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Aiming High To Reach Our Goals
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Cherry Tree Trust

Computing Policy

February 2025

Version 5

Document Control	
Title:	Computing Policy
Date:	February 2025
Supersedes:	Version 4 (ICT and e-Safety Policy)
Amendments:	Removed sections on Equipment, E-Safety and Accessing Learning from Home – These are now included in the Online Safety Policy Updated EYFS section to match updated Development Matters/ELGs Updated SoW to include changes made by Purple mash – adding in Artificial Intelligence and changes to Spreadsheets units
Related Policies / Guidance:	Online Safety Policy Assessment Policy Marking Policy EYFS Policy Code of Conduct SEN Policy Equality /Inclusion Policy Pupil Privacy Policy Preventing radicalization and risk assessment policy Safeguarding Whistleblowing Staff Code of Conduct
Review:	February 2026 –or sooner if needed

Approved by:	Governors	**Date:**	11/02/2025
Last reviewed on:	February 2025		
Next review due by:	February 2026 – or sooner if needed		

Contents

Intent

The curriculum that we teach has been planned to develop the five key skills for life of: Problem solving, Teamwork, Self-management (initiative, organisation, accountability) Self-belief (confidence, resilience, positive attitude) and Communication.

The computing curriculum is designed to develop problem solving, self-management, self-belief and communication. There will be opportunities for team work but we focus predominantly on ensuring each pupil has the skills needed in their future careers within computing.

Each child will be taught the rules to stay safe, knowing how to make the right decision to keep themselves and others safe on line and to take ownership of their actions. We intend to give our children the skills and the knowledge to communicate effectively using a multimedia approach.

Aim

We aim to teach our pupils the skills and knowledge to use computers effectively for a range of purposes within their lives.

We believe that a high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems.
The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

We are guided by the objectives within the National Curriculum for computing. This document outlines the aims as ensuring 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.

The National Curriculum outlines the subject content that should be taught as:

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.

<u>ICT in Early Years</u>

Children start in Nursery with some understanding of the uses of ICT in the context of everyday experiences. This could be watching items of shopping being scanned at the supermarket or helping to programme a washing machine. Practitioners support children's learning about ICT using the same approach as for all the areas of learning. They build on knowledge, skills and understanding that children have so far and provide a balance of child-initiated and adult-led learning opportunities. Children can explore and learn about the everyday uses of ICT through role play using real and pretend equipment. As they learn, within the context of adult-led activities, how to use digital cameras, CD players and different kinds of computer software they can begin to use these things more independently and for their own purposes. Although there is no direct Early Learning Goal for computing, the table below outlines how computing is incorporated in to Development Matters and the Early Learning Goals though other curriculum areas.

Computing			
Three and Four-Year-Olds	Personal, Social and Emotional Development		• Remember rules without needing an adult to remind them.
	Physical Development		• Match their developing physical skills to tasks and activities in the setting.
	Understanding the World		• Explore how things work.
Reception	Personal, Social and Emotional Development		• Show resilience and perseverance in the face of a challenge. • Know and talk about the different factors that support their overall health and wellbeing: - sensible amounts of 'screen time'.
	Physical Development		• Develop their small motor skills so that they can use a range of tools competently, safely and confidently.
	Expressive Arts and Design		• Explore, use and refine a variety of artistic effects to express their ideas and feelings.
ELG	Personal, Social and Emotional Development	Managing Self	• Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. • Explain the reasons for rules, know right from wrong and try to behave accordingly.
	Expressive Arts and Design	Creating with Materials	• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

Modifications

We have made some modifications to the National Curriculum because we believe that our pupils need:

- To be taught the skills of locating the keys on the keyboard. To increase children's speed, we revisit this process and practice.
- We also place emphasis on work place readiness within our curriculum and have made links to this.
- Manchester's music scene is inspiring so we have added opportunities for digital music making to capture and celebrate this.
- The children within school spend a lot of time playing computer games and we feel we need to not only ensure that they are safe online but also develop an understanding of all the uses of technology.

Progression of skills

		End of Nursery	ELG – End of Reception	Year One
Computer Science	**Robots**	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. Below are skills/units that will need to be covered so they are able to access Mini Mash/Purple Mash safely. These can be taught across the year, as pupils are ready for them, it is recommended that these are taught in order.	-To be able to describe a route that is in progress and a route taken by another person while it is being enacted. -To be able to follow a route taken by another person after it has been enacted. -To plan routes for toy vehicles and follow plans for toy vehicles. -To use the buttons on a floor robot to make it move developing to using buttons with greater purpose e.g., program several buttons to make it move. -To be able to interpret simple instructions to predict an outcome. -To be able to plan and input instructions for a floor robot building up to several steps.	Unit 1.7 – Coding • Concept of computers following given instructions • Planning using an algorithm Unit 1.4 – Lego Builders • Logical Decision Making • Sequencing instructions • Following instructions Unit 1.5 – Maze Explorers • Concept of computers following given instructions • Program logic and structure
Information Technology	**Mouse and Trackpad Skills**	**Hardware**	-To know how to 'hold' a mouse. -To be able to move the mouse purposefully. -To be able to click the left-hand mouse button to perform an action.	Across all Units – These skills are developed in all units *contingent on hardware used

		End of Nursery	ELG – End of Reception	Year One
		Technology Around Us **Mouse and Trackpad Skills** **Keyboard Skills** **Safety and Privacy**	-To be able to use click and drag to move objects purposefully. -To be able to use the scroll roller on a mouse. -To know how to use a laptop touchpad.	
	Drawing skills		-To be able to select colours. -To be able to mark make purposefully on a screen. -To be able to control the pencil width. -To be able to control tools to experiment with. -To be able to use the undo function. -To be able to erase parts of pictures. -To be able to draw using a touch screen. -To be able to draw using mouse control.	Unit 1.1 – Exploring Purple Mash • General use of Purple Mash • Design: Avatar creation • Paint Projects: use of simple paint tools Unit 1.6 – Animated Story Books • Use different drawing tools to create a picture on a page • Develop skill of using additional drawing tools for a desired effect
	Keyboard Skills		-To be able to find individual letters on the keyboard. -To use the spacebar. -To be able to delete using the backspace key and the DELETE key. -To be able to type both uppercase and lowercase	Across all Units – These skills are developed in all units *NOTE TOUCH TYPING UNIT 3.4.

		End of Nursery	ELG – End of Reception	Year One
			letters using CAPS LOCK and shift. -To be able to type numbers. -To be able to use the ENTER key. -To be able to use the arrow keys. -To be able to use the keyboard with all the above skills.	
	Photography		-To be able to look at photos and identify features. -To be able to take photos using a device. -To be able to use the webcam in Mini Mash. -To be able to open photos in Purple Mash. -To be able to use own photos in work on a digital device.	Unit 1.1 – Exploring Purple Mash • Exploration of Purple Mash including the skill of opening images such as images • Adding pictures and text to own work Unit 1.6 – Animated Story Books • Exploring image media functionality in 2Create for a story e.g. changing backgrounds and importing pictures Unit 1.9 - Tech Outside School

		End of Nursery	ELG – End of Reception	Year One
				• Using digital technology such as cameras and tablets to capture images with purpose to upload onto a software platform
	Sounds		-To experiment in the music area of Mini Mash to combine sounds. -To use the built-in sound effects in Purple Mash. -To be able to record spoken words and play these back.	Unit 1.6 - Animated Story Books • Use of adding sounds to multimedia pages • Adding voice recordings to multimedia pages • Creating suitable music for multimedia pages Unit 1.7 – Coding • Use of sounds in context when making simple programs in order to enhance user experience. E.g. bubble makes a pop sound when clicked
	Quizzes		-To know what a quiz is.	Unit 1.2 - Grouping and Sorting

		End of Nursery	ELG – End of Reception	Year One
			-To be able to participate in a multiple-choice quiz using pictures. -To be able to participate in a sequencing quiz using pictures. -To be able to answer quiz questions by typing. -To be able to participate in a cloze quiz. -To be able to participate in a sorting and sequencing quiz. -To be able to complete a quiz with mixed questions. -To be able to play a quiz game.	• Use of quizzes and applications to group and sort items • Building up on features of software to customise simple quizzes for an audience. Across Units – Although there are specific units in each year group of the main scheme, the use of quizzes is present throughout the SOW to support understanding of prior and post learning of units.
Digital Literacy	**Hardware**		-To be able to take appropriate actions before using technology. -To be able to understand why food should be kept away from devices. -To be able to identify electrical safety as important. -To know safe ways to transport portable devices. -To be able to relate being gentle and sharing to the use of devices. -To be able to understand what technology is.	Unit 1.1 – Exploring Purple Mash • General use of Purple Mash including the use of hardware (devices) to access Purple Mash. • Username and password importance Unit 1.5 – Maze Explorers • Concept of computers following given instructions

		End of Nursery	ELG – End of Reception	Year One
			-To be able to identify the main parts of a computer.	• Program logic and structure Unit 1.9 - Tech Outside School • Exploring types of technology in and outside of school • Exploring what 'common' technology is used for.
	Technology Around Us		-To know the technology used in the home. -To be able to identify how technology is used outdoors. -To be able to identify technology used in the wider world.	Across Units – Children will explore use of technology in the everyday world through most units in the SOW. They will also be able to make links with technology outdoors and use of it in the home Unit 1.9 - Tech Outside School • Exploring types of technology in and outside of school. • Exploring what 'common' technology is used for.
	Safety and Privacy		-To be able to explain what it means to own digital content.	Unit 1.1 – Exploring Purple Mash

		End of Nursery	ELG – End of Reception	Year One
			-To be able to explain what 'private' means when using technology. -To be able to express how it feels to be uncomfortable with something. -To be able to name 5 people who can help with negative feelings. -To be able to think about how to show kindness to others. -To begin to be aware of the impact of a lot of screen time.	• General use of Purple Mash including the skill and importance of saving and locating own work • Username and password importance Across Units – Although there are specific units in each year group of the main SOW that build on safety and privacy, online safety should be referred to and actively acted out in each learning session e.g. through good habits/behaviours and reporting protocols.
	Using Purple Mash with an Individual Login		-To navigate to PM login page. -Using login shortcuts. -Login in picture password. -Login in numbers. -Login in words. -My work area. -2Dos.	Unit 1.1 – Exploring Purple Mash • General use of Purple Mash including the use of login using own credentials • Username and password importance • Saving work and accessing work using My Work Area

		End of Nursery	ELG – End of Reception	Year One
				Across Units – Although there are specific units in each year group of the main scheme, this reception unit is built upon across the SOW. For example, everyday use such as file management, retrieval and submission of work.

