Digital	1)Introduction to Paint program and different brush strokes	Laptops + mice for easy access
media	2)Duplicating shapes on Paint	Paint program
Cross curricular link	3/4/5) Using Paint skills for their own picture based on their text	PPT in art folder
with Art	6) Innovating their new skills to create their own piece	
Creating an Iron	1) What effects can I create using different brushes on paint?	
Man – Paint(6	2) What shapes can I create using paint and how do I duplicate shapes?	
Weeks)	3+4) Can I create a background for Iron Man?	
	5) Can I create an Iron Man using shapes on paint?	
	6) Can I use the skills I have learned to create my own piece of art?	
Unit 3.5	1) To explain what coding is. Introduction to the 2Code interface including the possible	
Coding Burplo Mash – Yoar 2	actions of character objects.	https://static.purplemash.com/mashcontent/appli
Crash course in Coding	To use timers in 2Code to create differing effects.	cations/schemes of work/computing schemes of
(6 weeks/ lessons)	3) To use repetition commands	<pre>_work/computing_year3_coding_crash_course/Ye</pre>
	To introduce If statements to allow selection in a program.	ar%203%20Coding%20Crash%20Course2020.pdf
	5) To know how to debug a code to create a desired effect	
	6) To introduce variables.	Laptops
	1) What is coding and how do I use 2Code?	
	2) How can I use timers to create an effect?	
	3) How do I use repetition commands in coding?	
	4) How can I add choice to my coding?	
	5) What is meant by debugging and why is it important?	
	6) What is a variable in coding and why are they important?	
	GDS/ Higher achievers – to apply their learning to other coding programs (Scratch, Kodu etc)	
	and create algorithms with a similar purpose.	
Unit 3.6 – No timetabled		
Cross-Curricular coffue	are opportunities - Word RPT etc	
Purple Mash Unit 2.9	- Graphing - links to Maths when doing data tonic (2 week unit)	
Purple Mash timest	- Graphing - links to waths when uping data topic (5 week unit)	
Purple Mash – times ta	able practice in preparation for the tests	

	Year 4 Long Term Plan	https://www.purplemash.com/#tab/Teachers/com
		puting_sow/computing_sow_y4
Unit	Objectives	Resources
Unit 4.1	1) To explain what coding is. Introduction to the 2Code interface including the possible	https://www.purplemash.com/#tab/Teachers/com
Coding	actions of character objects.	puting sow/computing sow y4/computing sow
Year 4 Crash course	2) To create a program with an object that repeats actions indefinitely.	<u>y4 4-1</u>
in Coding	To use a timer to make characters repeat actions.	
	To explore the use of the repeat command and how this differs from the timer.	Laptops
(6 weeks/ lessons)	3) To create a program that responds to the 'if' command or the 'if/else' command To use	
	selection within a program.	
	4) To understand what a variable is in programming.	
	To use a variable to create a visual timer. To explore number and string variables.	
	5) To show how a character repeats an action and explain how they caused it to do so.	
	To make a character respond to user keyboard input	
	6) To have an idea about the design process and its benefits.	
	To turn a design into a functioning program.	
	1) What is coding and how do I use 2Code?	
	2) How can I make an object repeat an action on a timer or indefinitely?	
	3) What code can I use to give selection or choice?	
	4) What is a variable in coding and what do they do?	
	5) How do you make a character respond to or repeat an action?	
	6) Can I use my coding skills to create my own program?	
	Can I evaluate and debug my program so it has a purpose or desired effect?	
	GDS/ Higher achievers – to apply their learning to other coding programs (Scratch, Kodu etc)	
	and create algorithms with a similar purpose.	
Unit 4.2 – No	· · · · · · · · · · · · · · · · · · ·	
timetabled		
Computing		
Unit 4.3 –	1) To locate information on the search results page	Laptops
Unit 4.7	2) To effectively search to find out information	
Searching	3) To assess whether information is secure or reliable.	
(3 weeks/ lessons)	1) How do I search for information on the internet?	
	2) How can I make my searches more effective?	Searching
	3) Is the information I search for always reliable?	https://www.purplemash.com/#tab/Teachers/com

