**National Curriculum:**

The national curriculum for computing aims to ensure that all pupils:

* can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
* can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
* can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
* are responsible, competent, confident and creative users of information and communication technology.

**Key stage 1**

**Pupils should be taught to:**

* understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
* create and debug simple programs
* use logical reasoning to predict the behaviour of simple programs
* use technology purposefully to create, organise, store, manipulate and retrieve digital content
* recognise common uses of information technology beyond school
* 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.

**Key stage 2**

**Pupils should be taught to:**

* design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
* use sequence, selection, and repetition in programs; work with variables and various forms of input and output ♣ use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
* 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
* use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
* 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
* use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

**EYFS**

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| **Vocabulary****By the end of EYFS they will be able touse the words:** | **Outcomes for the end of EYFS. Children will be able to:** |
| AppComputerDeviceInformationInteractive WhiteboardInternetiPadKeyboardLaptopMobile phoneMouseOnline SafetyProgramTabletTechnology | **Fine Motor Skills**Develop their fine motor skills so that they can use a range of tools competently, safely and confidently**Managing Self**Be confident to try new activities and show independence, resilience and perseverance in the face of challengeExplain the reasons for rules, know right from wrong and try to behave accordingly.**Understanding the World**Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class. |

**Cycle A, Autumn Term 1**

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| **EYFS & Year 1** | **Lesson 1** | **Lesson 2** | **Lesson 3** | **Lesson 4** | **Lesson 5** | **Lesson 6** |
| **Online Safety**Kind and thoughtful(yr1 SoC)**Information technology****Grouping and sorting** **(unit 1.2 PM)****Pictograms****(unit 1.3 PM)** | Kind and thoughtfulI will understand that behaviour online can affect people in the same way that it does in real life | Purple Mash, Grouping and sorting – L1 I will be able to sort items using a range of criteria.  | Purple Mash, Grouping and sorting – L2I will be able to sort items on the computer using the ‘Grouping’ activities in Purple Mash. | Purple Mash, Pictograms– L1 I will be able to understand that data can be represented in picture format  | Purple Mash, Pictograms– L2I will be able to contribute to a class pictogram.  | Purple Mash, Pictograms– L3 I will be able to use a pictogram to record the results of an experiment |
| Key Vocabulary:Trusted adultUnkind behaviourKind behaviourOnline safety Worry box | Key Vocabulary:SortCriteriaDescribeMore thanLess than Equal | Key Vocabulary:GroupsActivities SortCriteriaDescribe | Key Vocabulary:DataPictogramVisual | Key Vocabulary:TitleDataPictogramVisual | Key Vocabulary:Collect dataRecord resultsCompareTotals Datapictogram |

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| **Year 2 & Year 3** | **Lesson 1** | **Lesson 2** | **Lesson 3** | **Lesson 4** | **Lesson 5** | **Lesson 6** | **Lesson 7** | **Lesson 8** |
| **Online Safety**Online bullies(yr2 SoC)**Information technology****Spread sheets****(unit 2.3 PM)** | Online bullies (yr2 SoC)I will understand what is meant by an online bully and its consequences for the victim and the perpetrator. | Purple Mash, spread sheets – L1 (yr2)Reviewing prior use of spreadsheetsI will be able to review the work done in 2Calculate in year 1.To revise spreadsheet related vocabulary. To use some 2Calculate tools that were introduced in year 1. | Purple Mash, spread sheets – L2 (Y2)Copying and Pasting Totalling toolsI will be able to use copying, cutting and pasting shortcuts in 2Calculate. To use 2Calcuate totalling tools. To use 2Calculate to solve a simple puzzle | Purple Mash, spread sheets – L3 (Y2)Using a spreadsheet to add amountsI will be able to explore the capabilities of a spreadsheet in adding up coins to match the prices of objects | Purple Mash, spread sheets – L4 (Y2)Creating a table and block graphTo add and edit data in a table layout.  I will be able to use the data to manually create a block graph. | Purple Mash, Bar Graphs – L1 (Y3)Creating Pie Charts and Bar GraphsI will be able to add and edit data in a table layout. To find out how spreadsheet programs can automatically create graphs from data. | Purple Mash, Bar Graphs – L2 (Y3)Using more than and Spin Button ToolsI will be able to introduce the ‘more than’, ‘less than’ and ‘equals’ tools. To introduce the ‘spin’ tool and show how it can be used to count through times tables. | Purple Mash, Bar Graphs – L3 (Y3)Advanced Mode and Cell AddressesI will be able to introduce the Advanced mode of 2Calculate. To learn about describing cells using their addresses. |
| Key Vocabulary:Online bullyCyberbullying VictimPerpetratorTrusted adultreport | Key Vocabulary:RowColumnCellToolboxDragImage viewCount toolSpeak tool | Key Vocabulary:CutCopyPasteTotalRowColumnCellToolboxDragImage viewCount toolSpeak tool | Key Vocabulary:PriceCoinsEqualsEquals toolAdditionCut CopyPastetotal | Key Vocabulary:DataToolBlock graphLabelPriceCoinsEqualsEquals toolAddition  | Key Vocabulary:Bar graph Pie chartTableData | Key Vocabulary:More thanEqualsLess than Spinner tool | Key Vocabulary:Advanced modeCell addressQuiz tool  |

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| **Year 4, Year 5 & Year 6** | **Lesson 1** | **Lesson 2** | **Lesson 3** | **Lesson 4** | **Lesson 5** | **Lesson 6** | **Lesson 7** | **Lesson 8** | **Lesson 9** |
| **Online Safety**Rule writers (yr5 SoC)**Information technology****Word Processing** **(unit 2.3 PM)** | Rule writersI will be able to create a set of online safety rules | Purple Mash, Word processing – L1 Making a Document from a Blank PageI will be able to know what a word processing tool is for | Purple Mash, Word processing – L2Inserting Images: Considering CopyrightI will be able to add and edit images to a word document. | Purple Mash, Word processing – L3Editing Images in WordI will be able to use word wrap with images and text. | Purple Mash, Word processing – L4Adding the TextI will be able to change the look of text within a document. | Purple Mash, Word processing – L5Finishing TouchesI will be able to add features to a document to enhance its look and usability. | Purple Mash, Word processing – L6Presenting Information Using TablesI will be able to use tables within MS Word to present information. | Purple Mash, Word processing – L7Writing a Letter Using a TemplateI will be able to introduce children to templates | Purple Mash, Word processing – L8Presenting Information – NewspaperI will be able to consider page layout including heading and columns |
| Key Vocabulary:Trusted adultOnline safetyChildlineReporting  | Key Vocabulary:Word processing toolDocument Front screenZoomSelecting / highlightingText formatting | Key Vocabulary:Page orientationCopy and pasteCopyrightCreative commonsAttributing | Key Vocabulary:Image editingCroppingImage transparencyText wrapping  | Key Vocabulary:StylesBulleted listsNumbered lists | Key Vocabulary:Drop capitalText boxCaptionhyperlink | Key Vocabulary:Word artMergeCellsColumnRowDistributing columns  | Key Vocabulary:TemplateSpell checkGrammar check  | Key Vocabulary:Columns  |