Computing Progression
N.C. Statements KS1 Year 1

	Computer Science			Information Technology	Digital Literacy	
Statement	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.
Outcome	*Children understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. They know that a computer program turns an algorithm into code that the computer can understand*	*Children can work out what is wrong with a simple algorithm when the steps are out of order, e.g. The Wrong Sandwich in Purple Mash and can write their own simple algorithm, e.g. Colouring in a Bird activity. Children know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code, e.g. Bubbles activity in 2Code.*	*When looking at a program, children can read code one line at a time and make good attempts to envision the bigger picture of the overall effect of the program. Children can, for example, interpret where the turtle in 2Go challenges will end up at the end of the program.*	*Children are able to sort, collate, edit and store simple digital content e.g. children can name, save and retrieve their work and follow simple instructions to access online resources, use Purple Mash 2Quiz example (sorting shapes), 2Code design mode (manipulating backgrounds) or using pictogram software such as 2Count.*	*Children understand what is meant by technology and can identify a variety of examples both in and out of school. They can make a distinction between objects that use modern technology and those that do not e.g. a microwave vs. a chair.*	*Children understand the importance of keeping information, such as their usernames and passwords, private and actively demonstrate this in lessons. Children take ownership of their work and save this in their own private space such as their My Work folder on Purple Mash.*

Computing Progression
N.C. Statements KS1 Year 2

	Computer Science			Information Technology	Digital Literacy	
Statement	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.
Outcome	*Children can 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.*	*Children can create a simple program that achieves a specific purpose. They can also identify and correct some errors, e.g. Debug Challenges: Chimp. Children's program designs display a growing awareness of the need for logical, programmable steps.*	*Children can identify the parts of a program that respond to specific events and initiate specific actions. For example, they can write a cause and effect sentence of what will happen in a program.*	*Children demonstrate an ability to organise data using, for example, a database such as 2Investigate and can retrieve specific data for conducting simple searches. Children are able to edit more complex digital data such as music compositions within 2Sequence. Children are confident when creating, naming, saving and retrieving content. Children use a range of media in their digital content including photos, text and sound.*	*Children can effectively retrieve relevant, purposeful digital content using a search engine. They can apply their learning of effective searching beyond the classroom. They can share this knowledge, e.g. 2Publish example template. Children make links between technology they see around them, coding and multimedia work they do in school e.g. animations, interactive code and programs.*	*Children know the implications of inappropriate online searches. Children begin to understand how things are shared electronically such as posting work to the Purple Mash display board. They develop an understanding of using email safely by using 2Respond activities on Purple Mash and know ways of reporting inappropriate behaviours and content to a trusted adult.*

Computing Progression
N.C. Statements KS2 Year 3

	Computer Science				Information Technology		Digital Literacy
Statement	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 concern about content and contact.
Outcome	*Children can turn a simple real-life situation into an algorithm for a program by deconstructing it into manageable parts. Their design shows that they are thinking of the desired task and how this translates into code. Children can identify an error within their program that prevents it following the desired algorithm and then fix it.*	*Children demonstrate the ability to design and code a program that follows a simple sequence. They experiment with timers to achieve repetition effects in their programs. Children are beginning to understand the difference in the effect of using a timer command rather than a repeat command when creating repetition effects.*	*Children's designs for their programs show that they are thinking of the structure of a program in logical, achievable steps and absorbing some new knowledge of coding structures. For example, repetition and use of timers. They make good attempts to 'step through' more complex code in order to identify errors in algorithms and can correct this. e.g. In programs such as Logo, they can 'read' programs with several steps and predict the outcome accurately.*	*Children can list a range of ways that the Internet can be used to provide different methods of communication. They can use some of these methods of communication, e.g. being able to open, respond to and attach files to emails using 2Email. They can describe appropriate email conventions when communicating in this way.*	*Children can carry out simple searches to retrieve digital content. They understand that to do this, they are connecting to the internet and using a search engine such as Purple Mash search or internet-wide search engines.*	*Children can collect, analyse, evaluate and present data and information using a selection of software, e.g. using a branching database (2Question), using software such as 2Graph. Children can consider what software is most appropriate for a given task. They can create purposeful content to attach to emails, e.g. 2Respond.*	*Children demonstrate the importance of having a secure password and not sharing this with anyone else. Furthermore, children can explain the negative implications of failure to keep passwords safe and secure. They understand the importance of staying safe and the importance of their conduct when using familiar communication tools such as 2Email in Purple Mash. They know more than one way to report unacceptable content and contact.*

Computing Progression
N.C. Statements KS2 Year 4

	Computer Science				Information Technology		Digital Literacy
Statement	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 concern about content and contact.
Outcome	*When turning a real-life situation into an algorithm, the children's design shows that they are thinking of the required task and how to accomplish this in code using coding structures for selection and repetition. Children make more intuitive attempts to debug their own programs.*	*Children's use of timers to achieve repetition effects are becoming more logical and are integrated into their program designs. They 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. As well as understanding how variables can be used to store information while a program is executing, they are able to use and manipulate the value of variables. Children can make use of user inputs and outputs such as 'print to screen'. e.g. 2Code.*	*Children's designs for their programs show that they are thinking of the structure of a program in logical, achievable steps and absorbing some new knowledge of coding structures. For example, 'IF' statements, repetition and variables. They can trace code and use step-through methods to identify errors in code and make logical attempts to correct this. In programs such as Logo, they can 'read' programs with several steps and predict the outcome accurately.*	*Children recognise the main component parts of hardware which allow computers to join and form a network. Their ability to understand the online safety implications associated with the ways the internet can be used to provide different methods of communication is improving.*	*Children understand the function, features and layout of a search engine. They can appraise selected webpages for credibility and information at a basic level.*	*Children are able to make improvements to digital solutions based on feedback. Children make informed software choices when presenting information and data. They create linked content using a range of software such as 2Connect and 2Publish+. Children share digital content within their community, i.e. using Virtual Display Boards.*	*Children can explore key concepts relating to online safety using concept mapping such as 2Connect. They can help others to understand the importance of online safety. Children know a range of ways of reporting inappropriate content and contact.*

Computing Progression
N.C. Statements KS2 Year 5

	Computer Science				Information Technology		Digital Literacy
Statement	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 concern about content and contact.
Outcome	*Children may attempt to turn more complex real-life situations into algorithms for a program by deconstructing it into manageable parts. Children are able to 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.*	*Children can 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. They are combining sequence, selection and repetition with other coding structures to achieve their algorithm design.*	*When children code, they are beginning to think about their code structure in terms of the ability to debug and interpret the code later, e.g. the use of tabs to organise code and the naming of variables*	*Children understand the value of computer networks but are also aware of the main dangers. They 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.*	*Children search with greater complexity for digital content when using a search engine. They are able to explain in some detail how credible a webpage is and the information it contains.*	*Children are able to make appropriate improvements to digital solutions based on feedback received and can confidently comment on the success of the solution. e.g. creating their own program to meet a design brief using 2Code. They objectively review solutions from others. Children are able to collaboratively create content and solutions using digital features within software such as collaborative mode. They are able to use several ways of sharing digital content, i.e. 2Blog, Display Boards and 2Email.*	*Children 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. Children implicitly relate appropriate online behaviour to their right to personal privacy and mental wellbeing of themselves and others.*

Computing Progression
N.C. Statements KS2 Year 6

	Computer Science				Information Technology		Digital Literacy
Statement	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 concern about content and contact.
Outcome	*Children are able to turn a more complex programming task into an algorithm by identifying the important aspects of the task (abstraction) and then decomposing them in a logical way using their knowledge of possible coding structures and applying skills from previous programs. Children 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**.*	*Children 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 in code utilising such structures, including nesting structures within each other. 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**.*	*Children are able to 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**.*	*Children 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**.*	*Children readily apply filters when searching for digital content. They are able to explain in detail how credible a webpage is and the information it contains. They compare a range of digital content sources and are able to rate them in terms of content quality and accuracy. Children use critical thinking skills in everyday use of online communication.*	*Children make clear connections to the audience when designing and creating digital content. The children design and create their own blogs to become a content creator on the Internet, e.g. **2Blog**. They are able to use criteria to evaluate the quality of digital solutions and are able to identify improvements, making some refinements.*	*Children demonstrate the safe and respectful use of a range of different technologies and online services. They identify more discreet inappropriate behaviours through developing critical thinking, e.g. **2Respond** activities. They recognise the value in preserving their privacy when online for their own and other people's safety.*

Unit Overviews

Units highlighted in purple have been recently changed mid-year on Purple Mash – these will change for September 2025. Currently there is only a replacement for the Year 6 unit

Predominant Area of Computing*		
Computer Science	Information Technology	Digital Literacy

*Most units will include aspects of all strands.

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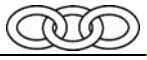
	Autumn				Spring		Summer		
Year 1	Unit 1.1 Online Safety & Exploring Purple Mash 4 Lessons	Unit 1.2 Grouping & Sorting 2 Lessons	Unit 1.9 Technology outside school 2 Lessons	Unit 1.4 Lego Builders 3 Lessons	Unit 1.6 Animated Story Books 5 Lessons	Unit 1.7 Coding 6 Lessons	Unit 1.3 Pictograms 3 Lessons	Unit 1.5 Maze Explorers 3 Lessons	Unit 1.8 Spreadsheets 3 Lessons
Year 2	Unit 2.2 Online Safety 3 Lessons	Unit 2.5 Effective Searching 3 Lessons	Unit 2.1 Coding 6 Lessons		Unit 2.8 Presenting Ideas 4 Lessons	Unit 2.4 Questioning 5 Lessons	Unit 2.3 Spreadsheets 4 Lessons	Unit 2.7 Making Music 3 Lessons	Unit 2.6 Creating Pictures 5 Lessons

	Autumn			Spring		Summer			
Year 3	Unit 3.2 Online safety 3 Lessons	Unit 3.4 Touch Typing 4 Lessons	Unit 3.1 Coding 6 Lessons	Unit 3.6 Branching Databases 4 Lessons	Unit 3.9 Presenting 5\6 Lessons (Microsoft PP or Google Slides)	Unit 3.5 Email (inc. email safety) 6 Lessons	Unit 3.7 Simulations 3 Lessons	Unit 3.8 Graphing 2 Lessons	Unit 3.3 Spreadsheets 3 Lessons 4 lessons for Crash Course
Year 4	Unit 4.2 Online Safety 4 Lessons	Unit 4.8 Hardware Investigators 2 Lessons	Unit 4.10 Introducing AI 4 Lessons	Unit 4.6 Animation 3 Lessons	Unit 4.4 Writing for Different Audiences 5 Lessons	Unit 4.3 Spreadsheets 6 Lessons	Unit 4.1 Coding 6 Lessons	Unit 4.5 Logo 4 Lessons	Unit 4.7 Effective Searching 3 Lessons
	Unit 4.9 Making Music To be included as part of Music curriculum								
Year 5	Unit 5.2 Online Safety 3 Lessons	Unit 5.7 Concept Maps 4 Lessons	Unit 5.6 3D Modelling 4 Lessons	Unit 5.8 Word Processing 8 Lessons (Can be incorporated in to English Lessons)	Unit 5.4 Databases 4 Lessons	Unit 5.5 Game Creator 5 Lessons	Unit 5.3 Spreadsheets 6 Lessons	Unit 5.1 Coding 6 Lessons	
Year 6	Unit 6.2 Online Safety 2 Lessons	Unit 6.4 Blogging 4 Lessons	Unit 6.3 Spreadsheets 5 Lessons	Unit 6.6 Networks 3 Lessons	Unit 6.5 Text Adventures 5 Lessons	Unit 6.8 Understanding Binary 4 Lessons	Unit 6.7 Quizzing 6 Lessons	Unit 6.1 Coding 6	

Schemes of work

Reception:

Autumn 2

Linked curriculum learning objective:  **Know what computers are and what they do**

Class discussion: What are computers? What can you do with them? What different types are there? Stress the use of computers as a tool and not just to play games on.

Use an art program to design something and then make it elsewhere e.g. out of junk.

Place a computer or laptop on the carpet with the children and begin to label the computer with post-it notes. Ask the children what they think the different parts do. Sometimes it helps children to teach them skills directly e.g. ask what the buttons on the computer do and then press them to show them.