Purple Mash Unit 4.6 Animation (3 Weeks/ lessons) Online safety week Internet safety (Unplugged lesson) Focus TBC	 To discuss what makes a good animated film or cartoon and what their favourites are. To learn how animations are created by hand. To find out how 2Animate can be created in a similar way using the computer. To learn about onion skinning in animation. To add backgrounds and sounds to animations. To be introduced to stop motion animation. To share animation on the class display board and by blogging. What makes a good animated film and how are they made? What is the Onion Skinning tool and how does it work? What is stop motion animation? How can I create my own? 	puting sow/computing sow y4/computing sow y4_4-7 Animation https://www.purplemash.com/#tab/Teachers/com puting sow/computing sow y4/computing sow y4_4-6
Unit 4.4– No		
Computing		
Unit 4.5 - Digital	1)Introduce digital images and storing	Laptops
media (6 weeks – 2	2)Enhancing digital images using colour	<u>PPT (in art folder)</u>
lessons per week)	3) Combining techniques to create a photo montage	
with Art	1/2. Can I capture a diaital image of an emotion and store it? Who were the Expressionists?	Photograph, audio and visual filmmaking
Photomontage	3/4. Can I enhance my digital image using colour properties? How do artists convey emotion	Green screen/ Camera
	using colour?	Microsoft word and mouse with scroll function
Green Screen	5/6. Can I manipulate my image using photomontage techniques? Can I combine techniques	
filmmaking	and materials to convey emotion in my art?	
	1) Introduce green screen and how it works. Begin planning tonic	
	2)3/4)Write own teleprompter and perform on green screen	
	5)Perform and edit green screen	
	6) Perform and edit green screen image	
	HA to plan a presentation about Ghandi OR Rosa Parks to film and edit.	
	LA and extension- show emotion and a scary situation to edit in (being chased, falling etc)	
	ן בוחג'א נס סופונאו media topic.	
	1) What is green screen and how can I use it to present information or images?	
	2) What is a teleprompter and how does it help performers?	
	3+4) Can I perform using green screen?	
	5+6) How can I edit my video or image for effect?	

Unit 4.6 – No			
timetabled			
Computing			
Cross-Curricular softw	are opportunities – Word, PPT etc		
As there is no Internet Safety Unit (due to timetable constraints) Internet safety should be highlighted all other opportunities			
Purple Mash – times table practice in preparation for the tests			

	Year 5 Long Term Plan	https://www.purplemash.com/#tab/Teachers/com
		puting_sow/computing_sow_y5
Unit	Objectives	Resources
Unit 5.1 - Digital	To be introduced to 2Design and Make.	Laptops –Week 1-4 only
media	To explore the effect of moving points when designing.	
Cross Curricular link	To understand that images can be manipulated digitally	Paint.net
with Art/DT –	To use a program and techniques for effect (Paint.net)	
Sculpture	To evaluate my image and explain successes and improvements	Photos taken and uploaded to laptops to edit
silhouettes		images
(4 weeks/ lessons)	1) What are the basics of 2Design and Make?	
	2) How does moving points impact on my design?	2design
Purple Mash	3) How can I use cutting tools to edit an image?	https://www.purplemash.com/#tab/Teachers/com
Year 5 unit 5.6	4) Can I use cutting tools to edit my image?	puting sow/computing sow y5/computing sow
Lesson 1-2 Creating	5) How do I create an image with two layers?	<u>y5 5-6</u>
3D images	6) Can I evaluate my finished image?	Instructions for teachers
Unit 5.2 - Internet	To understand how apps request permission to access data and functions on a device.	Flipchart Online safety
safety	To recognise that features in games/apps may be purchased with real money.	
Apps	To understand that some online purchases (e.g. loot boxes) do not guarantee to give items	Snakes and Ladders game (Laminated set)
(1 week/ lesson)	that are worth the same value as what is paid.	Dice/counters
	How do apps access my data and are 'free apps' really free?	
		https://projectevolve.co.uk/toolkit/years/5/privac
Purple Mash	To review and analyse a computer game.	<u>y-and-security/</u>
Year 5 Unit 5.2	To describe some of the elements that make a successful game.	
Game Creator	To design the setting for their game so that it fits with the selected theme.	
Purple Mash Year 5	To upload images or use the drawing tools to create the walls, floor and roof	https://www.purplemash.com/#tab/teachers/com
Unit 5.5	To design characters for their game and decide upon, and change, the animations	puting sow/computing sow y5/computing sow
(5 Weeks)	and sounds that the characters make.	<u>y5_5-5</u>
	To make their game more unique by selecting the appropriate options to maximise the	
	playability.	
	To write informative instructions for their game so that other people can play it.	
	To evaluate my their own and peers' games to help improve their design for the future	
	1) What makes a successful video game?	
	2) How can use a program to design a setting for my game?	
	3) How can I make characters perform actions within my game?	
	4) How can I make my game unique and accessible for other users?	
	5) How successful is my game? How can I improve it?	

