

Computing Scheme of Work

Overview

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Introduction

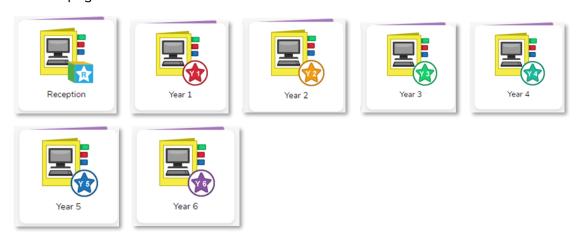
This document contains an overview of the units included in the Purple Mash Computing Scheme of Work for all year groups.

The scheme for Early Years (Reception) shows opportunities for using Mini Mash or Purple Mash as part of the Early Years classroom to support children in working towards early learning goals.'

Individual year group overview documents for years 1-6, detail the unit lessons for that year group and contain relevant curriculum maps for England, Wales, Scotland and Northern Ireland.

Year group pages also contain assessment documents for these units.

These can be found by clicking the following links or from the Purple Mash Computing Scheme of Work page.



The Purple Mash tools used within each unit are detailed in the <u>Tools section</u> below. To make the best use of the scheme, children need to be logged onto Purple Mash with their own individual usernames and passwords, using 2dos to complete work so their work will be saved in their own folders automatically and can be easily reviewed and assessed by the class teacher. If children have not used and logged onto Purple Mash before, then they will need to spend some time before starting these lessons, learning how to do this. Children can be supported by having their printed logon cards (produced using <u>Create and Manage Users)</u> to hand.

Lesson plans also make use of the facility within Purple Mash to set activities for pupils which they can then complete and hand-in online (2Dos). This enables you to assess their work easily as well as distribute resources to all pupils. If children have not opened 2Dos before then they will need more detailed instructions about how to do this. A teacher's guide to 2Dos can be found in the teacher's section: 2Dos Guide.

To force links within this document to open in a new tab, right-click on the link then select 'Open link in new tab'.

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Adapting and Refining the Scheme for your School

In an ideal world, pupils would be able to complete all units; this provides a wide range of different technological experiences using a variety of tools. The overlaps between units serve to deepen understanding of computational concepts and provide opportunities for pupils to apply and extend understanding and make links in their knowledge and capabilities.

However, as a school, you might decide that you need to refine the scheme for your own purposes and needs, meaning that not all units can be covered. This section aims to help you to do this whilst still being confident in curriculum coverage.

Firstly, use the colour coding to pick and choose units that cover the three strands of computing content to ensure a spread of complimentary opportunities and skills and to ensure curriculum coverage. Ideally, balance these strands over the whole school so that pupils cover and revisit all areas.

Secondly, look for opportunities to incorporate the computational skills into other subjects. Resources could be adapted or created to match your topics. Here are some suggestions:

Units that link to the maths curriculum:

- 1.2: Grouping and Sorting
- 1.3 Pictograms
- 2.4 Questioning
- 3.6 Branching Databases
- 3.8 Graphing
- 5.4 Databases
- 6.9 Spreadsheets
- All years: Spreadsheet units

Units that could be part of English lessons:

- 3.7: Simulations
- 4.4 Writing for Different Audiences
- 5.8 Word Processing

Units that could easily be topic linked; resources will need to be adapted to have a topic theme:

Any of the data handling units suggested in the maths section.

- 1.6 Animated stories
- 2.6 Creating Pictures
- 2.8 Presenting Ideas
- 3.9 Presenting
- 4.6 Animation
- 5.5 Game Creator
- 5.7 Concept maps
- 6.7 Quizzing



For lessons taught more discretely as computing such as Email (3.5) and Blogging (6.4), topic themes could still be used to double-up on objectives covered.

Online safety units can be part of RSE\PSHE lessons; there is a strong link between the learning objectives related to online safety with many of the online safety lessons aligning with RSE\PSHE objectives.

Music topics could be incorporated into music lessons with a modelling of musical skills on both instruments and using the computer:

- 2.7 Making Music
- 4.9 Making Music

Typing could be covered during a regular 10-minute morning session over a term rather than during dedicated computing lessons (unit 3.4).

We have a stand-alone spreadsheet unit for Y6, this does not rely upon having completed the other spreadsheet units so might be another way to familiarise pupils with spreadsheets without including a spreadsheet unit in each year groups. In this case, we would advise including the use of spreadsheets and other data programs within maths where there is a curricular link.