Prior to this task, ask the children to bring in any reclaimed materials such as yoghurt pots, cereal and other food boxes, plastic cartons, plastic bottles and milk top lids to create your junk area. Introduce the children to the 'Junk Modelling' area. This area is where the children will use various pieces of 'junk' to create something exciting and original. Tell the children they are going to build their own computer. See example pictures using cardboard, pots, pens etc. Record the children giving an oral account of their creations and how they use computers/ICT to do things (this could be video or a photo story with pictures and audio). When recording, encourage critical thinking and creativity by asking e.g. I wonder how I….What happens if….Do you have any ideas how I can….I saw __ and it gave me an idea….Do you remember how you found out how this worked, I liked the way you…

What are inputs? These are simply the means of talking to a computer, the keyboard and mouse are the first that need to be mastered. On the IWB model using a keyboard, identify and match numbers using the SMART board software keyboard with the class.

Explain that keyboards have all the letters of the alphabet – recognise S A T P I N

However, they are capital letters. Show the children how to play typing games. Set the children the task of playing a variety of games that help them to learn keyboard skills and mouse control and techniques.

Open using 'paint packages' presentation. Using a paint package on a computer/laptop or iPad, ask the children to draw pictures of how computers are used and of themselves. You could also create a classroom display that explains the different parts of a computer and some of the terminology.

Spring 1

Linked curriculum learning objective:  **Know how to use a paint program**

Explain to the class what an artist is and that artists take their inspiration for their art from what is around them and the things that they are passionate about. Ask the class what they know about artists and do they know any works of art? You could link this to places that the children have visited.

Demonstrate a PC art application with the class. Tell them to draw their favourite food and the place where they would eat it. When they have done this, make them play a game together by guessing what or whom they have drawn. This helps their drawing and colouring skills develop.

Demonstrate an iPad art app with the class. Tell them to draw their favourite toy and themselves playing with it. When they have done this, make them play a game together by guessing what or whom they have drawn. This helps their drawing and colouring skills develop, as above.

Tell them to draw their favourite friend, explain this is called a portrait.

Tell them to draw their favourite colour. They must use 4 different shapes and 4 different shades of their favourite colour. Play the same guessing game as above.

Spring 2 & Summer 1

Linked curriculum learning objective:  **Know that computers need instructions to make them work**

Explain to the class that they are going to learn about directions and will explore the words we use to describe them.

Play a game with the children to establish their understanding of directions (move forwards, move backwards, turn left and turn right).

Show flash cards or point in different directions and ask children to shout out the correct terminology. Explain how forwards and backwards are different to up and down. Discuss with children when we would use instructions, ask the children, 'As well as the instructions we ask children to follow, what else do we give instructions for?'

What way is ↑ (forward)

What way is ↓ (backward)

What way is ← (turn left)

What way is → (turn right)

Set children a task to match the words to the images. In pairs using the flash cards, the child will match the direction their partner is standing in with the arrow and images on the cards.

Recap on prior knowledge of directional language. Play a quick game e.g. Simon Says to reinforce the use of directional language.

Explain that the process of giving directions is similar to providing instructions and that instructions need to be in a certain order (sequencing). In pairs, ask the children to direct each other using only the terms forwards, backwards, turn left and turn right. Prompts can be placed on walls (with the word and symbol). It must be emphasised when giving instructions that they have to be in the correct order and very specific.

Introduce children to the Bee-Bots (floor turtle). Explain how the Bee-Bot will not move unless we give it certain instructions or commands. Children will learn to complete a programme of single instructions. Children will also master clearing previous programs before starting a new program. New terminology – 'clear and go'.

Extension - Children could make their own pictures to be placed together to create a map. Then direct each other to different areas on their own maps.

Year 1:

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
1	1.1	Online Safety & Exploring Purple Mash	1	Safe Logins	• To log in safely and understand why that is important. • To create an avatar and to understand what this is and how it is used. • To be able to create a picture and add their own name to it. • To start to understand the idea of 'ownership' of creative work. • To save work to the My Work area and understand that this is private space.	Children can log in to Purple Mash using their own login. Children have created their own avatar and understand why they are used. Children can add their name to a picture they created on the computer. Children are beginning to develop an understanding of ownership of work online. Children can save work into the My Work folder in Purple Mash and understand that this is a private saving space just for their work.
1	1.1	Online Safety & Exploring Purple Mash	2	My Work Area	• To learn how to find saved work in the Online Work area. •To learn about what the teacher has access to in Purple Mash. • To learn how to see messages left by the teacher on their work. • To learn how to search Purple Mash to find resources.	• Children can find their saved work in the Online Work area of Purple Mash. • Children can find messages that their teacher has left for them on Purple Mash. • Children can search Purple Mash to find resources.
1	1.1	Online Safety & Exploring Purple Mash	3	Purple Mash Topics	• To become familiar with the types of resources available in the Topics section. • To become more familiar with the icons used in the resources in the Topics section. • To start to add pictures and text to work.	• Children will be able to use the different types of topic templates in the Topics section confidently. • Children will be confident with the functionality of the icons in the topic templates. • Children will know how to use the different icons and writing cues to add pictures and text to their work.
1	1.1	Online Safety & Exploring Purple Mash	4	Purple Mash Tools	• To explore the Tools area of Purple Mash and to learn about the common icons used in Purple Mash for Save, Print, Open, New. • To explore the Games area on Purple Mash. • To understand the importance of logging out when they have finished.	• Children have explored the Tools section on Purple Mash and become familiar with some of the key icons: Save, Print, Open and New. • Children have explored the Games section and looked at Table Toons (2x tables). • Children can log out of Purple Mash when they have finished using it and know why that is important.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
1	1.2	Grouping & Sorting	1	Sorting Away from the Computer	To sort items using a range of criteria.	Children can sort various items offline using a variety of criteria.
1	1.2	Grouping & Sorting	2	Sorting on the Computer	To sort items on the computer using the 'Grouping' activities in Purple Mash.	Children have used Purple Mash activities to sort various items online using a variety of criteria.
1	1.3	Pictograms	1	Data in Pictures	To understand that data can be represented in picture format.	Children can discuss and illustrate the transport used to travel to school. Children can contribute to the collection of class data. Children have used these illustrations to create a simple pictogram.
1	1.3	Pictograms	2	Class Pictogram	To contribute to a class pictogram.	Children can contribute to a class pictogram. Children can discuss what the pictogram shows.
1	1.3	Pictograms	3	Recording Results	To use a pictogram to record the results of an experiment.	Children can collect data from rolling a die 20 times and recording the results. Children can represent the results as a pictogram.
1	1.4	Lego Builders	1	Following Instructions	To emphasise the importance of following instructions.	Children know that to achieve the effect they want when building something, they need to follow accurate instructions. Children know that by following the instructions correctly, they will get the correct result. Children know that an algorithm is a precise, step-by-step set of instructions used to solve a problem or achieve an objective.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
1	1.4	Lego Builders	2	Following and Creating Simple Instructions on the Computer.	To follow and create simple instructions on the computer.	Children can follow instructions in a computer program. Children can explain the effect of carrying out a task with no instructions. Children know that computers need precise instructions to follow. Children know that an algorithm written for a computer to follow is called a program.
1	1.4	Lego Builders	3	To consider how the order of instructions affects the result.	To consider how the order of instructions affects the result.	Children understand how the order in which the steps of a recipe are presented affects the outcome. Children can organise instructions for a simple recipe. Children know that correcting errors in an algorithm or program is called 'debugging'.
1	1.5	Maze Explorers	1	Challenges 1 and 2	To understand the functionality of the basic direction keys in Challenges 1 and 2. To be able to use the direction keys to complete the challenges successfully.	Children know how to use the direction keys in 2Go to move forwards, backwards, left and right. Children know how to add a unit of measurement to the direction in 2Go Challenge 2. Children know how to undo their last move. Children know how to move their character back to the starting point.
1	1.5	Maze Explorers	2	Challenges 3 and 4	To understand the functionality of the basic direction keys in Challenges 3 and 4. To understand how to create and debug a set of instructions (algorithm).	Children can use diagonal direction keys to move the characters in the right direction. Children know how to create a simple algorithm. Children know how to debug their algorithm.
1	1.5	Maze Explorers	3	Challenges 5 and 6	To use the additional direction keys as part of their algorithm. To understand how to change and extend the algorithm list. To create a longer algorithm for an activity.	Children can use the additional direction keys to create a new algorithm. Children can challenge themselves by using the longer algorithm to complete challenges.
1	1.5	Maze Explorers	4	Setting More Challenges	To provide an opportunity for the children to set challenges for each other. To provide an opportunity for the teacher to add these challenges to a display board for the class to try.	Children can change the background images in their chosen challenge and save their new challenge. Children have tried each other's challenges.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
1	1.6	Animated Story Books	1	Drawing and Creating	To understand the differences between traditional books and e-books. To explore the tools of 2Create a Story's My Simple Story level. To save the page they have created.	Children know the difference between a traditional book and an e-book. Children can use the different drawing tools to create a picture on the page. Children can add text to a page.
1	1.6	Animated Story Books	2	Animation	To add animation to a picture. To play the pages created so far. To save the additional changes and overwrite the file.	Children can open previously saved work. Children can add an animation to a page. Children can play the pages created. Children can save changes and overwrite the file.
1	1.6	Animated Story Books	3	Sounds and More!	To add a sound effect to a picture. To add a voice recording to the picture. To add created music to the picture.	Children can add a sound to the page. Children can add voice recording to the page. Children can create music for a page.
1	1.6	Animated Story Books	4	Making a Story	To add a background to the story. To demonstrate a good understanding of all the tools they have used in 2Create a Story and use these successfully to create their own story.	Children can add a background to the page. Children can use the additional drawing tools on My Story mode. Children can change the font style and size.
1	1.6	Animated Story Books	5	Copy and Paste	To use the copy and paste feature to create additional pages. To continue and complete an animated story. To create a class display board of the story books created by the class.	Children can use the copy and paste function to add more pages to their animated e-book. Children can share their e-books on a class story book display board.
1	1.7	Coding	1	Instructions	To understand what instructions are. To predict what will happen when instructions are followed. To understand that computer programs work by following instructions called code.	Children can give and follow instructions. Children can draw symbols to represent instructions. Children can arrange code blocks to create a set of instructions.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
1	1.7	Coding	2	Objects and Actions	To use code to make a computer program. To understand what objects and actions are.	Children can create a program using code blocks. Children can use object and action code blocks.
1	1.7	Coding	3	Events	To understand what an event is. To use an event to control an object.	Children can create a simple program using code blocks. Children can use event, object and action code blocks.
1	1.7	Coding	4	When Code Executes	To understand what an event is. To begin to understand how code executes when a program is run.	Children can create a simple program using code blocks. Children can use event, object and action code blocks. Children can notice when their code executes when their program is run.
1	1.7	Coding	5	Setting the Scene	To understand what backgrounds and objects are. To understand how to use the scale property.	Children can edit a scene by adding, deleting and moving objects. Children can change the size of objects using the properties table.
1	1.7	Coding	6	Using a Plan	To plan a computer program. To make a computer program.	Children can create a design plan for their Free Code Scene program. Children can use code to make the program they have designed work.
1	1.9	Technology outside school	1	What is Technology?	To find and understand examples of where technology is used in the local community	Children understand what is meant by 'technology'. Children have considered types of technology used in school and out of school.
1	1.9	Technology outside school	2	Technology outside school.	To record examples of technology outside school.	Children have recorded 4 examples of where technology is used away from school.