Unit 5.3 - Digital media	-To understand that images can be manipulated digitally - To introduce image editing software (Paint.net)	Laptops
Cross Curricular link	- To use a program and techniques for effect and atmosphere (Paint.net)	Paint.net
with Art.	- To evaluate my image and explain successes and improvements	
The Highwayman	1) How can I use a program (paint.net) to manipulate images?	Access to non- copyrighted images
<mark>(Lesson 5/6)</mark>	2) How could I improve my image? What was successful? Does my image create the desired	www.pixabay.com
DROPPED	effect?	Advanced search on www.google.com
Online safety week		
(Unplugged)		<u>PPT (in art folder)</u>
Focus TBC		Instructions for teachers
Unit 5.4	1) To explain what coding is. Introduction to the 2Code interface including the possible	https://static.purplemash.com/mashcontent/appli
Coding	actions of character objects.	cations/schemes of work/computing schemes of
(6 Weeks/ lessons)	2) To create a program with an object that repeats actions indefinitely.	work/computing_year5_coding_crash_course/Ye
Year 5 Crash course	To use a timer to make characters repeat actions.	ar%205%20Coding%20Crash%20Course.pdf
in Coding	To explore the use of the repeat command and how this differs from the timer.	
	3) To create a program that responds to the 'f' command or the 'f/else' command To use	https://www.purplemash.com/#tab/Teachers/com
	selection within a program.	puting_sow/computing_sow_y5/computing_sow_
	4) To understand what a variable is in programming.	<u>y5 5-1</u>
	To use a variable to create a visual timer. To explore number and string variables.	
	5/6) To go through the design, code, execute, refine process.	Laptops
	To use the coding skills that they have encountered creatively in their own program. To	
	create a program that controls or simulates a physical system, i.e. changing the speed and	
	angle of moving objects.	
	1) What is coding and how do I use 2Code?	
	2) How can I make an object repeat an action on a timer or indefinitely?	
	3) What code can I use to give selection or choice?	
	4) What is a variable in coding and what do they do?	
	5/6) Can I use my coding skills to create my own program?	
	Can I evaluate and debug my program so it has a purpose or desired effect?	
	GDS/ Higher achievers – to apply their learning to other coding programs (Scratch, Kodu etc.)	
	and create algorithms with a similar purpose.	

Unit 5.5 – No timetabled Computing		
Internet safety (1 week/ lesson) Communicating online Unit 5.6 – Databases Purple Mash – Year 5.4 (5 Weeks/ Lessons)	 I can describe what is meant by harm. I understand that not everyone I communicate with online is pleasant and may not have my best intentions at heart I can explain why some people choose to act in a certain way online, that it is their decision and that I am not responsible. How can I communicate safely online? 1) To learn how to search for information in a database. 2) To contribute to a class database. 3&4) To create a database around a chosen topic. 1) What are databases and how do I use them to search for information? 2+3) How can I create my own entry to a database to answer questions about a topic? 	Laptops <u>Flipchart</u> Online safety <u>https://static.purplemash.com/mashcontent/appli</u> <u>cations/schemes of work/computing schemes of</u> <u>work/computing_sow_year5_unit_5_4/Unit%205</u> <u>.4%20-%20Databases.pdf</u> <u>https://www.purplemash.com/#tab/Teachers/com</u> <u>puting_sow/computing_sow_y5/computing_sow</u> <u>y5_5-4</u>
Cross-Curricular softw	are opportunities – Word, PPT etc	

	Year 6 Long Term Plan	https://www.purplemash.com/#tab/Teachers/c
		omputing_sow/computing_sow_y6
Unit	Objectives	Resources
Unit 6.1 - Digital	-To understand that images can be manipulated digitally	Laptops –Week 5/6 only
media	 To use a program and techniques for effect (Paint.net) 	
Cross Curricular link	- To evaluate my image and explain successes and improvements	Paint.net
with Art – A	1) How can I use a program (paint.net) to manipulate images?	
Monster Calls	2) How could I improve my image? What was successful?	Access to non- copyrighted images
(Lesson 5 + 6)		www.pixabay.com
		Advanced search on <u>www.google.com</u>
		PPT in art folder
		Instructions for teachers
Unit 6.2 –	1) Introduction to spreadsheets	Laptops
Spreadsheets	2)Using a spreadsheet to model a real-life situation	
Year 6 Spreadsheet	3) Exploring Probability	Purple Mash – Year 6 Spreadsheet Catch-Up
catch-up	4) Conversions of measurements	https://www.purplemash.com/#tab/Teachers/c
(3 Weeks/ lessons)	5) Line graph.	omputing sow/computing sow y6/computing
JOS Wk 1,2,3	6) Use of spreadsheets in 'real life' Creating a computational model	<u>sow_y6_unit_6-3</u>
BP Wk 4,5,6		
	1+2) What is a spreadsheet and what are they used for? How are spreadsheets used in real-	
	3+4+5) How can Luse spreadsheets to show probability?	
	How can Luse a spreadsheet to convert measurements?	
	How can I use a spreadsheet to present data on a line granh?	
	6) Can I create my own spreadsheet using computational thinking?	
	GDS/ Higher achievers – apply their understanding to similar programs (excel)	
Unit 6.3 - Digital	1) Introduction to posters – features	Laptops
media	2) Using layers in a program to create an image	PPT resource (in Art folder)
Cross Curricular link	3) Evaluating the design and making improvements	
with Art		
Protest Posters	1) What are the features of an effective poster?	
(3 weeks/ lessons)	2) How can I use layers in paint.net to begin to create my poster?	
	3) How can I improve my poster using layers and colour?	

