

Computing Scheme of Work -Overview

Contents



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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.

- Early Years Scheme (Reception) Includes opportunities for using Mini Mash or Purple Mash as part of the Early Years classroom to support children in working towards early learning goals.'
- Year group overview documents Detail the unit lessons for that year group and contain relevant curriculum maps for England, Wales, Scotland and Northern Ireland.
- Assessment information Available on year group pages.
- **Purple Mash tools** Those used within each unit are detailed in the <u>Tools section</u> below.
- **Purple Mash logins** Ensure that children know how to login and access and save from 2Dos set for them.

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
- Y2, 3, 5: Spreadsheet units

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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). This is facilitated by using the <u>Typing Across</u> the <u>Year resources</u> (found in the Computing area).

We have a stand-alone spreadsheet unit for Y6, this does not rely upon having completed the other spreadsheet units in years 2, 3 and 5 so might be another way to familiarise pupils with spreadsheets without including a spreadsheet unit in other 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.

Coding Crash Courses

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

Use these units instead of the standard Coding units if the children have not completed the prior year's coding unit. 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.

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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 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.

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All Unit Summary

Predominant Computing strand*

| | Computer Science |
|-----|--|
| | Information Technology |
| | Digital Literacy |
| 100 | tunita will include concete of all strande |

Most units will include aspects of all strands

Early Years (Reception)

Rather than a scheme with set lessons, the early years resources are designed to integrate into the day-today 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 1.9 |
|-------------------------|---|-----------------------|------------|---------------|-------------------|-------------------------|----------|---------------------------------|
| | Online Safety & Exploring Purple Mash | Grouping & Sorting | Pictograms | Lego Builders | Maze Explorers | Animated Story Books | Coding | Technology outside school |
| Number of lessons | 4 | 2 | 3 | 3 | 3 | 5 | 6 | 2 |
| Main tool | | | 2Count | | 2Go | 2Create A Story | 2Code | |

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 | 6 | 5 | 3 | 5 | 3 | 4 |
| Main tool | 2Code | | 2Calculate | 2Question 2Investigate | | 2Paint A Picture | 2Sequence | |

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Year 3

| | 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 | Unit 3.10 |
|--------------|----------|------------------|--------------|-----------------|------------------------------------|------------------------|-------------|----------|---------------------------------------|-------------------------------|
| | Coding | Online safety | Spreadsheets | Touch Typing | Email (inc. email safety) | Branching Databases | Simulations | Graphing | Presenting | micro: bit |
| # lessons | 6 | 3 | 6 | 4 | 6 | 4 | 3 | 2 | 5\6* | 4 |
| Main tool | 2Code | | 2Calculate | 2Type | 2Email | 2Question | 2Simulate | 2Graph | Power Point or Google Slides | Free code micro: bit |

*Platform dependent

Year 4

| | Unit 4.1 | Unit 4.2 | Unit 4.4 | Unit 4.5 | Unit 4.6 | Unit 4.7 | Unit 4.8 | Unit 4.9 | Unit 4.10 | Unit 4.11 |
|--------------|----------|------------------|---------------------------------------|----------|-----------|------------------------|----------|-----------------|-------------|-------------------------|
| | Coding | Online Safety | Writing for Different Audiences | Logo | Animation | Effective Searching | Hardware | Making Music | Intro to Al | micro:bit |
| # lessons | 6 | 4 | 5 | 4 | 3 | 3 | 2 | 4 | 4 | 4 |
| Main tool | 2Code | | | 2Logo | 2Animate | | | Busy Beats | | Free code micro: bit |

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 | Unit 5.10 |
|--------------|----------|------------------|--------------|------------------|-----------------|-------------------|-----------------|------------------------------|-------------------------|------------------------|
| | Coding | Online Safety | Spreadsheets | Databases | Game Creator | 3D Modelling | Concept Maps | Word Processing | External Devices | micro:bit |
| # lessons | 6 | 3 | 6 | 4 | 5 | 4 | 4 | 7/8* | 6 | 4 |
| Main tool | 2Code | | 2Calculate | 2Investiga te | 2DIY 3D | 2Design & Make | 2Connect | MS Word or Google Docs | 2Code Purple Chip | Free code micro:bit |

*Platform dependent

Year 6

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

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Units by Year Group – Single Age Classes

Year 1

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

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

Predominant Computing strand*

| | Computer Science |
|--|------------------------|
| | Information Technology |
| | Digital Literacy |

Most units will include aspects of all strands



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

Year 2

Predominant Computing strand*

| Computer Science |
|------------------------|
| Information Technology |
| Digital Literacy |