Year 2

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
2	2.1	Coding	1	Algorithms	To understand what an algorithm is. To create a computer program using an algorithm.	Children can explain that an algorithm is a set of instructions. Children can describe the algorithms they created. Children can explain that for the computer to make something happen, it needs to follow clear instructions.
2	2.1	Coding	2	Collision Detection	To create a program using a given design. To understand the collision detection event.	Children can plan an algorithm that includes collision detection. Children can create a program using collision detection. Children read blocks of code and predict what will happen when it is run.
2	2.1	Coding	3	Using a Timer	To understand that algorithms follow a sequence. To design an algorithm that follows a timed sequence.	Children can create a program that uses a timer-after command. Children can explain what the timer-after command does in their program. Children can predict what will happen in a program that includes a timer-after command.
2	2.1	Coding	4	Different Object Types	To understand that different objects have different properties. To understand what different events do in code.	Children can create a computer program that includes different objects types. Children can modify the properties of an object. Children can use different events in their program to make objects move.
2	2.1	Coding	5	Buttons	To create a program using a given design. To understand the function of buttons in a program.	Children can create a computer program that includes a button object. Children can explain what a button does in their program. Children can modify the properties of a button to fit their program design.
2	2.1	Coding	6	'Smelly Code' Debugging	To know what debugging means. To understand the need to test and debug a program repeatedly. To debug simple programs.	Children can explain what debug (debugging) means. Children can use a design document to start debugging a program. Children can debug simple programs.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
2	2.2	Online Safety	1	Searching and Sharing	To know how to refine searches using the Search tool. To know how to share work electronically using the display boards. To use digital technology to share work on Purple Mash to communicate and connect with others locally. To have some knowledge and understanding about sharing more globally on the Internet.	Children can use the search facility to refine searches on Purple Mash by year group and subject. Children can share the work they have created to a display board. Children understand that the teacher approves work before it is displayed. Children are beginning to understand how things can be shared electronically for others to see both on Purple Mash and the Internet.
2	2.2	Online Safety	2	Email using 2Respond	To introduce Email as a communication tool using 2Respond simulations. To understand how we talk to others when they are not there in front of us. To open and send simple online communications in the form of email.	Children know that Email is a form of digital communication. Children understand how 2Repond can teach them how to use email. Children can open and send an email to a 2Respond character. Children have discussed their own experiences and understanding of what email is used for. Children have discussed what makes us feel happy and what makes us feel sad.
2	2.2	Online Safety	3	Digital Footprint	To understand that information put online leaves a digital footprint or trail. To begin to think critically about the information they leave online. To identify the steps that can be taken to keep personal data and hardware secure	Children can explain what a digital footprint is. Children can give examples of things that they would not want to be in their digital footprint.
2	2.3	Spreadsheets	1	Introduction to Spreadsheets	To understand what a spreadsheet is used for. To understand what a spreadsheet looks like. To be able to navigate around a spreadsheet and enter data. To learn new vocabulary related to spreadsheets.	Children can navigate around a spreadsheet. Children can enter data into cells. Children can explain what rows and columns are.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
2	2.3	Spreadsheets	2	Adding Images to a Spreadsheet	To add different types of images to a spreadsheet. To use image as calculation aids. To use the 'move cell' tool to make images draggable.	Children can use the menu buttons to add different types of images. Children can use the apparatus images to solve maths questions. Children can use the 'move cell' tool so that images can be dragged around the spreadsheet.
2	2.3	Spreadsheets	3	Exploring images and values	To use clipart images in a spreadsheet. To assign values to images. To use assigned values in calculations.	Children can use the clipart gallery to add images to a spreadsheet. Children can give images a value. Children can make use of the assigned values in calculations.
2	2.3	Spreadsheets	4	Totalling tools	To use 2Calculate totalling tools. To use 2Calculate to solve a simple puzzle.	Children can use tools in a spreadsheet to automatically total rows and columns. Children can use a spreadsheet to solve a mathematical puzzle.
2	2.3	Spreadsheets	5	Using the 'Speak' and 'Count' Tools to Count Items	To use the 'speak' and 'count' tools in 2Calculate to count items.	Children can use the count tool to count items. Children can use the speak tool so that the items are counted out loud
2	2.3	Spreadsheets	6	Creating a table and block graph	To add and edit data in a table layout. To find out how spreadsheet programs can automatically create graphs from data.	Children can create a table of data on a spreadsheet. Children can use a spreadsheet program to automatically create charts and graphs from data.
2	2.4	Questioning	1	Using and Creating Pictograms	To show that the information provided on pictograms is of limited use beyond answering simple questions	Children understand that the information on pictograms cannot be used to answer more complicated questions.
2	2.4	Questioning	2	Asking Yes / No Questions	To use yes/no questions to separate information	Children have used a range of yes/no questions to separate different items.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
2	2.4	Questioning	3	Binary Trees	To construct a binary tree to separate different items.	Children understand what is meant by a binary tree. Children have designed a binary tree to sort pictures of children or animals.
2	2.4	Questioning	4	Using 2Question	Use 2Question (a binary tree) to answer questions	Children understand that answers are limited to 'yes' and 'no' in a binary tree. Children understand that the user cannot use 2Question to answer more complicated questions. Children have matched the 2Simple item pictures to names, using a binary tree.
2	2.4	Questioning	5	Using 2Investigate: a Non-Binary Database	To use a database to answer more complex search questions. To use the Search tool to find information.	Children understand what is meant by a database. Children have used a database to answer simple and more complex search questions.
2	2.5	Effective Searching	1	Understanding the Internet and Searching	To understand the terminology associated with the Internet and searching.	Children can recall the meaning of key Internet and searching terms. Children have successfully completed a quiz about the Internet.
2	2.5	Effective Searching	2	Searching the Internet	To gain a better understanding of searching the Internet.	Children can identify the basic parts of a web search engine search page. Children learnt to read a web search results page. Children can search the Internet for answers to a quiz.
2	2.5	Effective Searching	3	Sharing Knowledge of the Internet and Effective Searching	To create a leaflet to help someone search for information on the Internet.	Children have created a leaflet to consolidate knowledge of effective Internet searching.
2	2.6	Creating Pictures	1	Introduction and Impressionism	To explore 2Paint A Picture. To look at the work of Impressionist artists and recreate them using the Impressionism template.	Children can describe the main features of impressionist art. Children can use 2Paint A Picture to create their own art based upon this style.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
2	2.6	Creating Pictures	2	Pointillist Art	To look at the work of pointillist artists such as Seurat. To recreate pointillist art using the Pointillism template.	Children can explain what pointillism is. Children can use 2Paint a Picture to create art based upon this style.
2	2.6	Creating Pictures	3	Piet Mondrian	To look at the work of Piet Mondrian and recreate it using the Lines template.	Children can describe the main features of Piet Mondrian's work. Children can use 2Paint a Picture to art based upon his style.
2	2.6	Creating Pictures	4	William Morris and Pattern	To look at the work of William Morris and recreate it using the Patterns template.	Children can describe the main features of art that uses repeating patterns. Children can use 2Paint a Picture to create art by repeating patterns in a variety of ways. Children can combine more than one effect in 2Paint a Picture to enhance patterns.
2	2.6	Creating Pictures	5	Surrealism and eCollage	To look at some surrealist art and create your own using the eCollage function in 2Paint A Picture.	Children can describe surrealist art. Children can use the eCollage function in 2Paint a Picture to create surrealist art using drawing and clipart.
2	2.7	Making Music	1	Introducing 2Sequence	To be introduced to making music digitally using 2Sequence. To explore, edit and combine sounds using 2Sequence.	Children understand what 2Sequence is and how it works. Children have used the different sounds within 2Sequence to create a tune. Children have explored how to speed up and slow down tunes. Children understand what happens to the tune when sounds are moved.
2	2.7	Making Music	2	Making Music	To add sounds to a tune to improve it. To think about how music can be used to express feelings and create tunes which depict feelings.	Children have added sounds to a tune to change it. Children have considered how music can be used to express feelings. Children can change the volume of the background sounds. Children have created two tunes which depict two feelings.
2	2.7	Making Music	3	Soundtracks	To upload a sound from a bank of sounds into the Sounds section. To record their own sound and upload it into the Sounds section. To create their own	Children have uploaded and used their own sound chosen from a bank of sounds. Children have created, uploaded and used their own recorded sound. Children have created their own

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
					tune using the sounds which they have added to the Sounds section.	tune using some of the chosen sounds.
2	2.8	Presenting Ideas	1	Presenting a Story Three Ways	To explore how a story can be presented in different ways.	Children have examined a traditional tale presented as a mind map, as a quiz, as an e-book and as a fact file. Children know that digital content can be represented in many forms.
2	2.8	Presenting Ideas	2	Presenting Ideas as a Quiz	To make a quiz about a story or class topic.	Children have made a quiz using 2Quiz. Children can talk about their work and make improvements based on feedback received.
2	2.8	Presenting Ideas	3	Making a Non-Fiction Fact File	To make a fact file on a non-fiction topic.	Children have extracted information from a 2Connect file to make a publisher fact file on a non-fiction topic. Children have added appropriate clipart. Children have added an appropriate photo. Children know that data can be structured in tables to make it useful.
2	2.8	Presenting Ideas	4	Making a Presentation	To make a presentation to the class.	Children can use a variety of software to manipulate and present digital content and information. Children can collect, organise and present data and information in digital content. Children can create digital content to achieve a given goal by combining software packages.