Crash Courses

For years 2 to 5* there are crash course units for Spreadsheets using 2Calculate

For years 2 to 6 there are crash course units for Coding using 2Code.

Use these units instead of the standard Spreadsheets and Coding units if the children have not completed the prior year's spreadsheets or coding units. The crash courses are designed to enable children to catch up with the main features of the units from previous years and progress onto the standard units in the next year.

For example, if you are a school that starts in year 3 with children joining from different settings who have not used the Purple Mash Computing Scheme, you would start with the crash courses in year 3 for Coding and Spreadsheets and then children will be ready for the standard units for coding and spreadsheets in year 4.

Use these units if your school has just started using the scheme so children have not completed the prior year units.

*There is no crash course for the use of 2Calculate in year 6 because there is a Spreadsheets unit of work that uses Microsoft Excel or Google Sheets that assumes no prior knowledge and can be used instead of 2Calculate. If you wish to use 2Calculate, we advise using the Year 5 crash course unit.



All Unit Summary

Predominant Area of Computing* Computer Information Digital Science Technology

*Most units will include aspects of all strands.

Early Years (Reception)

Rather then a scheme with set lessons, the early years resources are designed to integrate into the day-to-day routine and set-up of an early years setting with opportunities for using Mini Mash or Purple Mash as part of the Early Years curriculum to support children in working towards early learning goals.

In addition, there are units of suggested ideas that focus on computing skills specifically, that can also be provided as opportunities for learning as part of the topics in other areas to give children a sound basis to explore topics using technology and to be ready for progressing through the Computing curriculum. These are as follows and are designed to be integrated and linked to wider early years curriculum areas. These have been loosely classified into the three streams but there is overlap between all three streams.

Mouse and Trackpad Skills	Keyboard Skills	Drawing skills	Robots	Sounds	Photography
Technology Around Us	Hardware	Safety and Privacy	Quizzes	Using Purple Mash with an Individual Login	

Year 1

	Unit 1.1	Unit 1.2	Unit 1.3	Unit 1.4	Unit 1.5	Unit 1.6	Unit 1.7	Unit 1.8	Unit 1.9
	Online Safety & Exploring Purple Mash	Grouping & Sorting	Pictograms	Lego Builders	Maze Explorers	Animated Story Books	Coding	Spreadsheets	Technology outside school
Number of lessons	4	2	3	3	3	5	6	3	2
Main tool			2Count		2Go	2Create A Story	2Code	2Calculate	

Year 2

	Unit 2.1	Unit 2.2	Unit 2.3	Unit 2.4	Unit 2.5	Unit 2.6	Unit 2.7	Unit 2.8
	Coding	Online Safety	Spreadsheets	Questioning	Effective Searching	Creating Pictures	Making Music	Presenting Ideas
Number of lessons	6	3	4	5	3	5	3	4
Main tool	2Code		2Calculate	2Question 2Investigate		2Paint A Picture	2Sequence	



	Unit 3.1	Unit 3.2	Unit 3.3	Unit 3.4	Unit 3.5	Unit 3.6	Unit 3.7	Unit 3.8	Unit 3.9
	Coding	Online safety	Spreadsheets	Touch Typing	Email (inc. email safety)	Branching Databases	Simulations	Graphing	Presenting
Number of lessons	6	3	3 4 lessons for Crash Course	4	6	4	3	2	5\6*
Main tool	2Code		2Calculate	2Type	2Email	2Question	2Simulate	2Graph	PowerPoint or Google Slides

^{*}Platform dependent

Year 4

	Unit 4.1	Unit 4.2	Unit 4.3	Unit 4.4	Unit 4.5	Unit 4.6	Unit 4.7	Unit 4.8	Unit 4.9	Unit 4.10
	Coding	Online Safety	Spreadsh eets	Writing for	Logo	Animation	Effective Searching	Hardware Investigat	Making Music	(Optional Unit)
				Different Audiences				ors		Introducing Al
Number of lessons	6	4	6	5	4	3	3	2	4	4
Main tool	2Code		2Calculate		2Logo	2Animate			Busy Beats	

