Computing Curriculum Map – Foundation Stage

Year Group: Foundation Stage	Understanding Technology **Key vocabulary:** *iPad, whiteboard, buttons, Busy Things, Purple Mash, game, program, tools, online, offline*	Programming **Key vocabulary:** *steps, rules, instructions, errors*	Digital Literacy **Key vocabulary:** *technology, iPad, camera, whiteboard, laptop, computer, mouse, keyboard*	Online Safety **Key vocabulary:** *personal information, private, stranger, password, account, trusted adult*
Knowledge	• Children understand why we use different programmes. • Children understand how programs work by clicking a series of buttons.	• Understand how to make steps and rules in the offline world (algorithms). • Understand how to find and fix errors in the offline world (debugging).	• Children recognise that a range of technology is used in places such as homes and schools	• Children recognise the importance of keeping personal information private. • Children recognise that strangers in the online world are the same as in the offline world.
Skills	• Use buttons to change colour, pen size and eraser on IWBs. • Use simple programmes on Busy things, Phonics play and Purple Mash	• Test out different ways to solve a problem. • Create steps/instructions (either verbally or written) to carry out an activity.	• Use the PC to explore using the mouse to move things around on the screen and use the keyboard to become familiar with using the keys. • Use cameras to take photographs and to record videos (incl. iPad cameras).	• Keep passwords safe and don't share them with others. • Learn how to log out of personal accounts after use (e.g. Purple Mash). • Understand who to talk to if anything online worries them.
Outcome	• Use the IWB like a big painting easel to explore painting tools. • Use simple programmes to complete a challenge.	• Children can create series of steps and rules. • Children are able to use trial and error to solve problems. •	• Select and use technology for particular purposes.	• Children only use technology in the presence of a familiar, trusted adult. • Children can recognise trusted adults who they can talk to if something worries them.

Computing Curriculum Map – Year 1

Year Group: **Year 1**	**Understanding Technology** **Key vocabulary:** *iPad, whiteboard, buttons, Purple Mash, game, program, tools, online, offline, information technology, e-book, spreadsheet, rows, columns.*	**Programming** **Key vocabulary:** *steps, rules, instructions, errors, algorithm, debug, simulate, digital device.*	**Digital Literacy** **Key vocabulary:** *technology, iPad, camera, whiteboard, laptop, computer, mouse, keyboard, digital content, data.*	**Online Safety** **Key vocabulary:** *personal information, private, stranger, password, account, trusted adult, content, contact, conduct, identity.*
Knowledge	• Understand that data can be represented in a picture format. • Know the difference between a traditional book and an e-book. • Understand what a spreadsheet is and how to read one. • Know different uses for technology in their daily routine.	• Understand that an algorithm is a set of instructions and that digital devices follow these. • Understand what coding means. • Understand that debugging means fixing a program. • Understand that digital devices can simulate real situations.	• Recognise different types of technology in and out of school. • Understand how to access digital content. • Understand how to present their learning and store data in different ways.	• Understand why it's important to log out and to keep personal information private. • Awareness of Cs (content, contact, conduct), their benefits and their risks. • Know where to go for help and support if they feel unsafe, worries or upset. • Understand that they have an individual identity (offline and online). • Know to seek permission before sharing. • Recognise strangers are the same whether online or offline.
Skills	• Add animation to an e-book. • Add voice recordings/music to an e-book. • Add background to the pages of an e-book. • Copy and paste pages in an e-book. • Identify rows and columns. • Input numbers to a spreadsheet. • Identify examples of common uses of information technology.	• Read computer code. • To use arrow keys for directions. • Create lists of clear instructions. • Find errors within programs and fix them.	• Using a keyboard to type and a mousepad to move cursor. • Turn a computer on/off. • Access computer programs. • Collect data (e.g. numerical, research facts etc.) to present in a variety of ways. • Combine any 2 mediums to present data (e.g. text, still images, video, audio).	• Keep personal information private by logging out, not sharing passwords and only talking to people online who they know offline. • Manage content, contact and conduct safely. • Identify trusted adults. • Safely access computer programs. • Log out of computer programs or devices.
Outcome	• Sort items based on a criteria using Purple Mash grouping activities. • Create a pictogram using 2Count. • Create an e-book using 2Create. • Create a spreadsheet using 2Calculate.	• Create an algorithm using 2Go. • Debug an algorithm using 2Go. • Write a program where objects can stop moving and a sound is played when the objects collide using 2 Code.	• Log in and log out of Purple Mash. • Save and load work using Purple Mash. • Use Purple Mash to search for resources. • Children understand what 'technology' means in and out of school. • Children can collect, retrieve, store and present data.	• Increasingly use a range of digital devices to communicate safely and respectfully online. • Children identify the Cs and know ways to manage them. • Children know adults who they can go to if something concerns or upsets them. • Children remain safe online and recognise their own online identity.

