

 Computing 	
EYFS National Curriculum	
<p>See Early Learning Goals listed below.</p> <p>Program Key</p> <p>Purple Mash Programs</p> <p>MiniMash</p> <p>Both</p>	
EYFS Progression of Knowledge and Skills	
Communication and Language	<p>Early Learning Goal Being Imaginative Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories. 2Design, 2Beat, Mashcams, 2Create a Story, Paint Projects, 2Paint a picture</p> <p>Early Learning Goal Listening and attention Children listen attentively in a range of situations. They listen to stories, accurately anticipating key events and respond to what they hear with relevant comments, questions or actions. They give their attention to what others say and respond appropriately, while engaged in another activity. Talking Stories, Slideshows, Simple City, 2Create a Story, Mashcams,</p> <p>Early Learning Goal Speaking Children express themselves effectively, showing awareness of listeners' needs. They use past, present and future forms accurately when talking about events that have happened or are to happen in the future. They develop their own narratives and explanations by connecting ideas or events. Slideshows, Simple City, Mashcams, 2Create a Story,</p> <p>Early Learning Goal Understanding Children follow instructions involving several ideas or actions. They answer 'how' and 'why' questions about their experiences and in response to stories or events. events. 2Go, Simple City, 2Create a Story, Slideshow Creator</p>
Expressive arts and design	<p>Early Learning Goals Expressive arts and design Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories. 2Design and Make, 2 Paint a Picture, 2 Paint a Projects, 2 Create a Story, Mashcams, 2Beat, 2Explore</p> <p>Early Learning Goal Exploring and using media and materials Children sing songs, make music and dance, and experiment with ways of changing them. They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function 2Beat, 2Explore, 2Design and Make, 2 Paint a Picture, Paint Projects</p>
Literacy	<p>Early learning Goal Reading Children read and understand simple sentences. They use phonic knowledge to decode regular words and read them aloud accurately. They also read some common irregular words. They demonstrate understanding when talking with others about what they have read. 2Email/2 Respond, Talking Stories, Mashcams, 2 Create a Story, Alphabet slideshows</p> <p>Early Learning Goal Writing Children use their phonic knowledge to write words in ways which match their spoken sounds. They also write some irregular common words. They write simple sentences which can be read by themselves and others. Some words are spelt correctly and others are phonetically plausible. 2Connect, 2Publish, 2Email/2 Respond, Mashcams, 2 Create a Story,</p>



Mathematics	<p>Early Learning Goal Numbers Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing. A-fish-metic, 2Quiz, 2Count, Maths City 1, Number Paint Projects</p> <p>Early Learning Goal Shape, space and measure Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them. Maths City 2, 2DIY, 2Design and Make, Maths City 1, Shapes PIN</p>
Physical Development	<p>Early Learning Goal Health and self-care Children know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe. They manage their own basic hygiene and personal needs successfully, including dressing and going to the toilet independently. Mini Mash PIN- Grocers</p>
PSED	<p>Early Learning Goal Making relationships Children play co-operatively, taking turns with others. They take account of one another’s ideas about how to organise their activity. They show sensitivity to others’ needs and feelings, and form positive relationships with adults and other children. MiniMash – choice of programs.</p> <p>Early Learning Goal Self-confidence and self-awareness Children are confident to try new activities, and say why they like some activities more than others. They are confident to speak in a familiar group, will talk about their ideas, and will choose the resources they need for their chosen activities. They say when they do or don’t need help. MiniMash – choice of programs.</p>
Understanding the World	<p>Early Learning Goal People and Communities Children talk about past and present events in their own lives and in the lives of family members. They know that other children don’t always enjoy the same things, and are sensitive to this. They know about similarities and differences between themselves and others, and among families, communities and traditions PINS - All about Me,</p> <p>Early Learning Goal Technology Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. Simple City</p> <p>Early Learning Goal The world Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes. 2Connect, Simple City, Slideshow Creator, Topic Packs or PINS</p>



KS 1 National Curriculum

Pupils should:

- 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

KS 1 Ready to Progress Criteria

(‘Teaching a Broad and Balanced Curriculum for Educational Recovery’, June 2021)

At key stages 1 and 2:

- Teachers should give priority to developing pupils’ knowledge of **algorithms**, notably **sequencing** in key stage 1.