Year 5

	Unit 5.1	Unit 5.2	Unit 5.3	Unit 5.4	Unit 5.5	Unit 5.6	Unit 5.7	Unit 5.8	Unit 5.9
	Coding	Online Safety	Spreadsheets	Databases	Game Creator	3D Modelling	Concept Maps	Word Processing	External Devices
Number of lessons	6	3	6	4	5	4	4	8	6
Main tool	2Code		2Calculate	2Investigate	2DIY 3D	2Design & Make	2Connect	MS Word or Google Docs	2Code Purple Chip

Year 6

	Unit 6.1	Unit 6.2	Unit 6.3	Unit 6.4	Unit 6.5	Unit 6.6	Unit 6.7	Unit 6.8	6.9
	Coding	Online Safety	Spreadsheets	Blogging	Text Adventures	Networks	Quizzing	Understanding Binary	Spreadsheets
Number of lessons	6	2	5	4	5	3	6	4	8
Main tool	2Code		2Calculate	2Blog			2Quiz		Excel or Google Sheets



Units by Year Group - Single Age

Classes

Predominant Area of Computing*

Computer Information Digital
Science Technology Literacy

Year 1

*Most units will include aspects of all strands.

It is recommended that you teach unit 1.1 first as it introduces Purple Mash.

Unit 1.1	Unit 1.2	Unit 1.3
Online Safety & Exploring Purple Mash	Grouping & Sorting	Pictograms
Number of lessons – 4	Number of lessons – 2	Number of lessons – 3
Programs – Various	Programs – 2DIY	Programs – 2Count
Unit 1.4	Unit 1.5	Unit 1.6
Lego Builders	Maze Explorers	Animated Story Books
Number of lessons – 3	Number of lessons – 3	Number of lessons – 5
Programs – 2DIY	Programs – 2Go	Programs – 2Create A Story
Unit 1.7	Unit 1.8	Unit 1.9
Coding	Spreadsheets	Technology outside school
Number of lessons – 6	Number of lessons – 3	Number of lessons – 2
Programs – 2Code	Programs – 2Calculate	Programs – Various



Predominant Area of Computing*							
Computer Information Digital							
Science Technology Literacy							

^{*}Most units will include aspects of all strands.

Unit 2.1	Unit 2.2	Unit 2.3
Coding	Online Safety	Spreadsheets
Number of lessons – 6 Programs – 2Code	Number of lessons – 3 Programs – Various	Number of lessons – 4 Programs – 2Calculate
Unit 2.4	Unit 2.5	Unit 2.6
Questioning	Effective Searching	Creating Pictures
Number of lessons – 5	Number of lessons – 3	Number of lessons – 5
Programs – 2Question, 2Investigate	Programs – Browser	Programs – 2PaintAPicture
Unit 2.7	Unit 2.8	
Making Music	Presenting Ideas	
Number of lessons – 3	Number of lessons – 4	
Programs – 2Sequence	Programs – Various	



Predominant Area of Computing*								
	Computer Information Digital							
	Science Technology Literacy							

^{*}Most units will include aspects of all strands.

Unit 3.1	Unit 3.2	Unit 3.3
Coding	Online safety	Spreadsheets
Number of lessons – 6	Number of lessons – 3	Number of lessons – 3*
Main Programs – 2Code	Programs – Various	Programs – 2Calculate
Unit 3.4	Unit 3.5	Unit 3.6
Touch Typing	Email (including email safety)	Branching Databases
Number of lessons – 4	Number of lessons – 6	Number of lessons – 4
Programs – 2Type	Programs – 2Email, 2Connect, 2DIY	Programs – 2Question
Unit 3.7	Unit 3.8	Unit 3.9
Simulations	Graphing	Presenting (with Microsoft PowerPoint or Google Slides)
Number of lessons – 3	Number of lessons – 2	N 1 6
Programs – 2Simulate, 2Publish	Programs – 2Graph	Number of Lessons – 5 or 6 (version dependent) Main Program – MS PowerPoint or Google Slides

^{*}The Spreadsheets Crash-Course has 4 lessons



Predominant Area of Computing*				
Computer	Information	Digital		
Science	Technology	Literacy		

^{*}Most units will include aspects of all strands.

