Computing KS1 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
Foundation stage	https://www.purplemash.com/#tab/teachers/computing_sow/computing_sow_reception Link these to investigating/exploring throughout the year as removed from EYFS curriculum.					
Year 1	Internet safety & Exploring Purple Mash **Purple Mash Year 1 Unit 1.1 (4 Weeks)** Grouping and sorting **Purple Mash Year 1 Unit 1.2 (2 weeks)**	Pictograms **Purple Mash Year 1 Unit 1.3 (3 weeks)** Lego Builders **Purple Mash Year 1 Unit 1.4 (3 weeks)**	Animated Story Books **Purple Mash Year 1 Unit 1.6 (6 weeks)**	Spreadsheets Year 1 **Spreadsheets Purple Mash Year 1 Unit 1.8 (3 weeks)** Maze Explorers **Purple Mash Year 1 Unit 1.5 (3 weeks)**	Coding (6 weeks) **Year 1 Coding Purple Mash Year Unit 1.7**	Technology outside of school (Unplugged) **(2 weeks – 1 lesson) Flipchart TBC**
Year 2	Coding (6 weeks) **Year 2 Crash course in Coding**	Internet safety **Purple Mash Year 2 Unit 2.2 (2 Weeks)** Spreadsheets (4 weeks) **Year 2 Spreadsheet catch-up**	Creating Pictures **Purple Mash Year 2 Unit 2.6 (6 weeks)**	Questioning **Purple Mash Year 2 Unit 2.4 (6 weeks)**	Effective Searching **Purple Mash Year 2 Unit 2.5 (3 weeks)** Making Music **Purple Mash Year 2 Unit 2.7**	Presenting Ideas **Purple Mash Year 2 Unit 2.8 (6 weeks)**
After School Opportunities/ Outside of school		School reading event – Promoting online safety		School reading event- using green screen to create photo images (Fundraising for Year 6?)		Walk around the local area – Yr1

KS1 Skills coverage					
National Curriculum Objective	**Strand**	**Year group/ unit covered**			
		Nursery/ FS	Year 1	Year 2	
Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions	Computer Science	N/A	Unit 2 Unit 4 Unit 5	Unit 1	
Create and debug simple programs	Computer Science		Unit 4 Unit 5	Unit 1	
Use logical reasoning to predict the behaviour of simple programs	Computer Science		Unit 4 Unit 5	Unit 1	
Use technology purposefully to create, organise, store, manipulate and retrieve digital content	Information Technology		Unit 1 Unit 2 Unit 3 Unit 4 Unit 5	Unit 2 Unit 3 Unit 4 Unit 5 Unit 6	
Recognise common uses of information technology beyond school	Digital Literacy		Unit 6	Unit 5	
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.	Digital Literacy		Unit 1	Unit 2	

	Nursery and Foundation Evidence	
Unit	**Objectives**	**Resources**
Unit 1		
Unit 2		
Unit 3		
Unit 4		
Unit 5		
Unit 6		

	Year 1 Long Term Plan	https://www.purplemash.com/#tab/teachers/computing_sow/computing_sow_y1
Unit	**Objectives**	**Resources**
Unit 1 **Internet safety &** **Exploring Purple Mash** **Purple Mash Year 1** **Unit 1.1** **(4 Weeks)** **Grouping and sorting** **Purple Mash Year 1** **Unit 1.2** **(2 weeks)**	1) To login safely. To start to introduce to the children the idea of 'ownership' of their creative work. 2) To know how to find saved work in the Online Work area and find teacher comments. To know how to search Purple Mash to find resources. 3) To become familiar with the types of resources available in the Topics section. To become more familiar with the icons used in the resources in the Topic section. To start to add pictures and text to work. 4) To explore the Tools section of Purple Mash and to learn about the common icons used in Purple Mash for Save, Print, Open, New. To explore the Games section on Purple Mash. To understand the importance of logging out when they have finished. *1) What is Purple Mash?* *2) How can I search Purple Mash and find my saved work?* *3) How can I add pictures or text to my work?* *4) Can I explore Purple Mash and complete games set for me?* 1) To sort items using a range of criteria. (Unplugged) 2) To sort items on the computer using the 'Grouping' activities in Purple Mash. *1) Can I sort items using different criteria?* *2) Can I use the computer to sort items?*	https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y1/computing_sow_y1_unit_1-1 https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y1/computing_sow_y1_unit_1-2 Laptops
Unit 2 **Pictograms** **Purple Mash Year 1** **Unit 1.3** **(3 weeks)** **Lego Builders** **Purple Mash Year 1** **Unit 1.4** **(3 weeks)**	1) To understand that data can be represented in picture format 2)To contribute to a class pictogram 3) To use a pictogram to record the results of an experiment. *1) What is data and how can it be shown?* *2) What is a pictogram and how is it used to present data?* *3) Can I record the results using a pictogram?* 1) To emphasise the importance of following instructions. 2) To follow and create simple instructions on the computer. 3) To consider how the order of instructions affects the result. *1) Why is it important to follow instructions?* *2) Can I follow simple instructions on a computer?* *3) How does the order of instructions affect the result?*	https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y1/computing_sow_y1_unit_1-3 https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y1/computing_sow_y1_unit_1-4 Laptops Lego OR cubes to make a completed pattern. Lego sets must have instructions to follow.