Computing Curriculum Map - Year 2

Year Group: **Year 2**	**Understanding Technology** **Key vocabulary:** *iPad, whiteboard, buttons, Busy Things, Purple Mash, game, program, tools, online, offline, information technology, algorithm, simulate.*	**Programming** **Key vocabulary:** *steps, rules, instructions, errors, algorithm, debug, digital device, sequence, logical reasoning.*	**Digital Literacy** **Key vocabulary:** *technology, iPad, camera, whiteboard, laptop, computer, mouse, keyboard, digital content, data, digital footprint, searching.*	**Online Safety** **Key vocabulary:** *personal information, private, stranger, password, account, trusted adult, content, contact, conduct, identity.*
Knowledge	• Understand that a story can be presented in different ways. • Understand how music can be used to express feelings. • Understand what 2Sequence is and how it works • Understand different art styles. • Understand that the information on pictograms cannot be used to answer more complicated questions. • Know different uses for technology beyond school, including those they don't frequently encounter in their daily routine. • Recognise that computers are not intelligent but can appear to be when following algorithms.	• Understand how to debug a code • Understand the effect of a timer and repeat command. • Understand that algorithms are implemented as programs on digital devices. • Recognise the importance of sequence.	• Recognise different types of technology in and out of school. • Understand how to access digital content. • Understand how to present their learning and store data in different ways. • Understand how we talk to others when they aren't there in front of us. • Understand that information put online leaves a digital footprint or trail. • Understand the terminology associated with searching.	• Understand why it's important to log out and to keep personal information private. • Awareness of Cs (content, contact, conduct), their benefits and their risks. • Know where to go for help and support if they feel unsafe, worries or upset. • Understand that they have an individual identity (offline and online). • Know to seek permission before sharing. • Recognise strangers are the same whether online or offline.
Skills	• Extract information from a 2Connect file. • Use 2Quiz to create a quiz for the class. • Children can change the volume of the background sounds. • Use 2Paint to recreate different art types. • Use 2Question to answer questions. • Share examples of computers which simulate intelligence by following algorithms.	• Predict what objects will do in an algorithm • Use the timer, object and repeat buttons when coding. • Use the principles of logical reasoning to plan and predict behaviour of simple programs. • Solve problems on and offline.	• Collect data (e.g. numerical, research facts etc.) to present in a variety of ways. • Combine any 2 mediums to present data (e.g. text, still images, video, audio). • Refine searches using the search tool. • Use 2Respond to send emails.	• Keep personal information private by logging out, not sharing passwords and only talking to people online who they know offline. • Manage content, contact and conduct safely. • Identify trusted adults. • Safely access computer programs. • Log out of computer programs or devices.
Outcome	• Use a variety of software to manipulate and present digital content and information. • Create their own tune using 2Sequence • Use the eCollage function in 2Paint a Picture to create surrealist art using drawing and clipart. • Use a database to answer simple and more complex search questions.	• Create a complex algorithm to achieve a desired result. • Children can code a program using a variety of objects, actions, events and outputs successfully. • Children recognise how simple programs work and can solve problems.	• Children can collect, retrieve, store and present data. • Children can explain what a digital footprint is. • Use search functions appropriately to filter and sort information and to find answers.	• Increasingly use a range of digital devices to communicate safely and respectfully online. • Children identify the Cs and know ways to manage them. • Children know adults who they can go to if something concerns or upsets them. • Children remain safe online and recognise their own online identity.

Purple Mash Progression Maps KS1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Unit 1.1 – Online Safety and Exploring Purple Mash (4 weeks) Unit 1.9 – Technology Outside School (2 weeks)	Unit 1.2 – Grouping and Sorting (2 weeks) Unit 1.3 – Pictograms (3 weeks)	Unit 1.8 – Spreadsheets (3 weeks) Unit 1.6 – Animated Story Books (3 weeks)	Unit 1.6 – Animated Story Books (3 weeks continued) Unit 1.4 – Lego Builders (3 weeks)	Unit 1.5 – Maze Explorers (4 weeks) Unit 1.7 – Coding (2 weeks)	Unit 1.7 – Coding (4 weeks continued)
Year 2	Unit 2.2 – Online Safety (3 weeks) Unit 2.5 – Effective Searching (3 weeks)	Unit 2.8 – Presenting Ideas (4 weeks) Unit 2.4 – Questioning (2 weeks)	Unit 2.4 – Questioning (3 weeks continued) Unit 2.3 – Spreadsheets (3 weeks)	Unit 2.3 – Spreadsheets (1 week continued) Unit 2.1 – Coding (5 Weeks)	Unit 2.6 – Creating pictures (5 weeks)	Unit 2.7 – Making Music (4 weeks)