Unit 4.1	Unit 4.2	Unit 4.3
Coding	Online safety	Spreadsheets
Number of lessons – 6 Main Programs – 2Code	Number of lessons – 4 Programs – Various	Number of lessons – 6 Programs – 2Calculate
Unit 4.4	Unit 4.5	Unit 4.6
Writing for different audiences	Logo	Animation
Number of lessons – 5	Number of lessons – 4	Number of lessons – 3
Programs – 2Email, 2Connect, 2DIY	Programs – Logo	Programs – 2Animate
Unit 4.7	Unit 4.8	Unit 4.9
Effective Search	Hardware	Making Music
	Investigators	Number of Lessons – 4
Number of lessons – 3		
Programs – Browser	Number of lessons – 2	Main Program – Busy Beats
OPTIONAL UNIT		
Unit 4.10 Artificial Intelligence		
Number of Lessons – 4		



Predominant Area of Computing*				
Computer Information Digital				
Science	Technology	Literacy		

^{*}Most units will include aspects of all strands.

Unit 5.1	Unit 5.2	Unit 5.3
Coding	Online safety	Spreadsheets
Number of lessons – 6 Main Programs – 2Code	Number of lessons – 3 Programs - Various	Number of lessons – 6 Programs – 2Calculate
Unit 5.4	Unit 5.5	Unit 5.6
Databases	Game Creator	3D Modelling
Number of lessons – 4	Number of lessons – 5	Number of lessons – 4
Programs – 2Question, 2Investigate	Programs – 2DIY 3D	Programs – 2Design and Make
Unit 5.7	Unit 5.8	Unit 5.9
Concept Maps	Word processing (with Microsoft Word or Google Docs)	Using External Devices
Number of lessons – 4	Number of Lessons – 8	Number of lessons – 6
Programs – 2Connect	Main program – MS Word or Google Docs	Main Programs – 2Code Purple Chip



Predominant Area of Computing*					
	Computer		Information		Digital
	Science		Technology		Literacy

^{*}Most units will include aspects of all strands.

Unit 6.1 Coding	Unit 6.2 Online safety	Unit 6.3 Spreadsheets
Number of lessons – 6 Main Programs – 2Code	Number of lessons – 2 Programs - Various	Number of lessons – 5 Programs – 2Calculate
Unit 6.4	Unit 6.5	Unit 6.6
Blogging	Text Adventures	Networks
Number of lessons – 4	Number of lessons – 5	Number of lessons – 3
Programs – 2Blog	Programs – 2Code, 2Connect	
Unit 6.7	Unit 6.8	Unit 6.9
Quizzing	Understanding Binary	Spreadsheets (with Microsoft Excel or
	Number of Lessons –	Google Sheets)
Number of lessons – 6 Programs – 2Quiz, 2DIY, Text Toolkit, 2Investigate	4 Main Program – 2Code	Number of Lessons – 8 Main program – MS Excel or Google Sheets

Adapting the Scheme for Mixed Age Classes

Below is an exemplar for a 1\2, 3\4, 5\6 mix. Not all mixed age school will have the same mix, so plans will need adapting depending upon the mix and the journey of each individual pupil through the school: Ideally children in each age group will not repeat lessons in the next academic year and will not have gaps in knowledge to fill.

The logic that was used to create the exemplar can be applied to other mixes; this is the logic that was used to create the exemplar:

- Categorising the units into those that suited topics being covered in an order (spreadsheets and coding) and those that had more flexibility to differentiate and progress by outcome and expectation.
- From this, we created a two-year rolling program: In some schools this might be a 3- or 4-year rolling program. In schools with mixed ages, the same process will be being used for core subjects and we recommend using the same rolling program length.
- In the exemplar, the less specifically progressive units are completed by pupils in either year 1 or 2, year 3 or 4, year 5 or 6.
- In the exemplar, for KS1 (year 1/2) all the coding is in cycle A.
- For 3/4 and 5/6 coding, we looked at the themes of the individual lessons in the coding units and grouped them into two groups of related themes so all lessons about (for example) repetition in coding will be done in one year of the program and all lessons about variables would be done in another.
- Spreadsheets were hard to split in the same way as the coding so will require teachers to
 put the emphasis more firmly on the computing skills than the maths knowledge when
 younger pupils are tackling the unit for older pupils first in the two-year program.
- The rest of the units are more self-contained and can be achieved by differentiating expected outcomes for younger and older children.
- Unit 1.1 provides a good introduction to the use of Purple Mash and online safety, so we have included it in both cycles of the Y1\2 mix.

The lesson plans have a certain amount of repetition in them to recap and review learning from previous years. If they are completed out of sequence, for example teaching all the 'repetition' lessons in a block, some of this recapping will not be necessary, freeing up lesson time to explain new knowledge in more detail to the younger learners.

