



Progression in Computing including On-Line Safety

Area/Skill	EYFS	
	Computing is not taught as a separate curriculum area but aspects of the Early Years Framework are taught through computing where appropriate. These opportunities are maximised through the use of Mini Mash. The ‘Supporting The Early Years Framework with Mini Mash’ maps learning activities to the Early Years Framework.	
Key Stage One		
Computer Science	Information Technology	Digital Literacy
Children <ul style="list-style-type: none"> know what algorithms are and understand how they are implemented as programs on digital devices. know that programs execute by following precise and unambiguous instructions. Know how to create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs. 	Children <ul style="list-style-type: none"> know how to use technology purposefully to create, organise, store, manipulate and retrieve digital content. 	Children <ul style="list-style-type: none"> recognise common uses of information technology beyond school. know about and use technology safely and respectfully <ul style="list-style-type: none"> ➤ know how to keep personal information private. ➤ Know where to go for help and support when they have concerns about content or contact on the internet or other online technologies.
NB - Our knowledge is identified for each area above on our Knowledge Organisers	Year 1 We study <ul style="list-style-type: none"> Unit 1:1 - Online Safety & Exploring Purple Mash Unit 1.2 - Grouping and sorting Unit 1:3 – Pictograms using 2Count Unit 1:4 - Lego Builders Unit 1:5 - Maze Explorers Unit 1:7 – Coding Unit 1:8 - Spreadsheets Unit 1:9 - Technology outside school Unit 1:6 - Animated Story Books 	Year 2 We study <ul style="list-style-type: none"> Unit 2.1 - Coding Unit 2:2- Online Safety Unit 2:5- Effective Searching Unit 2:3 – Spreadsheets using 2calculate Unit 2:4 – Questioning/question trees using 2Question and 2Investigate Using 2Question Using 2Investigate Unit 2:1 - Coding Unit 2:6 - Creating Pictures Using 2Paint Unit 2:7 - Making Music using 2Sequence Unit 2:8 - Presenting Ideas

Computer Science	<ul style="list-style-type: none"> • I know that an algorithm is a set of instructions used to solve a problem or achieve an objective. • I know that a computer program turns an algorithm into code that the computer can understand. • I know how to 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 my own simple algorithm, e.g. Colouring in a Bird activity. • I know that an unexpected outcome is due to the code I have created and can make logical attempts to fix the code, e.g. Bubbles activity in 2Code. • I know when looking at a program, how to read code one line at a time and make good attempts to envision the bigger picture of the overall effect of the program. • I know how to interpret where the turtle in 2GO challenges will end up at the end of the program. 	<ul style="list-style-type: none"> • I know and can explain how an algorithm is a set of instructions to complete a task. • I know it is important to be precise with my algorithms so that they can be successfully converted into code when designing simple programs. • I know how to create a simple program that achieves a specific purpose. • I know how to / I can also identify and correct some errors, e.g. Debug Challenges: Chimp. • I know I need to use logical programmable steps in my program designs. • I know how to identify the parts of a program that respond to specific events and initiate specific actions. For Example, I can write a cause and effect sentence of what will happen in a program.
Information technology	<ul style="list-style-type: none"> • I know how sort, collate, edit and store simple digital content. • I can name, save and retrieve my work and follow simple instructions to access online resources • I can use Purple Mash 2Quiz example (sorting shapes) • I can use 2 Code design mode (manipulating backgrounds) • I can use pictogram software such as 2Count. 	<ul style="list-style-type: none"> • I know how to organise data and can retrieve specific data for conducting simple searches. • I can edit more complex digital data such as music compositions within 2Sequence. • I know how to and am now confident when creating, naming, saving and retrieving content. • I know how to use a range of media in my digital content including photos, text and sound.
Digital Literacy	<ul style="list-style-type: none"> • I know what is meant by technology and can identify a variety of examples both in and out of school. • I can make a distinction between objects that use modern technology and those that do not e.g. a microwave vs. a chair. • I know what information is and the importance of keeping information, such as my usernames and passwords, private and actively demonstrate this in lessons. • I know how to take ownership of my work and save this in my own private space such as my My Work' folder on Purple Mash. 	<ul style="list-style-type: none"> • I know how to effectively retrieve relevant, purposeful digital content using a search engine. • I know how to apply my learning of effective searching beyond the classroom. • I know how to share this knowledge, e.g. 2Publish example template. • I know how to make links between technology I see around me, coding and multimedia work I do in school e.g. animations, interactive code and programs. • I know the implications of inappropriate online searches.