Warhol inspired pieces (3 weeks/ lessons) Online safety week	 4) Introduction to repeating patterns 5) Andy Warhol and his designs 6) Evaluating the designs and making improvements 4) How can I use paint.net to produce a repeating pattern? 5) How can I use paint.net to create a Warhol-inspired design? 	
Internet safety (Unplugged) Focus TBC	6) How can I improve my Warhol inspired design?	
Unit 6.4 – No	WARNING ZONE	
timetabled	SATS Revision	
Unit 6.5 – Networks	-To discover what children know about the internet	Elipchart Networks
(Unplugged – 2	-To find out what a LAN and WAN are	Communication Survey (to be completed
lessons – one	-To find out how we access the internet in school	BEFORE lesson)
afternoon)	-To research and find out about the age of the internet	https://www.bbc.co.uk/bitesize/topics/zkcqn39
Unit 6.6 – Networks	- To think about what the future might hold	/articles/z2nbgk7#zt6c4wx
SATS Revision	How is the internet a network and how is it used in school?	https://www.bbc.co.uk/bitesize/guides/z36nb9
Timeslot TBC	What are the future possibilities for the internet?	<u>q/revision/1</u>
Unit 6.6 – Coding	1) To explain what coding is. Introduction to the 2Code interface including the possible	Laptops
Year 6 Crash course	actions of character, car and animal objects.	
in Coding	Linkering with 2Code	Purple Mash 6.1 Coding
(6 weeks/ lessons)	2) To create a program with an object that repeats actions indefinitely.	nttps://www.purplemasn.com/#tab/Teachers/c
AM slot post SATs	To use a timer to make characters repeat actions.	sow v6 unit 6-1
See laptop	3) To introduce If statements to allow selection in a program.	
timetable	4) To understand what a variable is in programming.	
	To use a variable to create a visual timer.	
	To explore number and string	
	5/6) To go through the design, code, execute, refine process.	
	To use the coding skills that they have encountered creatively in their own program.	
	To create a program that controls or simulates a physical system, i.e. changing the speed and	
	angle of moving objects.	

	 What is coding and how do I use 2Code? How can I make an object repeat an action on a timer or indefinitely? How can I use the repeat command? What code can I use to give selection or choice? What is a variable in coding and what do they do? (a) Luce my coding skills to create my own program? 	
	Can I evaluate and debug my program so it has a purpose or desired effect?	
	GDS/ Higher achievers – to apply their learning to other coding programs (Scratch, Kodu etc) and create algorithms with a similar purpose.	
Unit 6.4 – Internet	1) Identify benefits and risks of mobile devices broadcasting the location of the user/device,	Flipchart Online safety (week 1,2)
salety (Unplugged)	To review the meaning of a digital footprint and understand how and why people use their	PPT Offine safety (week 5)
(3 weeks/ lessons)	information and online presence to create a virtual image of themselves as a user.	https://www.purplemash.com/#tab/Teachers/c
WARNING ZONE	2) To have a clear idea of appropriate online behaviour and how this can protect themselves	omputing sow/computing sow y6/computing sow y6 unit 6-2
E safety afternoon	and others from possible online dangers, bullying and inappropriate behaviour. To begin to understand how information online can persist and give away details of those	https://www.purplemash.com/#app/games/2di
SATS Revision	who share or modify it.	y/online safety game - play as a class
Timeslot TBC	 3) To understand the importance of balancing game and screen time with other parts of their lives, e.g. explore the reasons why they may be tempted to spend more time playing games or find it difficult to stop playing and the effect this has on their health. To identify the positive and negative influences of technology on health and the environment. 1) What are the risks of mobile devices and how do they impact on your digital footnerint? 	https://projectevolve.co.uk/toolkit/years/6/heal th-well-being-and-lifestyle/ (lesson 3) Flipchart on server
	2) How can my choices online impact myself or others?	
	3) What are the influences of technology on health, well-being and the environment?	
Cross-Curricular software opportunities – Word, PPT etc		
Science – Data logging/ graphs on excel		