For an EYFS (Reception)\Y1 mix, you might decide that the curriculum for this class could focus initially on building familiarity with the hardware and tools using guidance from the Reception Scheme of Work with Mini Mash accessed through Purple Mash and then bringing in some units from the Y1 scheme of work that lend themselves well to early years:

- Grouping and Sorting easily can be done hands on with classroom equipment.
- Lego Builders
- Maze explorers
- Pictograms
- Technology outside school

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You can also use the colour coding to pick and choose units that cover the three strands of computing content rather than aiming to complete every unit if this is going to be difficult to achieve.

We also have a stand-alone spreadsheet unit for Y6, this does not rely upon having completed the other spreadsheet units so might be another way to familiarise pupils with spreadsheets without including a spreadsheet unit in each year group. In this case, we would advise including the use of spreadsheets and other data programs within Maths, where there is a curricular link.



Exemplar

Year 1\2 - Cycle A

Predominant Area of Computing*					
	Computer		Information		Digital
	Science		Technology		Literacy

^{*}Most units will include aspects of all strands.

Unit 1.1 Online Safety & Exploring Purple Mash	Unit 2.5 Effective Searching	Unit 1.4 Lego Builders
Number of lessons – 4	Number of lessons – 3	Number of lessons – 3
Programs – Various	Programs – Browser	Programs – 2DIY
Unit 1.9	Unit 1.2	Unit 2.6
Technology outside school	Grouping & Sorting	Creating Pictures
Number of lessons – 2	Number of lessons – 2	Number of lessons – 5
Programs – Various	Programs – 2DIY	Programs – 2PaintAPicture
Unit 1.8	Unit 1.7	Unit 2.1
Spreadsheets	Coding	Coding
Number of lessons – 3	Number of lessons – 6	Number of lessons – 5
Programs – 2Calculate	Programs – 2Code	Programs – 2Code



Year 1\2 - Cycle B

Predominant Area of Computing*				
Computer	Information	Digital		
Science	Technology	Literacy		

^{*}Most units will include aspects of all strands.

Unit 1.1 Online Safety & Exploring Purple Mash Number of lessons – 4 Programs – Various	Unit 1.5 Maze Explorers Number of lessons – 3 Programs – 2Go	Unit 2.4 Questioning Number of lessons – 5 Programs – 2Question, 2Investigate
Unit 2.2	Unit 1.6	Unit 2.7
Online Safety	Animated Story Books	Making Music
Number of lessons – 3	Number of lessons – 5	Number of lessons – 3
Programs – Various	Programs – 2Create A Story	Programs – 2Sequence
Unit 2.3	Unit 1.3	Unit 2.8
Spreadsheets	Pictograms	Presenting Ideas
Number of lessons – 4	Number of lessons – 3	Number of lessons – 4
Programs – 2Calculate	Programs – 2Count	Programs – Various

Year 3\4 - Cycle A

Predominant Area of Computing*			
Computer	Information		Digital
Science	Technology		Literacy

^{*}Most units will include aspects of all strands.

Coding	Unit 3.2 Online safety	Unit 3.3 Spreadsheets
Number of lessons – 6	Offiline safety	Spreadsfreets
Main Programs – 2Code	Number of lessons – 3	Number of lessons – 3
See table below for breakdown.	Programs – Various	Programs – 2Calculate
Unit 3.4	Unit 3.5	Unit 3.6
Touch Typing	Email (including email safety)	Branching Databases
Number of lessons – 4	Number of lessons – 6	Number of lessons – 4
Programs – 2Type	Programs – 2Email, 2Connect, 2DIY	Programs – 2Question
Unit 3.7	Unit 3.8	
Simulations	Graphing	
Number of lessons – 3	Number of lessons – 2	
Programs – 2Simulate, 2Publish	Programs – 2Graph	

Year 3\4 - Cycle B

Predominant Area of Computing*			
Computer	Information	Digital	
Science	Technology	Literacy	

^{*}Most units will include aspects of all strands.