Year 3

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
3	3.1	Coding	1	Using Flowcharts	To review previous coding knowledge. To understand what a flowchart is and how flowcharts are used in computer programming.	Children can read and explain a flowchart Children can use a flowchart to create a computer program. Children can create a computer program that uses click events and timers.
3	3.1	Coding	2	Using Timers	To understand that there are different types of timers. To be able to select the right type of timer for a purpose.	Children can create a program that uses a timer-after command. Children can create a program that uses a timer-every command. Children understand there can be different ways to solve a problem.
3	3.1	Coding	3	Using Repeat	To understand how to use the repeat command.	Children understand how the turtle object moves. Children can use the repeat command with an object. Children can create a computer program that includes use of the repeat command.
3	3.1	Coding	4	Code, Test and Debug	To use coding knowledge to create a range of programs. To understand the importance of nesting.	Children can create computer programs using prior knowledge. Children can run, test and debug their programs. Children can consider nesting when debugging their programs.
3	3.1	Coding	5	Design and Make an Interactive Scene	To design and create an interactive scene.	Children can use the properties table to set the properties of objects. Children can plan their scene and code before they create their program. Children can confidently make several different things happen in a program.
3	3.1	Coding	6	Design and Make an Interactive Scene	To design and create an interactive scene.	Children can use the properties table to set the properties of objects. Children can plan their scene and code before they create their program. Children can confidently make several different things happen in a program.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
3	3.2	Online Safety	1	Safety in Numbers	To know what makes a safe password, how to keep passwords safe and the consequences of giving your passwords away. To understand how the Internet can be used to help us to communicate effectively. To understand how a blog can be used to help us communicate with a wider audience.	Children understand what makes a good password for use on the Internet. Children are beginning to realise the outcomes of not keeping passwords safe. Children can contribute to a concept map of all the different ways they know that the Internet can help us to communicate. Children have contributed to a class blog with clear and appropriate messages. Extension: Children understand that passwords help to limit who can see personal / private / confidential information.
3	3.2	Online Safety	2	Fact or Fiction?	To consider if what can be read on websites is always true. To look at a 'spoof' website. To create a 'spoof' webpage. To think about why these sites might exist and how to check that the information is accurate.	Children understand that some information held on websites may not be accurate or true. Children are beginning to understand how to search the Internet and how to think critically about the results that are returned. Children have accessed and assessed a 'spoof' website. Children have created their own 'spoof' webpage mock-up. Children have shared their 'spoof' web page on a class display board. Extension: Children evaluate facts from a website and explain how they fact checked the information that was presented.
3	3.2	Online Safety	3	Appropriate Content & Ratings	To learn about the meaning of age restrictions symbols on digital media and devices. To discuss why PEGI restrictions exist. To know where to turn for help if they see inappropriate content or have inappropriate contact from others.	Children can identify some physical and emotional effects of playing/watching inappropriate content/games. Children relate cyberbullying to bullying in the real-world and have strategies for dealing with online bullying including screenshot and reporting.
3	3.3	Spreadsheets	1	Creating Pie Charts and Bar Graphs	To add and edit data in a table layout. To find out how spreadsheet programs can automatically create graphs from data.	Children can create a table of data on a spreadsheet. Children can use a spreadsheet program to automatically create charts and graphs from data.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
3	3.3	Spreadsheets	2	Advanced Mode and Cell Addresses	To introduce the Advanced mode of 2Calculate. To learn about describing cells using their addresses.	Children can describe a cell location in a spreadsheet using the notation of a letter for the column followed by a number for the row. Children can find specified locations in a spreadsheet.
3	3.3	Spreadsheets	3	The formula bar	To learn about the formula wizard in 2Calculate Advanced mode. To learn about the formula bar in 2Calculate Advanced mode. To use formulae to complete calculations.	Children can follow the steps of the formula wizard to perform calculations. Children can enter formulae into the formulae bar. Children can create formulae to complete calculations.
3	3.3	Spreadsheets	4	Using and combining tools in 2Calculate	To explore how tools can be combined to use 2Calculate to make number games. To explore the use of the timer, random number and spin button tools.	Children can use the timer, random number and spin button tools. Children can combine tools to make fun ways to explore number.
3	3.3	Spreadsheets	5	Line Graphs	To use the line graphing tool in 2Calculate with appropriate data. To interpret a line graph to estimate values between data readings.	Children can use a series of data in a spreadsheet to create a line graph. Children can use a line graph to find out when the temperature in the playground will reach 20°C.
3	3.3	Spreadsheets	6	Using a Spreadsheet for Budgeting	To use the range notation in 2Calculate. To use 2Calculate to create a model of a real-life situation. To create a spreadsheet file with more than one sheet.	Children can describe a group of cells using range notation. Children can use a spreadsheet to plan a party budget Children can add multiple sheets to a spreadsheet file.
3	3.4	Touch Typing	1	Home, Top and Bottom Row Keys	To introduce typing terminology. To understand the correct way to sit at the keyboard. To learn how to use the home, top and bottom row keys.	Children understand the names of the fingers. Children understand what is meant by the home, bottom, and top rows. Children have developed the ability to touch type the home, bottom, and top rows.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
3	3.4	Touch Typing	2	Home, Top and Bottom Row Keys (Consolidation)	To practice and improve typing for home, bottom, and top rows.	Children can use two hands to type the letters on the keyboard.
3	3.4	Touch Typing	3	Left Keys	To practice the keys typed with the left hand.	Children can touch type using the left hand.
3	3.4	Touch Typing	4	Right Keys	To practice the keys typed with the right hand.	Children can touch type using the right hand.
3	3.5	Email	1	Communication	To think about the different methods of communication.	Children can list a range of different ways to communicate. Children can use 2Connect to highlight the strengths and weaknesses of each method. Extension: Children can order the various types of communication that have been used through history.
3	3.5	Email	2	Composing Emails	To open and respond to an email. To write an email to someone from an address book.	Children can open an email and respond to it. Children have sent emails to other children in the class. Extension: Children can use the search option in the address book to find a classmate when sending an email.
3	3.5	Email	3	Using Email Safely: Part 1	To learn how to use email safely.	Children have written rules about how to stay safe using email. Children have contributed to classmates' rules. Extension: Children understand the importance of draft.
3	3.5	Email	4	Using Email Safely: Part 2	To learn how to use email safely.	Children have created a quiz about email safety which explores scenarios that they could come across in the future. Extension: Children create title screens for their quizzes explaining what the quiz is about, and how to play it.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
3	3.5	Email	5	Attachments	To add an attachment to an email.	Children can attach work to an email. Children know what CC means and how to use it.
3	3.5	Email	6	Email Simulations	To explore a simulated email scenario.	Children can read and respond to a series of email communications. Children can attach files appropriately and use email communication to explore ideas. Extension: Children know why the terms CC and BCC are used Children understand when to use CC or BCC
3	3.6	Branching Databases	1	Introducing Databases	To sort objects using just YES/NO questions.	Children understand how YES/NO questions are structured and answered. Children have used YES/NO questioning to play a simple game with a friend. Children can explain why they choose a particular question to split their database. Extension: Children can begin to use 'or more' and 'or less' in their questioning
3	3.6	Branching Databases	2	Branching Databases	To complete a branching database using 2Question.	Children have contributed to a class branching database about fruit. Children have completed a branching database about vegetables. Extension: Children can edit and adapt a branching database to accommodate new entries.
3	3.6	Branching Databases	3	Creating a Branching Database on the Computer	To create a branching database of the children's choice.	Children can choose a suitable topic for a branching database. Children can select and save appropriate images. Children can create a branching database. Children know how to use and debug their own and others branching databases.
3	3.6	Branching Databases	4	Creating a Branching Database on the Computer	To create a branching database of the children's choice.	Children can choose a suitable topic for a branching database. Children can select and save appropriate images. Children can create a branching database. Children know how to use and

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
						debug their own and others branching databases.
3	3.7	Simulations	1	What Are Simulations?	To find out what a simulation is and understand the purpose of simulations.	• Children know that a computer simulation can represent real and imaginary situations. • Children can give some examples of simulations used for fun and for work. • Children can give suggestions of advantages and problems of simulations.
3	3.7	Simulations	2	Exploring a Simulation	To explore a simulation, making choices and discussing their effects.	• Children can explore a simulation. • Children can use a simulation to try out different options and to test predictions. • Children can begin to evaluate simulations by comparing them with real situations and considering their usefulness. • Children can analyse choices made using a branching database.
3	3.7	Simulations	3	Analysing and Evaluating a Simulation	To work through and evaluate a more complex simulation.	• Children can recognise patterns within simulations and make and test predictions. • Children can identify the relationships and rules on which the simulations are based. • Children can evaluate a simulation to determine its usefulness for purpose. • Children can create their own simple simulation (extension).
3	3.8	Graphing	1	Introducing 2Graph	• To enter data into a graph and answer questions.	• Children can set up a graph with a given number of fields. • Children can enter data for a graph. • Children can produce and share graphs made on the computer. • Extension: Children can select most appropriate style of graph for their data and explain their reasoning.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
3	3.8	Graphing	2	Using 2Graph in an investigation	• To investigate in order to answer a question. • To present the results in graphic form.	• Children have solved a maths question using graphing. • Children can present the results in a range of graphical formats. • Children can use the sorting option to make analysis of their data easier. • Extension: Children can select most appropriate style of graph for their data and explain their reasoning.
3	3.9	Presenting (MS PowerPoint - Desktop version)	1	Making a Presentation from a Blank Page	• To create a page in a presentation.	• Children know what PowerPoint is. • Children can open PowerPoint. • Children can add text to a page and format it.
3	3.9	Presenting (MS PowerPoint - Desktop version)	2	Adding Media	• To add media to a presentation	• Children can change the design of the slides. • Children can insert a new slide. • Children can insert pictures. • Children can edit pictures. • Children can insert video and audio (extension).
3	3.9	Presenting (MS PowerPoint - Desktop version)	3	Adding Animation	• To add animations into a presentation	• Children can use animations in a presentation. • Children can use transitions in a presentation.
3	3.9	Presenting (MS PowerPoint - Desktop version)	4	Presenting with Timings	• To add timings into a presentation.	• Children can add timings to a presentation. • Children can present effectively using PowerPoint.
3	3.9	Presenting (MS PowerPoint - Desktop version)	5	Create a Presentation	• To use the skills learnt in previous weeks to design and present an effective presentation.	• Children can create a presentation including formatted text. • Children can include different media. • Children can add transitions and animations. • Children can add timings to the presentation. • Children can present effectively.

Year 4

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
4	4.1	Coding	1	Design, Code, Test and Debug	• To review coding vocabulary and knowledge. • To create a simple computer program.	• Children can explore different object types in 2Code. • Children can use a background and objects to create a scene. • Children can plan an algorithm for their scene and use 2Code to program it.
4	4.1	Coding	2	IF Statements	• To begin to understand selection in computer programming. • To understand how an IF statement works.	• Children can create a program that includes an IF statement. • Children can interpret a flowchart that depicts an IF statement.
4	4.1	Coding	3	Co-ordinates	• To understand how to use co-ordinates in computer programming. • To understand how an IF statement works.	• Children can make use of the X and Y properties of objects in their coding. • Children can create a program that includes an IF statement.
4	4.1	Coding	4	Repeat Until and IF/ELSE Statements	• To understand the Repeat until command. • To begin to understand selection in computer programming. • To understand how an IF/ELSE statement works.	• Children can read code that includes repeat until and IF/ ELSE and explain how it works. • Children can create a program that includes an IF/ ELSE statement. • Children can interpret a flowchart that depicts an IF/ ELSE statement
4	4.1	Coding	5	Number Variables	• To understand what a variable is in programming. • To use a number variable.	• Children can explain what a variable is in programming. • Children can create and use variables when programming.
4	4.1	Coding	6	Making a Playable Game	• To review vocabulary and concepts learnt in Year 4 Coding. • To create a playable game.	• Children can read code that includes repeat until and IF/ ELSE and explain how it works. • Children can create a program that includes and IF/ ELSE statement. • Children can interpret a flowchart that depicts an IF/ ELSE statement.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
4	4.2	Online Safety	1	Going Phishing	• To understand how children can protect themselves from online identity theft. • To understand that information put online leaves a digital footprint or trail and that this can aid identity theft.	• Children know that security symbols such as a padlock protect their identity online. • Children know the meaning of the term 'phishing' and are aware of the existence of scam websites. • Children can explain what a digital footprint is and how it relates to identity theft. • Children can give examples of things that they would not want to be in their digital footprint.
4	4.2	Online Safety	2	Beware Malware	• To identify the risks and benefits of installing software including apps.	• Children can identify possible risks of installing free and paid for software. • Children know that malware is software that is specifically designed to disrupt, damage, or gain access to a computer. • Children know what a computer virus is.
4	4.2	Online Safety	3	Plagiarism	• To understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism. • To identify appropriate behaviour when participating or contributing to collaborative online projects for learning.	• Children can determine whether activities that they undertake online, infringe another's' copyright. They know the difference between researching and using information and copying it • Children know about citing sources that they have used.
4	4.2	Online Safety	4	Healthy Screen-Time	• To identify the positive and negative influences of technology on health and the environment. • To understand the importance of balancing game and screen time with other parts of their lives.	• Children can take more informed ownership of the way that they choose to use their free time. They recognise a need to find a balance between being active and digital activities. • Children can give reasons for limiting screen time.
4	4.4	Writing for Different Audiences	1	Font Styles	• To explore how font size and style can affect the impact of a text.	• Children can look at and discussed a variety of written material where the font size and type are tailored to the purpose of the text. • Children can use text formatting to make a piece of writing fit for its audience and purpose.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
4	4.4	Writing for Different Audiences	2	Using a Simulated Scenario to Produce a News Report	• To use a simulated scenario to produce a news report.	• Children can role-played the job of a journalist in a newsroom. • Children can interpret a variety of incoming communications and use these to build up the details of a story. • Children can use the incoming information to write their own newspaper report.
4	4.4	Writing for Different Audiences	3	Using a Simulated Scenario to Produce a News Report	• To use a simulated scenario to produce a news report.	• Children can role-played the job of a journalist in a newsroom. • Children can interpret a variety of incoming communications and use these to build up the details of a story. • Children can use the incoming information to write their own newspaper report.
4	4.4	Writing for Different Audiences	4	Writing for a Campaign	• To use a simulated scenario to write for a community campaign.	• Children can use 2Connect to mind-map ideas for a community campaign. • Children can use these ideas to write a persuasive letter or poster as part of the campaign. • Children can assess their texts using criteria to judge their suitability for the intended audience.
4	4.4	Writing for Different Audiences	5	Writing for a Campaign	• To use a simulated scenario to write for a community campaign.	• Children can use 2Connect to mind-map ideas for a community campaign. • Children can use these ideas to write a persuasive letter or poster as part of the campaign. • Children can assess their texts using criteria to judge their suitability for the intended audience.
4	4.5	Logo	1	Introduction to 2Logo	• To learn the structure of the language of 2Logo. • To input simple instructions in 2Logo	• Children know what the common instructions are in 2Logo and how to type them. • Children can follow simple 2Logo instructions to create shapes on paper. • Children can follow simple instructions to create shapes in 2Logo.
4	4.5	Logo	2	Creating Letters using Logo	• To use 2Logo to create letter shapes.	• Children can create 2Logo instructions to draw patterns of increasing complexity. • Children understand the pu and pd commands. • Children can write 2Logo