Year 1 Progression of Knowledge and Skills

Computer Science	<ul style="list-style-type: none"> • Understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. • Know that an algorithm written for a computer is called a program. • Recognise what is wrong with a simple algorithm when the steps are out of order • Write their own simple algorithm • Know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code. • Read code one line at a time and make good attempts to predict the overall effect of the program. <p>Purple Mash Unit: 1.4: We are Lego Builders (non-computer based) Purple Mash Unit: 1.5 :We are Maze Explorers - 2Go Purple Mash Unit: 1.7: Coding - 2Code</p>
Information Technology	<ul style="list-style-type: none"> • Sort, collate, edit and store simple digital content. • Name, save and retrieve work and follow simple instructions to access online resources. <p>Purple Mash Unit 1.3: Pictograms – 2Count Purple Mash Unit 1.5: Animated Story Books – 2Create A Story Purple Mash Unit 1.8: Spreadsheets – 2Calculate Purple Mash Unit 1.5: Animated Story Books – 2Create A Story Purple Mash Unit 1.2: Sorting – 2Quiz</p>



Digital Literacy	<ul style="list-style-type: none"> Understand what is meant by technology and identify a variety of examples both in and out of school. Make a distinction between objects that use modern technology and those that do not e.g. a microwave vs. a chair. Understand the importance of keeping information, such as their usernames and passwords, private and actively demonstrate this in lessons. Take ownership of their work and save this in their own private space. <p>Purple Mash Unit: 1.1: Online Safety (Purple Mash dashboard) Purple Mash Unit 1.9: Technology – (Non-Computer based)</p>
Year 2 Progression of Knowledge and Skills	
Computer Science	<ul style="list-style-type: none"> Explain that an algorithm is a set of instructions to complete a task. When designing simple programs, children show an awareness of the need to be precise with their algorithms so that they can be successfully converted into code. Create a simple program that achieves a specific purpose. Identify and correct some errors and display a growing awareness of the need for logical, programmable steps Identify the parts of a program that respond to specific events and initiate specific actions. <p>Purple Mash Unit 2.1: Coding – 2Code</p>
Information Technology	<ul style="list-style-type: none"> Demonstrate an ability to organise data. Retrieve specific data for conducting simple searches. Edit more complex digital data such as music compositions. Children use a range of media in their digital content including photos, text and sound. <p>Purple Mash Unit 2.3: Spreadsheets – 2Calculate Purple Mash Unit 2.4: Questioning – 2Question Purple Mash Unit 2.7: Making Music – 2Sequence Purple Mash Unit 2.8: Presenting Ideas Differently - 2Connect/2Quiz</p>
Digital Literacy	<ul style="list-style-type: none"> Effectively retrieve relevant, purposeful digital content using a search engine. Apply their learning of effective searching beyond the classroom and share this knowledge Make links between technology they see around them, coding and multimedia work they do in school. <p>Purple Mash Unit 2.5: Effective Searching – online searches Purple Mash Unit 2.2: Online Safety – 2Respond</p>



KS2 National Curriculum

Pupils should:

- 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.

KS 2 Ready to Progress Criteria

(‘Teaching a Broad and Balanced Curriculum for Educational Recovery’, June 2021)

At key stage 2:

- Teachers should focus on **sequencing, selection and repetition**.
- Pupils should be given enough time to practise **programming** to secure knowledge of key programming constructs.
- Gaps in knowledge of how to use **digital devices** should be identified and addressed. It is important that pupils use devices confidently and competently, so that they can focus on complex tasks without also having to learn how to use a device, which may otherwise get in the way of processing information.

Year 3 Progression of Knowledge and Skills

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| Computer Science | <ul style="list-style-type: none"> • Children can turn a simple real-life situation into an algorithm for a program by deconstructing it into manageable parts. • Identify an error within their program that prevents it from following the desired algorithm and then fix it. • Design and code a program that follows a simple sequence. • Experiment with timers to achieve repetition effects in their programs. • Begin to understand the difference in the effect of using a timer command rather than a repeat command when creating repetition effects. • Understand how variables can be used to store information while a program is executing • Use logical, achievable steps and absorb some new knowledge of coding structures. • Make good attempts to ‘step through’ more complex code in order to identify errors in algorithms and can correct this. • ‘Read’ programs with several steps and predict the outcome accurately • List a range of ways that the internet can be used to provide different methods of communication. • Use some methods of communication, e.g. being able to open, respond to and attach files to emails. • Describe appropriate email conventions when communicating in this way. |
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Purple Mash Unit 3.1: Coding – 2Chart / 2Code