Coding	Unit 4.2 Online safety	Unit 4.3 Spreadsheets
Number of lessons – 6 Main Programs – 2Code	Number of lessons – 4	Number of lessons – 6
See table below for breakdown.	Programs – Various	Programs – 2Calculate
Unit 4.4	Unit 4.5	Unit 4.6
Writing for different audiences	Logo	Animation
Number of lessons – 5	Number of lessons – 4	Number of lessons – 3
Programs – 2Email, 2Connect, 2DIY	Programs – Logo	Programs – 2Animate
Unit 4.7	Unit 4.8	
Effective Search	Hardware Investigators	
Number of lessons – 3	Number of lessons – 2	
Programs – Browser		



Coding Breakdown

	YEAR 3 & 4 - CYCLE A				
Using Flowcharts Unit 3.1, Lesson 1	Using Timers Unit 3.1, Lesson 2	'if' statements Unit 4.1, Lesson 2	Coordinates Unit 4.1, Lesson 3	Code, Test and Debug – Unit 3.1, Lesson 4	Design, Code, Test and Debug Unit 4.1, Lesson 1
		YEAR 3 & 4	1 - CYCLE B	1	
Using Repeat Unit 3.1, Lesson 3	Repeat Until and 'if/else' Statements Unit 4.1, Lesson 4	Number Variables Unit 4.1, Lesson 5	Design and Mak scene Unit 3.1, Lesson		Making a Playable game – Unit 4.1, Lesson 6

Additional Units

You may choose to do these in addition to or instead of any of the above units. They have not been included above due to the number of weeks in a school year and the number of weeks for each unit.

Unit 3.9 Presenting (with Microsoft PowerPoint or Google Slides)	Unit 4.9 Making Music Number of Lessons – 4
Number of Lessons – 5 or 6 (version dependent) Main Program – MS PowerPoint or Google Slides	Main Program – Busy Beats

Year 5\6 - Cycle A

Predominant Area of Computing*				
Computer		Information		Digital
Science		Technology		Literacy

^{*}Most units will include aspects of all strands.

Coding	Unit 5.2	Unit 5.3
	Online safety	Spreadsheets
Number of lessons – 6	Number of lessons – 3	Number of lessons – 6
Main Programs – 2Code	Number of lessons – 3	Number of lessons – o
See table below for	Programs - Various	Programs –
breakdown.		2Calculate
Unit 5.4	Unit 5.5	Unit 5.6
Databases	Game Creator	3D Modelling
Number of lessons – 4		
	Number of lessons – 5	Number of lessons – 4
Programs – 2Question,	D 2011/20	D
2Investigate	Programs – 2DIY 3D	Programs – 2Design and Make
Unit 5.7		
Concept Maps		
Number of lessons – 4		
Number of lessons – 4		
Programs – 2Connect		



Year 5\6 - Cycle B

Predominant Area of Computing*			
Computer	Information	Digital	
Science	Technology	Literacy	

^{*}Most units will include aspects of all strands.

Coding	Unit 6.2	Unit 6.3
County		ome old
	Online safety	
Number of lessons – 6		Spreadsheets
Main Programs –	Number of lessons – 2	
2Code		Number of lessons – 5
See table below for	Programs - Various	
breakdown.	3	Programs –
		20 1 1 1
Unit 6.4	Unit 6.5	Unit 6.6
Blogging	Text Adventures	Networks
Number of lessons – 4	Number of lessons – 5	Number of lessons – 3
Number of lessons – 4	Number of lessons – 5	Number of lessons – 3
Programs – 2Blog	Programs – 2Code, 2Connect	
	ZConnect	
Unit 6.7		
Quizzing		
Number of lessons – 6		
Programs – 2Quiz,		
2DIY, Text Toolkit,		
2Investigate		



Coding Breakdown

YEAR 5 & 6 - CYCLE A					
Coding Efficiently Unit 5.1, Lesson 1	Simulating a physical system Unit 5.1, Lesson 2	Friction and Functions Unit 5.1, Lesson 4	Introducing Strings Unit 5.1, Lesson 5	Text Variable and Concatenation Unit 5.1, Lesson 6	User Input Unit 6.1, Lesson 5
		YEAR 5 & 6	6 - CYCLE B		
Designing and writing a more complex program Unit 6.1, Lessons 1 & 2		Decomposition and Abstraction Unit 5.1, Lesson 3	Using Functions Unit 6.1, Lesson 3	Flowcharts and control simulations Unit 6.1, Lesson 4	Text Adventure Unit 6.1, Lesson 6

Additional Units

You may choose to do these in addition to or instead of any of the above units. They have not been included above due to the number of weeks in a school year and the number of weeks for each unit.