Most units will include aspects of all strands

Year 3

| Unit Number | Title | Number of lessons | Tools |
|-------------|--|----------------------------------|-----------------------------------|
| 3.1 | Coding | 6 | 2Code |
| 3.2 | Online Safety | 3 | Various |
| 3.3 | Spreadsheets | 6 | 2Calculate |
| 3.4 | Touch Typing | 4 | 2Туре |
| 3.5 | Email | 6 | 2Email, 2Connect, 2DIY |
| 3.6 | Branching Databases | 4 | 2Question |
| 3.7 | Simulations | 3 | 2Simulate, 2Publish |
| 3.8 | Graphing | 2 | 2Graph |
| 3.9 | Presenting (with Microsoft PowerPoint or Google Slides) | 5 or 6 (version dependent) | MS PowerPoint or Google Slides |
| 3.10 | micro:bits | 4 | Free code micro:bit |



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Year 4

| Unit Number | Title | Number of lessons | Tools |
|-------------|---------------------------------|----------------------|------------------------|
| 4.1 | Coding | 6 | 2Code |
| 4.2 | Online Safety | 4 | Various |
| 4.4 | Writing for different audiences | 5 | 2Email, 2Connect, 2DIY |
| 4.5 | Logo | 4 | 2Logo |
| 4.6 | Animation | 3 | 2Animate |
| 4.7 | Effective Searching | 3 | Internet Browser |
| 4.8 | Hardware Investigators | 2 | Hardware |
| 4.9 | Making Music | 4 | Busy Beats |
| 4.10 | Artificial Intelligence | 4 | |
| 4.11 | micro:bits | 4 | Free code micro:bit |

Predominant Computing strand*

| Computer Science |
|------------------------|
| Information Technology |
| Digital Literacy |

Most units will include aspects of all strands



| Year 5 | |
|--------|--|
|--------|--|

| Unit Number | Title | Number of lessons | Tools |
|-------------|--|----------------------|---------------------------|
| 5.1 | Coding | 6 | 2Code |
| 5.2 | Online Safety | 3 | Various |
| 5.3 | Spreadsheets | 6 | 2Calculate |
| 5.4 | Databases | 5 | 2Email, 2Connect, 2DIY |
| 5.5 | Game Creator | 5 | 2DIY 3D |
| 5.6 | 3D Modelling | 4 | 2Design and Make |
| 5.7 | Concept Maps | 4 | 2Connect |
| 5.8 | Word processing (with Microsoft Word or Google Docs) | 8 | MS Word or Google Docs |
| 5.9 | Using External Devices | 6 | 2Code Purple Chip |
| 5.10 | micro:bits | 4 | Free code micro:bit |

Predominant Computing strand*

| Computer Science |
|------------------------|
| Information Technology |
| Digital Literacy |

Most units will include aspects of all strands

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| Unit Number | Title | Number of lessons | Tools |
|-----------------------|---|----------------------|--|
| 6.1 | Coding | 6 | 2Code |
| 6.2 | Online Safety | 2 | Various |
| 6.4 | Blogging | 4 | 2Blog |
| 6.5 | Text Adventures | 5 | 2Code, 2Connect |
| 6.6 | Networks | 3 | |
| 6.7 | Quizzing | 6 | 2Quiz, 2DIY, Text Toolkit, 2Investigate, 2Survey |
| 6.8 | Understanding Binary | 4 | 2Code |
| 6.9 | Spreadsheets (with Microsoft Excel or Google Sheets) | 8 | MS Excel or Google Sheets |
| 6.10 (coming soon) | micro:bits | 4 | Free code micro:bit |

Year 6

Predominant Computing strand*

| Computer Science |
|------------------------|
| Information Technology |
| Digital Literacy |

Most units will include aspects of all strands



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 4year 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

| Pre | Predominant Computing strand* | | |
|-----|--|--|--|
| | Computer Science | | |
| | Information Technology | | |
| | Digital Literacy | | |
| Мо | Most units will include aspects of all strands | | |

| Unit Number | Title | # of lessons | Tools |
|-------------|---------------------------------------|--------------|------------------|
| 1.1 | Online Safety & Exploring Purple Mash | 4 | Various |
| 2.5 | Effective Searching | 3 | Internet Browser |
| 1.4 | Lego Builders | 3 | 2DIY |
| 1.9 | Technology outside school | 2 | Various |
| 1.2 | Grouping & Sorting | 2 | 2DIY |
| 2.6 | Creating Pictures | 5 | 2PaintAPicture |
| 1.7 | Coding | 6 | 2Code |
| 2.1 | Coding | 6 | 2Code |

Year 1\2 – Cycle A

Year 1\2 - Cycle B

| Unit Number | Title | # of lessons | Tools |
|-------------|---------------------------------------|--------------|-------------------------|
| 1.1 | Online Safety & Exploring Purple Mash | 4 | Various |
| 1.5 | Maze Explorers | 3 | 2Go |
| 2.4 | Questioning | 5 | 2Question, 2Investigate |
| 2.2 | Online Safety | 3 | Various |
| 1.6 | Animated Story Books | 5 | 2Create A Story |
| 2.7 | Making Music | 3 | 2Sequence |
| 2.3 | Spreadsheets | 6 | 2Calculate |
| 1.3 | Pictograms | 3 | 2Count |
| 2.8 | Presenting Ideas | 4 | Various |