Purple Mash Unit 3.5: Emailing – 2Respond / 2Connect



Information Technology	<ul style="list-style-type: none"> Carry out simple searches to retrieve digital content. Understand that to search online they are connecting to the internet and using a search engine such as Purple Mash search or internet-wide search engines. Collect, analyse, evaluate and present data and information using a selection of software. Consider what software is most appropriate for a given task. Create purposeful content to attach to emails. <p>Purple Mash Unit 3.3: Spreadsheets – 2Calculate Purple Mash Unit 3.4: Touch Typing – 2Type Purple Mash Unit 3.5: Emailing – 2Respond Purple Mash Unit 3.6: Branching Databases - 2Question Purple Mash Unit 3.7: Simulations – 2Simulate Purple Mash Unit 3.8: Graphing – 2Graph</p>
Digital Literacy	<ul style="list-style-type: none"> Demonstrate the importance of having a secure password and not sharing this with anyone else. Explain the negative implications of failure to keep passwords safe and secure. Understand the importance of staying safe and the importance of their conduct when using familiar communication tools. Know more than one way to report unacceptable content and contact. <p>Purple Mash Unit 3.2: Online Safety Purple Mash Unit 3.5: Emailing – 2Respond</p>
Year 4 Progression of Knowledge and Skills	
Computer Science	<ul style="list-style-type: none"> Consider how their design shows that they are thinking of the required task and how to accomplish this in code using coding structures for selection and repetition. Make intuitive attempts to debug their own programs. Use timers to achieve repetition effects that are becoming more logical and are integrated into their program designs. Understand ‘if statements’ for selection and attempt to combine these with other coding structures including variables to achieve the effects that they design in their programs. Understand how variables can be used to store information while a program is executing, they are able to use and manipulate the value of variables. Make use of user inputs and outputs such as ‘print to screen’. Trace code and use step-through methods to identify errors in code and make logical attempts to correct this. ‘Read’ programs with several steps and predict the outcome accurately. Recognise the main component parts of hardware which allow computers to join and form a network. Understand the online safety implications associated with the ways the internet can be used to provide different methods of communication. <p>Purple Mash Unit 4.1: Coding – 2Code Purple Mash Unit 4.2: Online Safety – 2Connect / 2Publish Plus / Display Boards Purple Mash Unit 4.5: Logo – 2Logo Purple Mash Unit 4.7: Effective Searchers – Browsers, 2Quiz, 2Connect Purple Mash Unit 4.8: Hardware Investigators – 2Quiz, 2Connect</p>



Information Technology	<ul style="list-style-type: none"> Understand the function, features and layout of a search engine. Appraise selected webpages for credibility and information at a basic level. Make improvements to digital solutions based on feedback. Make informed software choices when presenting information and data. Create linked content using a range of software. Share digital content within their community, i.e. using Virtual Display Boards. <p>Purple Mash Unit 4.1: Coding – 2Code Purple Mash Unit 4.3: Spreadsheets – 2Calculate Purple Mash Unit 4.4: Writing for Different Audiences – Writing Templates, 2Simulate/2Connect/2Publish Plus Purple Mash Unit 4.6: Animation – 2Animate Purple Mash Unit 4.7: Effective Searchers – Browsers, 2Quiz, 2Connect</p>
Digital Literacy	<ul style="list-style-type: none"> Children can explore key concepts relating to online safety using concept mapping. Help others to understand the importance of online safety. Know a range of ways of reporting inappropriate content and contact. <p>Purple Mash Unit 4.2: Online Safety – 2Connect / 2Publish Plus / Display Boards</p>
Year 5 Progression of Knowledge and Skills	
Computer Science	<ul style="list-style-type: none"> Attempt to turn more complex real-life situations into algorithms for a program by deconstructing it into manageable parts. Test and debug their programs as they go and can use logical methods to identify the approximate cause of any bug but may need some support identifying the specific line of code. Translate algorithms that include sequence, selection and repetition into code with increasing ease and their own designs show that they are thinking of how to accomplish the set task in code utilising such structures. Combining sequence, selection and repetition with other coding structures to achieve their algorithm design. Consider their code structure in terms of the ability to debug and interpret the code later Understand the value of computer networks but are also aware of the main dangers. Recognise what personal information is and can explain how this can be kept safe. Children can select the most appropriate form of online communications contingent on audience and digital content, e.g. 2Blog, 2Email, Display Boards. <p>Purple Mash Unit 5.1: Coding - 2Code Purple Mash Unit 5.2: Online Safety 2Publish Plus Writing Templates Display boards 2Connect Purple Mash Unit 5.5 Game Creator- 2DIY 3D, Writing Templates, 2Blog</p>