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
						instructions for a word of four letters.
4	4.5	Logo	3	Using the 'Repeat' Command in 2Logo	• To use the Repeat command in 2Logo to create shapes.	• Children can follow 2Logo code to predict the outcome. • Children can create shapes using the Repeat function. • Children can find the most efficient way to draw shapes.
4	4.5	Logo	4	Using Procedures	• To use and build procedures in 2Logo.	• Children can use the Procedure feature. • Children can create 'flowers' or 'crystals' using 2Logo.
4	4.6	Animation	1	Animating an Object	• To decide what makes a good, animated film or cartoon and discuss favourite animations. • To learn how animations are created by hand. • To find out how 2Animate animations can be created in a similar way using technology.	• To decide what makes a good, animated film or cartoon and discuss favourite animations. • To learn how animations are created by hand. • To find out how 2Animate animations can be created in a similar way using technology.
4	4.6	Animation	2	2Animate Tools	• To learn about onion skinning in animation. • To add backgrounds and sounds to animations.	• Children know what the Onion Skin tool does in animation. • Children can use the Onion Skin tool to create an animated image. • Children can use backgrounds and sounds to make more complex and imaginative animations.
4	4.6	Animation	3	Stop Motion Animation	• Introducing 'stop motion' animation. • To share animation the class blog.	• Children know what 'stop motion' animation is and how it is created. • Children have used some of the ideas from existing 'stop motion' films to recreate their own animation. • Children have shared their animations and commented on each other's work using blogs in Purple Mash.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
4	4.7	Effective Searching	1	Using a Search Engine	• To locate information on the search results page.	• Children can structure search queries to locate specific information.
4	4.7	Effective Searching	2	Use Search Effectively to Answer Questions	• To use search effectively to find out information.	• Children have used search to answer a series of questions. • Children have written search questions for a friend to solve.
4	4.7	Effective Searching	3	Reliable Information Sources	• To assess whether an information source is true and reliable.	• Children can analyse the contents of a web page for clues about the credibility of the information.
4	4.8	Hardware Investigators	1	Hardware	• To understand the different parts that make up a desktop computer.	• Children can name the different parts of a desktop computer. • Children know what the function of the different parts of the computer is.
4	4.8	Hardware Investigators	2	Parts of a Computer	• To recall the different parts that make up a computer.	• Children have created a leaflet to show the function of computer parts.
4	4.9	Making Music	1	Understanding Music	• To identify and discuss the main elements of music: Pulse, Rhythm, Tempo, Pitch, Texture	• Children can use appropriate musical language to discuss a piece of music. • Children can identify sounds in a piece of music. • Children can explain how a piece of music makes them feel.
4	4.9	Making Music	2	Rhythm and Tempo	• To understand and experiment with rhythm and tempo.	• Children can identify and recall a simple rhythm. • Children can explain what tempo is and how changing it can change the mood of a piece of music. • Children can create their own simple rhythm using Busy Beats.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
4	4.9	Making Music	3	Melody and Pitch	• To create a melodic phrase.	• Children can show an understanding of melody. • Children can create a simple melodic pattern using 2Sequence and Busy Beats. • Children can use a variety of notes, experimenting with pitch.
4	4.9	Making Music	4	Creating Music	• To compose a piece of electronic music.	• Children can explore and understand how music is created. • Children can experiment with pitch, rhythm and melody to create a piece of electronic house music on Busy Beats.
4	4.1O	Artificial Intelligence	1	What is Artificial Intelligence?	•To understand the basic concept of artificial intelligence. •To identify real-life examples of artificial intelligence. •To recognise the impact of artificial intelligence in daily life.	•Children can define artificial intelligence in their own words. •Children can identify at least three examples of artificial intelligence.
4	4.1O	Artificial Intelligence	2	How Artificial Intelligence can help us	•To recap what is meant by the terminology artificial intelligence. •To explore how artificial intelligence can assist and benefit us in various aspects of daily life.	•Children can define artificial intelligence. •Children can understand where AI can help us in our daily lives.
4	4.1O	Artificial Intelligence	3	The future of Artificial Intelligence	•To understand the potential applications and impact of AI in the future. •To encourage critical thinking and creativity when thinking about the future of AI.	•Children can use critical thinking and creativity in envisioning the future of AI. •Children can express their ideas about the future of AI in a creative manner. •Children can collaborate effectively in paired activities.
4	4.1O	Artificial Intelligence	4	Artificial Intelligence in action	•To understand how artificial intelligence is being used to create music and art. •To use artificial intelligence to create music and art.	•Children can try and establish which creative compositions are done by humans and which are done by artificial intelligence. •Children can use artificial intelligence to create images and music.

Year 5

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
5	5.1	Coding	1	Coding Efficiently	• To review existing coding knowledge. • To be able to simplify code. • To create a playable game.	• Children can use simplified code to make their programming more efficient. • Children can use variables in their code. • Children can create a simple playable game.
5	5.1	Coding	2	Simulating a Physical System	• To understand what a simulation is. • To program a simulation using 2Code.	• Children can plan an algorithm modelling the sequence of traffic lights. • Children can select the right images to reflect the simulation they are making. • Children can use their plan to program the simulation to work in 2Code.
5	5.1	Coding	3	Decomposition and Abstraction	• To know what decomposition and abstraction are in Computer Science. • To take a real-life situation, decompose it and think about the level of abstraction. • To use decomposition to make a plan of a real-life situation.	• Children can make good attempts to break down their task into smaller achievable steps. • Children recognise the need to start coding at a basic level of abstraction to remove superfluous details from their program that do not contribute to the aim of the task.
5	5.1	Coding	4	Friction and Functions	• To understand how to use friction in code. • To begin to understand what a function is and how functions work in code.	• Children can create a program which represents a physical system. • Children can create and use functions in their code to make their programming more efficient.
5	5.1	Coding	5	Introducing Strings	• To understand what the different variable types are and how they are used differently. • To understand how to create a string.	• Children can create and use strings in programming. • Children can set/change variable values appropriately. • Children know some ways that text variables can be used in coding.
5	5.1	Coding	6	Text Variables and Concatenation	• To begin to explore text variables when coding. • To understand what concatenation is and how it works.	• Children can create a string and use it in their program. • Children can use strings to produce a range of outputs in their program.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
5	5.2	Online Safety	1	Responsibilities and Support when Online	• To gain a greater understanding of the impact that sharing digital content can have. • To review sources of support when using technology. • To review children' responsibility to one another in their online behaviour.	• Children think critically about the information that they share online, both about themselves and others. • Children know who to tell if they are upset by something that happens online. • Children can use the SMART rules as a source of guidance when online.
5	5.2	Online Safety	2	Protecting Privacy	• To know how to maintain secure passwords. • To understand the advantages, disadvantages, permissions, and purposes of altering an image digitally and the reasons for this. • To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online.	• Children think critically about what they share online, even when asked by a usually reliable person to share something. • Children have clear ideas about good passwords. • Children can see how they can use images and digital technology to create effects not possible without technology. • Children have experienced how image manipulation could be used to upset them or others even using simple, freely available tools and little specialist knowledge.
5	5.2	Online Safety	3	Citing Sources	• To learn about how to reference sources in their work. • To search the Internet with a consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information.	• Children can cite all sources when researching and explain the importance of this. • Children select keywords and search techniques to find relevant information and increase reliability.
5	5.2	Online Safety	4	Reliability	• Ensuring reliability through using different methods of communication.	• Children show an understanding of the advantages and disadvantages of different forms of communication and when it is appropriate to use each.
5	5.3	Spreads heets	1	Conversions of Measurements	To use formulae within a spreadsheet to convert measurements of length and distance.	Children can create a formula in a spreadsheet to convert m to cm. Children can apply this to creating a spreadsheet that converts miles to km and vice versa.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
5	5.3	Spreadsheets	2	Using Formulae	To use a spreadsheet to model a real-life problem. To use formulae to calculate area and perimeter of shapes.	Children can use a spreadsheet to work out the area and perimeter of rectangles. Children can use these calculations to solve a real-life problem.
5	5.3	Spreadsheets	3	Exploring Probability	To use a spreadsheet to investigate the probability of the results of throwing many dice.	Children can create a spreadsheet to answer a mathematical question relating to probability. Children can take copy and paste shortcuts. Children can problem solve using the count tool.
5	5.3	Spreadsheets	4	Computational Modelling	To use spreadsheets to model real-life situations. To use the created spreadsheet to make decisions about these situations.	Children can use spreadsheets to model real-life situations and produce solutions that can be practically applied.
5	5.3	Spreadsheets	5	Computational Modelling	To use spreadsheets to model real-life situations. To use the created spreadsheet to make decisions about these situations.	Children can use spreadsheets to model real-life situations and produce solutions that can be practically applied.
5	5.3	Spreadsheets	6	Testing a hypothesis	To use the count tool to answer hypotheses about common letters in use.	Children can use a spreadsheet to work out which letters appear most often. Children can use the count tool.
5	5.4	Databases	1	Searching a Database	To learn how to search for information in a database.	• Children understand the different ways to search a database. • Children can search a database to answer questions correctly.
5	5.4	Databases	2	Creating a Class Database	• To contribute to a class database.	• Children can design an avatar for a class database. • Children can successfully enter information into a class database.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
5	5.4	Databases	3	Creating a Topic Database	To create a database around a chosen topic.	• Children can create their own database on a chosen topic. • Children can add records to their database. • Children know what a database field is and can correctly add field information. • Children understand how to word questions so that they can be effectively answered using a search of their database.
5	5.4	Databases	4	Creating a Topic Database	To create a database around a chosen topic.	• Children can create their own database on a chosen topic. • Children can add records to their database. • Children know what a database field is and can correctly add field information. • Children understand how to word questions so that they can be effectively answered using a search of their database.
5	5.5	Game Creator	1	Setting the scene.	• To Introduce the 2DIY 3D tool. • To begin planning a game.	• Children can review and analyse a computer game. • Children can describe some of the elements that make a successful game. • Children can begin the process of designing their own game.
5	5.5	Game Creator	2	Creating the Game Environment	• To design the game environment.	• Children can design the setting for their game so that it fits with the selected theme. • Children can upload images or use the drawing tools to create the walls, floor, and roof.
5	5.5	Game Creator	3	The Game Quest	• To design the game quest to make it a playable game.	• Children can design characters for their game. • Children can decide upon, and change, the animations and sounds that the characters make.
5	5.5	Game Creator	4	Finishing and Sharing	• To finish and share the game.	• Children can make their game more unique by selecting the appropriate options to maximise the playability. • Children can write informative instructions for their game so that other people can play it.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
5	5.5	Game Creator	5	Evaluation	• To self- and peer-evaluate.	• Children can evaluate my their own and peers' games to help improve their design for the future.
5	5.6	3D Modelling	1	Introducing 2Design and Make	• To be introduced to the 2Design and Make tool.	• Children know what the 2Design and Make tool is for. • Children can explore the different viewpoints in 2Design and Make whilst designing a building.
5	5.6	3D Modelling	2	Moving Points	• To explore the effect of moving points when designing.	• Children can adapt one of the vehicle models by moving the points to alter the shape of the vehicle while still maintaining its form.
5	5.6	3D Modelling	3	Designing for a Purpose	• To design a 3D model to fit certain criteria.	• Children can explore how to edit the polygon 3D models to design a 3D model for a purpose.
5	5.6	3D Modelling	4	Printing and Making	• To refine and print a model.	• Children can refine one of their designs to prepare it for printing. • Children can print their design as a 2D net and then created a 3D model. • Children can explore the possibilities of 3D printing.
5	5.7	Concept Maps	1	Introduction to Concept Mapping	• To understand the need for visual representation when generating and discussing complex ideas. • To understand the uses of a 'concept map'.	• Children can make connections between thoughts and ideas. • Children can see the importance of recording concept maps visually.
5	5.7	Concept Maps	2	Using 2Connect	• To understand and use the correct vocabulary when creating a concept map. • To create a concept map.	• Children understand what is meant by 'concept maps', 'stage', 'nodes' and 'connections.' • Children can create a basic concept map.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
5	5.7	Concept Maps	3	2Connect Story Mode	• To understand how a concept map can be used to retell stories and information.	• Children have used 2Connect Story Mode to create an informative text.
5	5.7	Concept Maps	4	Collaborative Concept Maps	• To create a collaborative concept map and present this to an audience.	• Children have used 2Connect collaboratively to create a concept map. • Children have used Presentation Mode to present their concept maps to an audience.
5	5.8	Word Processing with MS Word - Desktop and Online version	1	Making a Document from a Blank Page	To know what a word processing tool is for	Children know what a word processing tool is for. Children will be able to create a word processing document altering the look of the text and navigating around the document.
5	5.8	Word Processing with MS Word - Desktop and Online version	2	Inserting Images: Considering Copyright	To add and edit images to a word document.	Children know how to add images to a word document. Children can edit images to reduce their file size. Children know the correct way to search for images that they are permitted to reuse. Children know how to attribute the original artist of an image.
5	5.8	Word Processing with MS Word - Desktop and Online version	3	Editing Images in Word	To know how to edit images and use word wrap with images and text.	Children can edit their images within Word. Children understand wrapping of images and text.
5	5.8	Word Processing with MS Word - Desktop and Online version	4	Adding the Text	To change the look of text within a document.	Children can add appropriate text to their document, formatting in a suitable way. Children can use a style set in Word. Children can use bullet points and numbering.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
5	5.8	Word Processing with MS Word - Desktop and Online version	5	Finishing Touches	To add features to a document to enhance its look and usability.	Children can add text boxes and shapes. Children can consider paragraph formatting such as line spacing, drop capitals. Children can add hyperlinks to an external website. Children can add an automated contents page.
5	5.8	Word Processing with MS Word - Desktop and Online version	6	Presenting Information Using Tables	To use tables within MS Word to present information.	Children can add tables to present information. Children can edit properties of tables including borders, colours, merging cells, adding and removing rows and columns. Children can add word art for a heading.
5	5.8	Word Processing with MS Word - Desktop and Online version	7	Writing a Letter Using a Template	To introduce children to templates.	Children can use a Word template and edit it appropriately.
5	5.8	Word Processing with MS Word - Desktop and Online version	8	Presenting Information - Newspaper	To consider page layout including heading and columns.	Children can format a page using a combination of images, headers and columns.