Unit 5.8 Word processing (with Microsoft Word or Google Docs)	Unit 6.9 Spreadsheets (with Microsoft Excel or Google Sheets)	Unit 6.8 Understanding Binary Number of Lessons – 4
Number of Lessons – 8 Main program – MS Word or Google Docs	Number of Lessons – 8 Main program – MS Excel or Google Sheets	Main Program – 2Code
	Unit 5.9 Using External Devices	
	Number of Lessons – 6 Main Program – 2Code Purple Chip	



Tools by Unit

Year	Unit	Title	Tools used
Y1	1.1	Online Safety and Exploring Purple Mash	Avatar creator
			Paint Projects
			Writing Templates
			2Count (Pictograms)
			2Explore (Music)
	1.2	Grouping & Sorting	2Quiz
	1.3	Pictograms	2Connect (Mind Map)
			2Count (Pictograms)
	1.4	Lego Builders	Paint Projects
			Writing Templates
			2Quiz
	1.5	Maze Explorers	2Go (coding)
	1.6	Animated Stories	2Create a Story
	1.7	Coding	2Code
	1.8	Spreadsheets	2Calculate
	1.9	Technology Outside School	Writing Templates

Year	Unit	Title	Tools used
Y2	2.1	Coding	2Code
	2.2	Online Safety	Writing Templates
			Displayboards
			2Respond (2Email)
	2.3	Spreadsheets	2Calculate
	2.4	Questioning	2Question (Binary
			Databases)
			2Calculate (spreadsheet)
			2Investigate (database)
	2.5	Effective Searching	2Quiz
			Writing Templates



	2.6	Creating Pictures	2Paint a Picture Writing Templates
	2.7	Making Music	2Sequence (Music)
	2.8	Presenting Ideas	2Connect (Mind Map)
			2Create a Story (ebook)
			2Quiz
			Writing Templates

Year	Unit	Title	Tools used
Y3	3.1	Coding	2Code
	3.2	Online Safety	2Connect (Mind Map)
			2Blog (Blogging)
			Writing Templates
			Displayboards
	3.3	Spreadsheets	2Calculate
	3.4	Typing	2Type
	3.5	Email	2Email
	3.6	Branching Databases	2Question (Binary Databases)
	3.7	Simulations	2Simulate
			Writing Templates
	3.8	Graphing	2Graph
			Writing Templates
			2Blog (Blogging)
	3.9	Presenting (with Microsoft PowerPoint or Google Slides)	Microsoft PowerPoint or Google Slides



Year	Unit	Title	Tools used
Y4	4.1	Coding	2Code
	4.2	Online Safety	2Connect (Mind Map)
			2Publish Plus
			Displayboards
	4.3	Spreadsheets	2Calculate
	4.4	Writing for Different Audiences	Writing Templates
			2Simulate
			2Connect (Mind Map)
			2Publish Plus
	4.5	Logo	2Logo (text-based coding)
	4.6	Animation	2Animate
	4.7	Effective Searching	2Quiz
			2Connect (Mind Map)
	4.8	Hardware Investigators	2Quiz
			2Connect (Mind Map)
			Writing Templates
	4.9	Making Music	Busy Beats
			2Sequence
			Writing Templates
	4.10	Artificial Intelligence	Writing Templates



Year	Unit	Title	Tools used
Y5	5.1	Coding	2Code
	5.2	Online Safety	2Publish Plus
			Writing Templates
			Displayboards
			2Connect (Mind Map)
	5.3	Spreadsheets	2Calculate
	5.4	Databases	2Investigate (database)
			Avatar creator
	5.5	Game Creator	2DIY 3D
			Writing Templates
			2Blog (Blogging)
	5.6	3D Modelling	2Design and Make
			Writing Templates
	5.7	Concept Maps	2Connect (Mind Map)
	5.8	Word Processing (with Microsoft Word or Google Docs)	MS Word or Google Docs
	5.9	Using External devices	2Code Purple Chip and app

Year	Unit	Title	Tools used
Y6	6.1	Coding	2Code
	6.2	Online Safety	2DIY 3D 2DIY 2Code
			2Blog (Blogging)
	6.3	Spreadsheets	2Calculate
	6.4	Blogging	2Blog (Blogging)
	6.5	Text Adventures	2Code
			2Connect (Mind Map)
			Writing Templates
	6.6	Networks	2Connect (Mind Map)
			Writing Templates
	6.7	Quizzing	2DIY
			2Quiz