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Exemplar

| Pre | Predominant Computing strand* | | | | |
|-----|--|--|--|--|--|
| | Computer Science | | | | |
| | Information Technology | | | | |
| | Digital Literacy | | | | |
| Мо | Most units will include aspects of all strands | | | | |

Year 3\4 – Cycle A

| Unit Number | Title | # of lessons | Tools |
|-------------------------------------|---------------------|--------------|------------------------|
| See table below for breakdown | Coding | 6 | 2Code |
| 3.2 | Online safety | 3 | Various |
| 3.3 | Spreadsheets | 6 | 2Calculate |
| 3.5 | Email | 6 | 2Email, 2Connect, 2DIY |
| 3.6 | Branching Databases | 4 | 2Question |
| 3.7 | Simulations | 3 | 2Simulate, 2Publish |
| 3.8 | Graphing | 2 | 2Graph |
| 3.10 | micro:bits | 4 | Free code micro:bit |

Year 3\4 – Cycle B

| Unit Number | Title | # of lessons | Tools |
|-------------------------------------|---|----------------------------------|-----------------------------------|
| See table below for breakdown | Coding | 6 | 2Code |
| 4.2 | Online safety | 4 | Various |
| 4.4 | Writing for different audiences | 5 | 2Email, 2Connect, 2DIY |
| 4.5 | Logo | 4 | 2Logo |
| 4.6 | Animation | 3 | 2Animate |
| 4.7 | Effective Search | 3 | Internet Browser |
| 4.8 | Hardware Investigators | 2 | |
| 3.9 | Presenting (with Microsoft PowerPoint or Google Slides | 5 or 6 (version dependent) | MS PowerPoint or Google Slides |



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| | YEAR 3 & 4 - CYCLE A | | | | | |
|--|--|--|--------------------------------------|---|---|--|
| Using Flowcharts Unit 3.1, Lesson 1 | Using Timers Unit 3.1, Lesson 2 | ʻif' 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 | I - CYCLE B | | | |
| 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 | scene | | Making a Playable game – Unit 4.1, Lesson 6 | |

Coding Breakdown

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 Number | Title | Number of lessons | Tools |
|-------------|-------------------------|----------------------|---------------------|
| 3.4 | Touch Typing | 4 | 2Type |
| 4.9 | Making Music | 4 | Busy Beats |
| 4.10 | Artificial Intelligence | 4 | |
| 4.11 | micro:bits | 4 | Free code micro:bit |

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Exemplar

| Pre | Predominant Computing strand* | | | | |
|-----|--|--|--|--|--|
| | Computer Science | | | | |
| | Information Technology | | | | |
| | Digital Literacy | | | | |
| Мо | Most units will include aspects of all strands | | | | |

Year 5\6 – Cycle A

| Unit Number | Title | # of lessons | Tools |
|-------------------------------------|---------------|--------------|------------------|
| See table below for breakdown | Coding | 6 | 2Code |
| 5.2 | Online safety | 3 | Various |
| 5.3 | Spreadsheets | 6 | 2Calculate |
| 5.4 | Databases | 4 | 2Investigate |
| 5.5 | Game Creator | 5 | 2DIY 3D |
| 5.6 | 3D Modelling | 4 | 2Design and Make |
| 5.7 | Concept Maps | 4 | 2Connect |

Year 5\6 – Cycle B

| Unit Number | Title | # of lessons | Tools |
|-------------------------------------|------------------------|--------------|--|
| See table below for breakdown | Coding | 6 | 2Code |
| 6.2 | Online safety | 2 | Various |
| 6.4 | Blogging | 4 | 2Blog |
| 5.9 | Using External Devices | 6 | 2Code Purple Chip |
| 6.6 | Networks | 3 | |
| 6.7 | Quizzing | 6 | 2Quiz, 2DIY, Text Toolkit, 2Investigate, 2Survey |

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

Coding Breakdown

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 Number | Title | Number of lessons | Tools |
|-------------|--|----------------------|------------------------------|
| 5.8 | Word processing (with Microsoft Word or Google Docs) | 8 | MS Word or Google Docs |
| 5.10 | micro:bit | 4 | Free code micro:bit |
| 6.5 | Text Adventures | 5 | 2Code, 2Connect |
| 6.8 | Understanding Binary | 4 | 2Code |
| 6.9 | Spreadsheets (with Microsoft Excel or Google Sheets) | 8 | MS Excel or Google Sheets |



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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 |

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Purple Mash Computing Scheme of Work – Tools by unit

| 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 | 2Туре |
| | 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 |
| | 3.10 | micro:bits | Free code micro:bit |



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| 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 |
| | 4.11 | micro:bit | Free code micro:bit |

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| 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 |

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Purple Mash Computing Scheme of Work – Tools by unit

| | | | 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 |



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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.

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• Knowledge: Giving children a diet of knowledge that supports them in becoming educated citizens.

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.



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