Information Technology	<ul style="list-style-type: none"> • Search with greater complexity for digital content when using a search engine. • Explain in some detail how credible a webpage is and the information it contains. • Make appropriate improvements to digital solutions based on feedback received and can confidently comment on the success of the solution and review solutions from others. • Collaboratively create content and solutions using digital features within software such as collaborative mode. Use several ways of sharing digital content. <p>Purple Mash Unit 5.1: Coding - 2Code Purple Mash Unit 5.3: Spreadsheets – 2Calculate Purple Mash Unit: 5.4: Databases - 2Investigate Purple Mash Unit 5.5: Game Creator- 2DIY 3D, Writing Templates, 2Blog Purple Mash Unit: 5.6: 3D Modelling - 2Design and Make Writing Templates Purple Mash Unit: 5.7: Concept Maps – 2Connect</p>
Digital Literacy	<ul style="list-style-type: none"> • Have a secure knowledge of common online safety rules and can apply this by demonstrating the safe and respectful use of a few different technologies and online services. • Relate appropriate online behaviour to their right to personal privacy and mental wellbeing of themselves and others. <p>Purple Mash Unit 5.2: Online Safety 2Publish Plus Writing Templates Display boards 2Connect</p>

Year 6 Progression of Knowledge and Skills

Computer Science	<ul style="list-style-type: none"> • Turn a more complex programming task into an algorithm by identifying the important aspects of the task and then decomposing them in a logical way using their knowledge of possible coding structures and applying skills from previous programs. • Test and debug their program as they go and use logical methods to identify the cause of bugs, demonstrating a systematic approach to try to identify a particular line of code causing a problem. • Translate algorithms that include sequence, selection and repetition into code and their own designs show that they are thinking of how to accomplish the set task. • Coding displays an improving understanding of variables in coding, outputs such as sound and movement, inputs from the user of the program such as button clicks and the value of functions. • Interpret a program in parts and can make logical attempts to put the separate parts of a complex algorithm together to explain the program as a whole. • Understand and can explain in some depth the difference between the internet and the World Wide Web. Children know what a WAN and LAN are and can describe how they access the internet in school. <p>Purple Mash Unit 6.1: Coding - 2Code Purple Mash Unit 6.2: Online Safety 2DIY 3D 2DIY 2Code 2Blog Purple Mash Unit 6.4 Blogging Weeks – 2Blog Purple Mash Unit 6.5 Text Adventures – 2Code, 2Connect, 2Create a Story, Writing Templates Purple Mash Unit 6.6 Networks – 2Connect (Mind Map) Writing Templates</p>
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Information Technology	<ul style="list-style-type: none"> • Children readily apply filters when searching for digital content. • Explain in detail how credible a webpage is and the information it contains. • Compare a range of digital content sources and are able to rate them in terms of content quality and accuracy. • Use critical thinking skills in everyday use of online communication. • Make clear connections to the audience when designing and creating digital content. • Design and create their own blogs to become a content creator on the internet • Use criteria to evaluate the quality of digital solutions and are able to identify improvements, making some refinements. <p>Purple Mash Unit 6.1: Coding - 2Code</p> <p>Purple Mash Unit 6.2: Online Safety - 2DIY 3D 2DIY 2Code 2Blog</p> <p>Purple Mash Unit 6.3: Spreadsheets - 2Calculate</p> <p>Purple Mash 6.4: Blogging - 2Blog</p> <p>Purple Mash Unit 6.5: Text Adventures – 2Code, 2Connect, 2Create a Story, Writing Templates</p> <p>Purple Mash Unit 6.7: Quizzing - 2DIY 2Quiz Text Toolkit 2Investigate (database)</p>
Digital Literacy	<ul style="list-style-type: none"> • Demonstrate the safe and respectful use of a range of different technologies and online services. • Identify more discreet inappropriate behaviours through developing critical thinking • Recognise the value in preserving their privacy when online for their own and other people’s safety. <p>Purple Mash Unit 6.2: Online Safety - 2DIY 3D 2DIY 2Code 2Blog</p> <p>Purple Mash 6.4: Blogging - 2Blog</p>