Purple Mash Computing Scheme of Work – Adapting and refining the scheme

			Text Toolkit
			2Investigate (database)
	6.8	Understanding Binary	2Connect (Mind Map)
			2Question (Binary
			Databases)
			Writing Templates
			2Code
	6.9	Spreadsheets (with Microsoft Excel or Google Sheets)	MS Excel or Google Sheets

Cultural Capital

Defining Cultural Capital

"As part of making the judgement about the quality of education, inspectors will consider the extent to which schools are equipping pupils with the knowledge and cultural capital they need to succeed in life. Our understanding of 'knowledge and cultural capital' is derived from the following wording in the national curriculum: 'It is the essential knowledge that pupils need to be educated citizens, introducing them to the best that has been thought and said and helping to engender an appreciation of human creativity and achievement."

(Ofsted's definition of cultural capital – Extract: Ofsted School Inspection Handbook 2019)

When we consider cultural capital in relation to a child starting their journey of learning in a school setting, it's the idea that they all have started school with their own experiences and knowledge. These experiences and knowledge will link to their culture and wider family. Pierre Bourdieu, a French sociologist, developed the concept of cultural capital in the 1960s, arguing heavily that children's attainment in schools was not defined by solely economic factors. Various research indicates a strong correlation between the value placed on children's cultures and the progress they make in formal education settings.

It's important to note that cultural capital shouldn't be defined as just academic achievement, cultural capital should be thought of enabling a child to grow into educated citizens who have had broad experiences and knowledge with a strong appreciation of human achievement and creativity.

Cultural capital is one of the key things that a child will utilise throughout their life in order to become successful in society.

How schools play a part

Schools have a duty to ensure that their children are given a rich educational diet that supports the notion of Cultural Capital.

Schools should consider several key things:

- Culturally relevant pedagogy: Embracing all their children's cultural identities, personal experiences, knowledge, and heritage in order to make learning more relevant to them and in thus doing so, giving rise to greater engagement and subsequently greater achievement.
- Culturally responsive teaching: Using a range of teaching strategies that supports children's personal experiences and cultural identities.
- Provision: Providing broad and rich experiences that their learners may not have experienced before, including the immersion of different cultures, traditions and approaches to everyday activities.
- Knowledge: Giving children a diet of knowledge that supports them in becoming educated citizens.

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Purple Mash Computing Scheme of Work and Cultural Capital

We understand the importance of supporting opportunities for all children. Our future workforce should reflect a broad cross section of society, including but not limited to: age, gender, race, religious beliefs, cognitive and physical differences. If we consider computing and the potential career opportunities and pathways this may lead to, it's vital that a broad workforce is in place, particularly when decisions on design and implementation of systems is required to limit bias. Computing should be integrated within different cultures and experiences of people, for example, farmers using technology to maximise yield of crops.

The Purple Mash Computing Scheme of Work is a comprehensive set of resources aligned to the National Curricula for Computing, Technology and Digital Competence. The Scheme of Work is intended to facilitate teachers in achieving the very best outcomes for all children. It exposes children to a wide variety of digital tools, technological skills and innovations to enable them to become informed members of the digital community.

It contains everything that is needed to deliver inspiring and engaging lessons whilst allowing for the flexibility to meet individual school needs. The scheme provides the scaffolding for teaching key skills alongside the flexibility to change the context to meet needs of individuals. For example, relating graphing to the local environment; tailoring blogging to individual cultures, experiences and interests. Lessons are delivered from lesson plans with accompanying slide shows. We have included additional units that go beyond the expectations of National Curricula, whilst also providing 'Catch-Up' units to close gaps in learning. The activity ideas for Early Years (Reception) show opportunities for using Mini Mash or Purple Mash as part of the Early Years classroom to support children in working towards early learning goals.

The scheme's flexibility is not just limited to adaptation of teaching approaches or contexts used within lessons. Functionality within the delivery platform allows for a range of devices to be used to access and deliver content. Additionally, features such as collaboratively enabled tools, means that children don't always require individual devices.

Supplementary resources such as Code Club and Digital Leaders give rise to opportunities for broadening horizons for all children regardless of their starting point. They support experience of leadership, developing skills and give exposure to new experiences and responsibilities such as leadership.