Year 6

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
6	6.1	Coding	1	Designing and Making a more Complex Program	To design a playable game with a timer and a score. To plan and use selection and variables. To understand how the launch command works.	• Children can plan a program which includes a timer and a score. • Children can follow their plans to create a program. • Children can debug when things do not run as expected.
6	6.1	Coding	2	Designing and Making a more Complex Program	To design a playable game with a timer and a score. To plan and use selection and variables. To understand how the launch command works.	• Children can plan a program which includes a timer and a score. • Children can follow their plans to create a program. • Children can debug when things do not run as expected.
6	6.1	Coding	3	Using Functions	To use functions and understand why they are useful. To understand how functions are created and called.	• Children can create a program that makes use of functions. • Children can create a program that uses multiple functions with the code arranged in tabs. • Children can explain how their code executes when their program is run.
6	6.1	Coding	4	Flowcharts and Control Simulations	To use flowcharts to test and debug a program. To create a simulation of a room in which devices can be controlled.	• Children can follow flowcharts to create and debug code. • Children can create flowcharts for procedures. • Children can be creative with the way they code to generate novel visual effects.
6	6.1	Coding	5	User Input	To understand the different options of generating user input in 2Code. To understand how user input can be used in a program.	• Children can code programs that take text input from the user and use this in the program. • Children can attribute variables to user input. • Children are aware of the need to code for all possibilities when using user input.
6	6.1	Coding	6	Using Text-based Adventures	To understand how 2Code can be used to make a text-based adventure game.	• Children can follow through the code of how a text adventure can be programmed in 2Code. • Children can design their own text-based adventure game based on one they have played. • Children can adapt an existing text

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
						adventure so it reflects their own ideas.
6	6.2	Online Safety	1	Message in a Game	• To identify benefits and risks of mobile devices broadcasting the location of the user/device, e.g., apps accessing location. • To identify secure sites by looking for privacy seals of approval, e.g., https, padlock icon. • To identify the benefits and risks of giving personal information and device access to different software.	• Children have used the example game and further research to refresh their memories about risks online including sharing location, secure websites, spoof websites, phishing, and other email scams. • Children have used the example game and further research to refresh their memories about the steps they can take to protect themselves including protecting their digital footprint, where to go for help, smart rules and security software.
6	6.2	Online Safety	2	Online Behaviour	• To review the meaning of a digital footprint and understand how and why people use their information and online presence to create a virtual image of themselves as a user. • To have a clear idea of appropriate online behaviour and how this can protect themselves and others from possible online dangers, bullying and inappropriate behaviour. • To begin to understand how information online can persist and give away details of those who share or modify it.	• Children understand how what they share impacts upon themselves and upon others in the long-term. • Children know about the consequences of promoting inappropriate content online and how to put a stop to such behaviour when they experience it or witness it as a bystander. • Extension: Children' actions demonstrate that they also feel a responsibility to others when communicating and sharing content online.
6	6.2	Online Safety	3	Screen Time	• To understand the importance of balancing game and screen time with other parts of their lives, e.g., explore the reasons why they may be tempted to spend more time playing games or find it difficult to stop playing and the effect this has on their health. • To identify the positive and negative influences of	• Children can take more informed ownership of the way that they choose to use their free time. They recognise a need to find a balance between being active and digital activities. • Children can give reasons for limiting screen time. • Children can talk about the positives and negative aspects of technology and balance these opposing views.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
					technology on health and the environment.	• Extension: Children have an internalised in-depth understanding of the risks and benefits of an online presence.
6	6.4	Blogging	1	What is a Blog?	• To identify the purpose of writing a blog. • To identify the features of successful blog writing.	• Children understand how a blog can be used as an informative text. • Children understand the key features of a blog
6	6.4	Blogging	2	Planning a Blog	• To plan the theme and content for a blog.	Children can work collaboratively to plan a blog.
6	6.4	Blogging	3	Writing a Blog	• To understand how to write a blog and a blog post. • To consider the effect upon the audience of changing the visual properties of the blog. • To understand how to contribute to an existing blog.	• Children can create a blog or blog post with a specific purpose. • Children understand that the way in which information is presented has an impact upon the audience.
6	6.4	Blogging	4	Sharing Posts and Commenting	• To understand the importance of commenting on blogs. • To peer-assess blogs against the agreed success criteria. • To understand how and why blog posts and comments are approved by the teacher.	• Children can post comments and blog posts to an existing class blog. • Children understand the approval process that their posts go through and demonstrate an awareness of the issues surrounding inappropriate posts and cyberbullying. • Children can assess the effectiveness and impact of a blog. • Children understand that content included in their blog carefully considers the end user.
6	6.5	Text Adventures	1	What Is a Text Adventure? Planning a Story Adventure	• To find out what a text-based adventure game is and to explore an example made in 2Create a Story. • To use 2Connect to plan a 'Choose your own Adventure' type story.	• Children can describe what a text adventure is. • Children can map out a story-based text adventure. • Children can use 2Connect to record their ideas. • Extension: Children can turn a simple story with 2 or 3 levels of decision making into a logical design