Unit 3 **Animated Story Books** **Purple Mash Year 1** **Unit 1.6** **(6 weeks)**	1) To be introduced to e-books and to 2Create a Story. 2) To continue a previously saved story. To add animation to a story. 3+4) To add sound to a story including voice recording and music the children have created. 5) To work on a more complex story including adding backgrounds and copying and pasting pages. 6) To use additional features to enhance their stories. To share their e-books on a class display board *1) What is 2Create a Story?* *2) How can I add an animation to a story?* *3+4) Can I add sound, recordings and music to a story?* *5) Can I add a background to my story by copying and pasting an image?* *6) Can I make a story better using the tools I've used?*	https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y1/computing_sow_y1_unit_1-6 Laptops
Unit 4 **Spreadsheets** Year 1 **Spreadsheets** **Purple Mash Year 1** **Unit 1.8** **(3 weeks)** **Maze Explorers** **Purple Mash Year 1** **Unit 1.5** **(3 weeks)**	1) Introduction to spreadsheets 2) Adding images to a spreadsheet and using the image toolbox 3) Using the 'speak' and 'count' tools in 2Calculate to count items *1) What is a spreadsheet and what are they used for?* *2) How do I add images to spreadsheets?* *3) How can I use the 'speak' and 'count' tools in 2Calculate?* 1) To understand the functionality of the basic direction keys in Challenges 1 and 2. To be able to use the direction keys to complete the challenges successfully. 2) To understand the functionality of the basic direction keys in Challenges 3 and 4. To understand how to create and debug a set of instructions (algorithm). 3) To use the additional direction keys as part of their algorithm. To understand how to change and extend the algorithm list. To create a longer algorithm for an activity. Ex) To provide an opportunity for the children to set challenges for each other. To provide an opportunity for the teacher to set these new challenges as 2Dos for all the class to try. *1) Can I use the direction keys to complete the challenges?* *2) What is an algorithm and how can I make it work?* *3) Can I extend and change my algorithm list?* *Ex.) Can I complete challenges set for me and make my own?*	https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y1/computing_sow_y1_unit_1-8 https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y1/computing_sow_y1_unit_1-5 Laptops

Unit 5 **Coding (6 weeks)** **Year 1 Coding** **Purple Mash Year Unit 1.7**	1) To understand what coding means in computing. 2) To introduce 2Code and use to create a simple program. 3) To use Design Mode to add and change backgrounds and characters. To use the Properties table to change the look of the objects. 4) To design a scene for a program. To add an additional character who moves when clicked. 5) To explore the When Key and When Swiped commands (on tablets if available). To use the Stop button to make characters stop when the background is clicked.. 6) To explore a method to code interactivity between objects. To use Collision Detection to make objects perform actions. To use the sound property. *1) What is coding?* *2) How can I use 2Code to create a simple program?* *3) Can I use Design Mode to add or change backgrounds and characters?* *4) Can I add an additional character who moves when clicked?* *5) Can I make characters stop when the background is clicked?* *6) How can I make objects perform actions or sounds?*	https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y1/computing_sow_y1_unit_1-7 Laptops
Unit 6 **Technology outside of school** **(Unplugged)** **(2 weeks – 1 lesson)** **Flipchart TBC**	1) To walk around the local community and find examples of where technology is used. 2) To record examples of technology outside school. *1+2) How is technology used inside and outside of school?*	https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y1/computing_sow_y1_unit_1-9 Flipchart TBC Walk around the local area and look at types of technology
Cross-Curricular software opportunities – Word, PPT etc Maths – unit 1 – sorting shapes, Unit 2 – pictograms		