		<ul style="list-style-type: none"> • I know things are shared electronically and am beginning to understand how things are shared electronically such as posting work to the Purple Mash display board. • I know how to use email safely by using 2 Respond activities on Purple Mash and know ways of reporting inappropriate behaviours and content to a trusted adult.
Vocabulary	<p>Online safety and exploring purple mash: log in, username, password, avatar, my work, topics, log out, save, notification, tools.</p> <p>Grouping and Sorting: Sort, Criteria</p> <p>Pictogram: Pictogram, Data, Collate</p> <p>Lego Builders: Instruction, Algorithm, Computer, Program, Debug</p> <p>Maze Explorers: Direction, Rewind, Left turn, Challenge, Forward, Debug, Arrow, Backwards, Instruction, Undo, Right turn, Algorithm</p> <p>Animated Story Books: Animation, Font, Sound Effect, E-Book, File, Display Board</p> <p>Coding: Action, Code, Event, Algorithm, Command, Execute, Background, Debug/Debugging, Input, Instructions, Properties, Scene, Object, Run, Sound, Output, Scale, When clicked</p> <p>Spreadsheets: Arrow keys, Cells, Lock tool, Backspace key, Clipart, Move cell tool, Cursor, Count Tool, Rows, Columns, Delete key, Speak Tool, Image Toolbox, Spreadsheet</p> <p>Technology Outside School: Technology</p>	<p>Coding: Action, Algorithm, Background, Button, Collision Detection, Debug/Debugging, Design Mode, Event, Key Pressed, Nesting, Object, Predict, Properties, Run, Scale, Scene, Sound, When Clicked/swiped, Sequence, Test, Timer, Text,</p> <p>Online Safety: Search, Display Board, Internet, Sharing, Email, Attachment, Digital Footprint</p> <p>Spreadsheets: Backspace Key, Copy and paste, Columns, Cells, Count Tool, Delete Key, Equals tool, Image Toolbox, Lock tool, Move cell tool, Rows, Speak Tool, Spreadsheet.</p> <p>Questioning: Pictogram, Question, Data, Collate, Binary Tree, Avatar, Database</p> <p>Effective Searching: Internet, Search, Search Engine</p> <p>Creating Pictures: Impressionism, Palette, Pointillism, Share, Surrealism, Template</p> <p>Making Music: Bpm, Composition, Digitally, Instrument, Music, Sound Effects (sfx) Soundtrack, Tempo, Volume</p> <p>Presenting ideas: Concept Map (Mind Map), Quiz, Presentation, Node, Animated, Non-Fiction, Narrative, Audience</p>
<p>Gateway Milestones To access the next stage in their learning children should achieve these gateway milestones</p>	<ul style="list-style-type: none"> • Children know that an algorithm is a set of instructions used to solve a problem or achieve an objective. • Children can work out what is wrong with a simple algorithm. • Children can write their own simple algorithm. • Children can use logical reasoning to predict what is going to happen in a program. • Children can sort, collate, edit and store simple digital content. • Children can name and save their work in a safe place e.g. "My work" folder • Children have an awareness of Online Safety and know how to keep usernames and passwords private. • Children know how technology is used in the home and at school. 	<ul style="list-style-type: none"> • Children can explain that an algorithm is a set of instructions to complete a task. • Children can turn algorithms of more than one step into code. • Children can identify and correct errors in a code. • Children can organise, search and manipulate digital content e.g. using a database. • Children can name, store and retrieve their work from a saved area and share it electronically. • Children can use a range of media in their digital content e.g. photos, text and sound. • Children can search for information online in a safe manner. • Children know how to report inappropriate content to an adult. • Children know how technology is used both in and outside of school.