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
6	6.5	Text Adventures	2	Making a Story-based Adventure Game	• To use 2Connect plans for a story adventure to make the adventure using 2Create a Story.	• Children can use the full functionality of 2Create a Story Adventure mode to create, test and debug using their plan. • Children can split their adventure-game design into appropriate sections to facilitate creating it.
6	6.5	Text Adventures	3	Coding Comprehension of Text Adventure Game	•To read and understand given code for a text adventure game.	•Childre can explain the features and purpose of code within a given text adventure. •Childrean are able to step through each line of code and follow the flow of execution.
6	6.5	Text Adventures	4	Debugging and Improving a Text Adventure	• To debug a text adventure. • To independently design and implement improvements to a text adventure game.	• Children can make logical attempts to debug more complex code involving a combination of functions, variables and a loop. • Children can suggest and implement ideas to further develop the program.
6	6.6	Networks	1	The World Wide Web and the Internet	• To discover what the children know about the Internet.	• Children know the difference between the World Wide Web and the internet. • Extension: Children can provide examples of the difference between the World Wide Web and the Internet.
6	6.6	Networks	2	Our School Network and Accessing the Internet	• To find out what a LAN and WAN are. • To find out how we access the internet in school.	• Children know about their school network. • Extension: Children can explain the differences between more than two network types such as: LAN, WAN, WLAN and SAN.
6	6.6	Networks	3	Research	• To research and find out about the age of the internet. • To think about what the future might hold.	• Children have researched and found out about Tim Berners-Lee. • Children have considered some of the major changes in technology which have taken place during their lifetime and the lifetime of their teacher/another adult.
6	6.7	Quizzing	1	Introducing 2DIY	• To create a picture-based quiz for young children.	• Children have used the 2DIY activities to create a picture-based quiz. • Children have considered the audience's ability level and interests when setting the quiz. • Children have shared their quiz and responded to feedback.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
6	6.7	Quizzing	2	Using 2Quiz	• To learn how to use the question types within 2Quiz.	• Children understand the different question types within 2Quiz. • Children have ideas about what sort of questions are best suited to the different question types. • Children have used 2Quiz to make and share a science quiz (or another subject). • Children have considered the audience's ability level and interests when setting the quiz. • Children have shared their quiz with peers. • Children have given and responded to feedback.
6	6.7	Quizzing	4	Exploring Grammar Quizzes	• To explore the grammar quizzes.	• Children have tried out the different types of grammar games. • Children have chosen an appropriate grammar tool to make their own grammar game(s).
6	6.7	Quizzing	5	A Database Quiz	• To make a quiz that requires the player to search a database.	• Children have used a 2Investigate quiz to answer quiz questions. • Children have designed their own quiz based on one of the 2Investigate example databases.
6	6.7	Quizzing	6	Using a survey	• To develop skills in creating surveys and questionnaires. • To use a survey to gain information rather than scores.	• Children have used questioning to gain information or understanding. • Children have interpreted survey data.
6	6.8	Understanding Binary	1	What is Binary?	Overarching Aim Examine how whole numbers are used as the basis for representing all types of data in digital systems through: • To examine how whole numbers are used as the basis for representing all types of data in digital systems. • To recognise that digital systems represent all types of data using number codes that ultimately are patterns of 1s and 0s (called binary digits, which is why they are	Overacrching Criteria Children understand binary as a number system and its purpose and application in computing. • Children can explain how all data in a computer is saved in the computer memory in a binary format. • Children can explain that binary uses only the integers 0 and 1. • Children can relate 0 to an 'off' switch and 1 to and 'on' switch.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
					called digital systems). • To understand that binary represents numbers using 1s and 0s and these represent the on and off electrical states respectively in hardware and robotics.	
6	6.8	Understanding Binary	2	Counting in Binary	Overarching Aim Examine how whole numbers are used as the basis for representing all types of data in digital systems through:	Overacrching Criteria Children understand binary as a number system and its purpose and application in computing. • Children can count up from 0 in binary using visual aids if needed. • Children can relate bits to computer storage.
6	6.8	Understanding Binary	3	Converting from Decimal to Binary	Overarching Aim Examine how whole numbers are used as the basis for representing all types of data in digital systems through: • To examine how whole numbers are used as the basis for representing all types of data in digital systems. • To recognise that the numbers 0, 1, 2 and 3 could be represented by the patterns of two binary digits of 00, 01, 10 and 11 • To represent whole numbers in binary, for example counting in binary from zero to 15, or writing a friend's age in binary.	Overacrching Criteria Children understand binary as a number system and its purpose and application in computing. • Children can convert numbers to binary using the division by two method. • Children can check their own answers using the converter tool.
6	6.8	Understanding Binary	4	Game States	Overarching Aim Examine how whole numbers are used as the basis for representing all types of data in digital systems through: • To examine how whole numbers are used as the basis for representing all types of data in digital systems. • To represent the state of an object in a game as active or inactive using the respective binary values of 1 or 0.	Overacrching Criteria Children understand binary as a number system and its purpose and application in computing. • Children can make use of a variable set to 0 or 1 to control game states.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
6	6.9	Spreadsheets with MS Excel	1	What is a Spreadsheet?	• To know what a spreadsheet looks like. • To navigate and enter data into cells.	• Children know some uses of a spreadsheet tool. • Children can navigate around a spreadsheet using cell references. • Children can enter data into cells. • Children understand new vocabulary relating to spreadsheets: cells, columns, rows, cell names, sheets, workbook.
6	6.9	Spreadsheets with MS Excel	2	Basic Calculations	• To introduce some basic data formulae in Excel. • To demonstrate how the use of Excel can save time and effort when performing calculations.	• Children can use a spreadsheet to carry out basic calculations including addition, subtraction, multiplication and division formulae. • Children can use the series fill function. • Children recognise how using formulae allows the data to change and the calculations to update automatically.
6	6.9	Spreadsheets with MS Excel	3	Modelling	• To use a spreadsheet to model a situation.	• Children can use a spreadsheet to model a situation. • Children can use a spreadsheet to solve a problem. • Children can use the SUM function
6	6.9	Spreadsheets with MS Excel	4	Organising Data	• To demonstrate how Excel can make complex data clear by manipulating the way it is presented.	• Children can use a variety of methods including flash fill, convert text to tables and splitting cells for organising and presenting their data in a spreadsheet. • Children know what is meant by a delimiter. • Children understand how to sort data.
6	6.9	Spreadsheets with MS Excel	5	Advanced Formulae and Big Data	• To use formulae for percentages, averages, max and min in spreadsheets.	• Children know how to incorporate formulae for percentages, averages, max and min into their spreadsheets. • Children gain familiarity with range notation in Excel. • Children know some shortcuts that help to make data meaningful. • Children begin to develop a critical eye when it comes to the conclusions that can be made from data.
6	6.9	Spreadsheets with MS Excel	6	Charts and Graphics	• To create a variety of graphs in Excel.	• Children know that there are ways to represent their data graphically and that Excel can make these calculations for them. • Children gain an understanding of how a graphical representation can make data easier to interpret.

Year	Unit Number	Unit Title	Lesson	Lesson Title	Aims	Success Criteria
						• Children make a chart using Excel recommendations. • Children illustrate their data using sparklines and data bars.
6	6.9	Spreadsheets with MS Excel	7	Using a Spreadsheet to Plan a Cake Sale	• To use a spreadsheet to model a real-life situation.	• Children can understand how a spreadsheet can be used to plan an event. • Children understand the advantages of using formulae when data is subject to change • Children have modelled a real-life situation using a spreadsheet.
6	6.9	Spreadsheets with MS Excel	8	Using a Spreadsheet to Solve Problems	• To apply spreadsheet skills to solving problems.	• To apply all new spreadsheet skills to solving problems and presenting data. • To explore printing Excel sheets.

Assessment

It is important to know the starting point of each child at the beginning of a unit. Some units build on previous work and other units will be completely new. It is important to know at which level the child is working (either emerging, expected or exceeding) so that specific skills can be taught to catch up a child's ability or specific knowledge can be retaught.
Subject coordinators will also need the information to know how well children are developing the skills and knowledge throughout the school.
By recording information on SIMS, we are able to hold a central information source which can be securely accessed by teachers and subject leads.

Key Step 1 - Familiarisation of the units being used for the year group being taught.

Teacher will look over the chosen sequence of units for their year group, referring to the ***Prior and Future learning links*** to support their understanding of the bigger picture across the school and within the year they teach for Computing. Teachers should look at ***progression of skills and knowledge documents*** to support their knowledge of what the children should be achieving.

Key Step 2 – Introducing a unit of work.

When introducing a unit of work, the teacher may choose to use the ***unit concept map*** and ***unit quiz***. By using these, it will support with identifying what the children currently know. Teachers will introduce the ***knowledge organisers*** at this stage.

Key Step 3 – Delivering a unit of work.

During each lesson, the scheme provides suggested activities and points towards the curriculum objectives and strands being covered. Teachers, may choose to set work as a ***2Do and assign objectives*** which they can then judge once work has been completed. Records of judgements will be held in the ***Data Dashboard***. To ensure that children can recall previously learnt material, teachers will use ***Knowledge & Skill Recap Questions*** at the start of each lesson. Teachers may wish to use the ***'I Can Statements'*** as well or as an alternative to using the objective and judgement feature on Purple Mash. They will need to use the ***PDF Unit plan*** and make judgements for each lesson by writing down. https://training.2simple.com/

Key Step 4 – End of a unit of work

At the end of a unit, children would have used component knowledge and skills to help them carry out composite tasks. Teachers may wish to use the ***unit concept map and unit quiz*** to support the teacher's understanding of the progress the children have made.

Key Step 5 – Summative points over the academic year.

As more units are covered over time – Teachers may continue an approach as above, using the ***Data Dashboard*** average selection to help support summative assessment judgements. They should begin recording within the ***Excel Sheet*** to support easy transfer of data into Computing data sets in SIMs

Purple Mash Assessment

Within each year group, each objective of the national curriculum is met throughout the different units. During these units, children will save their work onto their own online server. Teachers will then be able to visit their pupils saved work to assess the child's understanding.

Teachers are then able to assess each child's understanding through a clear description.

Unit 4.8 – Hardware Investigators

Lesson	Title	Aims (Objectives)	Success Criteria
1	Hardware	• To understand the different parts that make up a desktop computer.	• Children can name the different parts of a desktop computer. • Children know what the function of the different parts of a computer is.
2	Parts of a Computer	• To recall the different parts that make up a computer.	• Children have created a leaflet to show the function of computer parts.

Assessment Guidance

The unit overview for Year 4 contains details of national curricula mapped to the Purple Mash Units. The following information is an exemplar of what a child at an expected level would be able to demonstrate when completing this unit with additional exemplars to demonstrate how this would vary for a child with emerging or exceeding achievements.

Assessment Guidance	
Emerging	Children understand what hardware is and that specific components allow computers to join and form a network. Children can recognise some hardware parts that relate to networking (Unit 4.8 Lesson 1). With some support, children can create their own hardware leaflet.
Expected	Children recognise the main component parts of hardware which allow computers to join and form a network (Unit 4.8 Lesson 1). Children can create their own leaflet to share their understanding of Computer Hardware (Unit 4.8 Lesson 2).
Exceeding	Children recognise the components parts of hardware which allow computers to join and form a network (Unit 4.8 Lesson 1). They are also able to explain that there are different types of network and how they are connected. Children can create their own leaflet to share their understanding of Computer Hardware and can compare physical network connections with wireless connections. (Unit 4.8 Lesson 2).

All children are working at Year 4 expected outcomes except	
	who are working towards Year 4 expectations
	who are working above Year 4 expectations

Example of Year 4 Hardware Investigators unit which covers multiple objectives as seen on objective coverage sheet that follows.

National Curriculum Objective coverage throughout each year

Year 1

National Curriculum Objective	Strand	Units
Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	Computer Science	1.2 1.4 1.5 1.7
Create and debug simple programs	Computer Science	1.5 1.7
Use logical reasoning to predict the behaviour of simple programs.	Computer Science	1.5 1.7
Use technology purposefully to create, organise, store, manipulate and retrieve digital content	Information Technology	1.3 1.6 1.7
Recognise common uses of information technology beyond school	Digital Literacy	1.9
Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	Digital Literacy	1.1

Year 2

National Curriculum Objective	Strand	Units
Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	Computer Science	2.1
Create and debug simple programs	Computer Science	2.1
Use logical reasoning to predict the behaviour of simple programs.	Computer Science	2.1
Use technology purposefully to create, organise, store, manipulate and retrieve digital content	Information Technology	2.3 2.4 2.5 2.6 2.7 2.8
Recognise common uses of information technology beyond school	Digital Literacy	2.5*
Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	Digital Literacy	2.2*

Year 3

National Curriculum Objective	Strand	Units
Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	Computer Science	3.1 3.10
Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	Computer Science	3.1 3.10
Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	Computer Science	3.1 3.10
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.	Computer Science	3.5
Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Information Technology	
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.	Information Technology	3.3 3.4 3.5 3.6 3.7 3.8 3.9
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Digital Literacy	3.2 3.5 3.9

Year 4

National Curriculum Objective	Strand	Units
Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	Computer Science	4.1 4.5 4.11
Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	Computer Science	4.1 4.5 4.11
Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	Computer Science	4.1 4.5 4.11
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.	Computer Science	4.2 4.7 4.8
Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Information Technology	4.7
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.	Information Technology	4.1 4.4 4.6 4.9 4.10
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. ***And discussed in other units**	Digital Literacy	4.2*

Year 5

National Curriculum Objective	Strand	Units
Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	Computer Science	5.1 5.5 5.9 5.10
Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	Computer Science	5.1 5.9 5.10
Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Computer Science	5.1 5.9 5.10
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.	Computer Science	5.2
Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Information Technology	Various Search technologies are taught more specifically in unit 4.7. Children will utilize this knowledge in many Internet based sessions in all areas of the curriculum.
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.	Information Technology	5.1 5.3 5.4 5.5 5.6 5.7 5.8 5.9 5.10
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Digital Literacy	5.2 and discussed in other units

Year 6

National Curriculum Objective	Strand	Units
Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	Computer Science	6.1 6.5, 6.8
Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	Computer Science	6.1
Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	Computer Science	6.5
Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Computer Science	6.1 6.5, 6.8
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.	Computer Science	6.2
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.	Computer Science	6.4
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.	Computer Science	6.6
Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Information Technology	6.2
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.	Information Technology	6.1, 6.4, 6.5 6.7, 6.8, 6.9
Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact*.	Digital Literacy	6.2 6.4