	Year 2 Long Term Plan	https://www.purplemash.com/#tab/teachers/computing_sow/computing_sow_y2
Unit	**Objectives**	**Resources**
Unit 1 **Coding (6 weeks)** **Year 2 Crash course in Coding**	1) Introduction to coding. Introduction to block coding on screen. 2) Introduction to backgrounds and characters. Making a character move left and right. 3) Introduction to Collision Detection. 4) To use Repeat and Timer commands. 5) Debugging. 6) To explore the possible actions of different types of objects. *1) What is coding and how do I use 2Code?* *2) How can I add a background or character and make your character move?* *3) What is Collision Detection?* *4) How can I use the repeat and timer commands?* *5) What is meant by debugging and why is it important?* *6) Can I explore the actions of different objects?*	https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y2/computing_sow_y2_unit_2-1 Laptops
Unit 2 **Internet safety** **Purple Mash Year 2 Unit 2.2** **(2 Weeks)** **Spreadsheets (4 weeks)** **Year 2 Spreadsheet catch-up**	1) To know how to refine searches using the Search tool. To know how to share work electronically using the display boards. To use digital technology to share work on Purple Mash to communicate and connect with others locally. To have some knowledge and understanding about sharing more globally on the Internet. 2) To introduce Email as a communication tool using 2Respond simulations. To understand how we talk to others when they aren't there in front of us. To open and send simple online communications in the form of email *1) How can I use the internet to search and share my work?* *2) What is email and how does it work?* 1) Introduction to spreadsheets 2) Copying and Pasting Totalling tools. 3) Using a spreadsheet to total currency amounts. 4) Using the 'speak' and 'count' tools in 2Calculate to count items *1) What are spreadsheets and how do they work?* *2) What are the Copying and Pasting tools and how do they work?* *3) How can I use a spreadsheet to count money?* *4) How can I use the 'speak' and 'count' function in 2Calculate to count items?*	https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y2/computing_sow_y2_unit_2-2 https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y2/computing_sow_y2_unit_2-3 Laptops

Unit 3 **Digital Art** **Creating Pictures** **Purple Mash Year 2** **Unit 2.6** **(6 weeks)**	1) To be introduced to 2Paint a Picture. To look at the impressionist style of art (Monet, Degas, Renoir). 2) To recreate pointillist art and look at the work of pointillist artists such as Seurat. 3) To look at the work of Piet Mondrian and recreate it using the Lines template. 4) To look at the work of William Morris and recreate it using the Patterns template. 5) To explore surrealism and eCollage. 6) Additional session to complete any outstanding pieces and create your own. *1) Who were the Impressionists and can I recreate a piece using 2Paint a picture?* *2) Who were the Pointillists and can I recreate a piece using 2Paint a picture?* *3) Who was Piet Mondrian and can I recreate a piece using the Lines template?* *4) Who was William Morris and can I recreate a piece using the patterns template?* *5) What is surrealism and can I create my own piece using eCollage?* *6) Additional session to complete any work*	https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y2/computing_sow_y2_unit_2-6 Laptops
Unit 4 **Questioning** **Purple Mash Year 2** **Unit 2.4** **(6 weeks)**	1) To show that the information provided on pictograms is of limited use beyond answering simple questions. 2) To use yes/no questions to separate information. 3) To construct a binary tree to separate different items. 4) To use 2Question (a binary tree) to answer questions. 5+6) To use a database to answer more complex search questions. To use the Search tool to find information. *1) Can pictograms answer complex questions?* *2) How can I use yes/no answers to separate information?* *3) What is a binary tree and how do I make one?* *4) How do I use a binary tree to answer questions?* *5+6) Can I use a database to answer more complex questions and use the search tool to find specific information?*	https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y2/computing_sow_y2_unit_2-4 Laptops
Unit 5 **Effective Searching** **Purple Mash Year 2** **Unit 2.5** **(3 weeks)**	1) To understand the terminology associated with searching. 2) To gain a better understanding of searching on the Internet. 3) To create a leaflet to help someone search for information on the Internet. *1) How can I search for information on a computer?* *2) How can I use the internet for search and how do I keep safe?* *3) Can I produce a leaflet to help another child search for information on the internet?*	https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y2/computing_sow_y2_unit_2-5 Laptops https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y2/computing_sow_y2_unit_2-7/computing_sow_y2_unit_2-7

Making Music **Purple Mash Year 2** **Unit 2.7** **(3 weeks)**	1) To be introduced to making music digitally using 2Sequence. To explore, edit and combine sounds using 2Sequence. 2) To add sounds to a tune they've already created to change it. To think about how music can be used to express feelings and create tunes which depict feelings. 3) To upload a sound from a bank of sounds into the Sounds section. To record their own sound and upload it into the Sounds section. To create their own tune using the sounds which they have added to the Sounds section. *1) What is 2Sequence and how can I use it to make music digitally?* *2) Can I change a tune by adding sounds to express feelings?* *3) Can I use my own sounds to create my own tune?*	Laptops
Unit 6 **Presenting Ideas** **Purple Mash Year 2** **Unit 2.8** **(6 weeks)**	1) To explore how a story can be presented in different ways. 2) To make a quiz about a story or class topic. 3+4) To make a fact file on a non-fiction topic. 5+6) To make a presentation to the class. *1) How can I present a story in different ways using software?* *2) Can make a quiz based on a class topic?* *3+4) Can I present a fact file based on a chosen topic?* *5+6) Can I design and present information to the rest of the class?*	https://www.purplemash.com/#tab/Teachers/computing_sow/computing_sow_y2/computing_sow_y2_unit_2-8 Laptops A variety of different topics to present from throughout the year chosen by teachers
Cross-Curricular software opportunities – Word, PPT etc		