Year group	EYFS area linked to subject….	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science **KS1** 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. **KS2** 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	EYFS-Skills-and-Progression-Map-2023-006.pdf (moorside-academy.co.uk)	To understand that algorithms are a set of instructions used to solve a problem. To know that an algorithm written for a computer is called a program. To develop strategies to help find bugs in programs. To make very simple programs. **Purple Mash Units:** **1.4 – Lego Builders** **1.5 - Maze Explorers** **1.7 - Coding**	To use algorithms and know that they can be implemented as programs used to complete a task. To carefully plan an algorithm before creating it to ensure it will work when made into code. To design a simple program (Using 2code) that achieves a purpose. To know and use strategies to debug and find errors in their programs. To make predictions as to what will happen in a program. Ex. write a cause and effect sentence detailing wat will happen. **Purple Mash Units:** **2.1 - Coding**	To plan and write algorithms and programs using sequence and repetition to simulate a real-life situation by deconstructing it into manageable parts. To solve (fix) problems and errors in their algorithms and programs. To have knowledge and experience of using a range of different inputs and outputs including timers and repetition effects. To start to use and understand 'if' statements. To describe some of components of a computer network and some of the ways in which computer networks can be used, including using 2Email to model appropriate email conventions when communicating. **Purple Mash Units:** **3.1 – Coding** **3.5 - Email**	To design and write more complex algorithms and programs using sequence, selection and repetition. To further develop their computational thinking to help debug their programs and design and solve problems and tasks. To have a simple understanding of how search engines work. To use selection (decision) in their programming. Ex. using an 'if' statement for a question being asked and the program takes one of two paths. To develop their understanding of inputs and outputs further, demonstrating how they can use programs to control external devices. Ex. 'Print to screen'. To understand the difference between the internet and World Wide Web. To recognize the main component parts of	To design and write programs using sequence, repetition, selection, and variables. To develop a greater understanding of how to use selection and repetition in more complex programs. To understand how search engines work. To further develop their computational thinking showing they can plan and decompose tasks; explain how the algorithms they write work and correct errors in their programs. To plan and write programs to control external devices such as sensors and motors and explain about the inputs and outputs used. To have an understanding of how a computer network works and the opportunities that it offers for	To design and create more complex programs using sequence, repetition, selection, and variables appropriately. To develop their computational thinking to demonstrate that they can decompose and evaluate their tasks and correct errors in their algorithms and programs. To identify a specific line of code that is causing a problem in my program and attempt a fix. To be confident in their knowledge of inputs and outputs and plan and write programs to solve tasks to control external devices such as sensors and motors. To know how different computer networks work, including the roles of the components and the opportunities and benefits that they offer

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. Appreciate how (search) results are selected and ranked.					hardware which allow computers to join and form a network. To use variables within their program and know how to change the value of the variable. **Purple Mash Units:** **4.1 – Coding** **4.2 – Online safety** **4.5 – Logo** **4.7 – Effective Searching** **4.8 – Hardware investigations**	communication and collaboration. To recognise the main dangers that can be perpetuated via computer networks. I can use the most appropriate form of online communication according to the digital content. **Purple Mash Units:** **5.1 – Coding** **5.2 – Online Safety** **5.5 – Game Creator**	for communication and collaboration. To understand the difference between the internet and internet services (world wide web). To know how search engines work and what 'ranking' is when related to search engines. To explain what a LAN and WAN is and describe the process of how access to the internet in school is possible. **Purple Mash Units:** **6.1 – Coding** **6.2 – Online safety** **6.4 – Blogging** **6.6 – Networks** **6.7 – Binary**

| Information technology

KS1

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

KS2

Use search technologies effectively.

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 | EYFS-Skills-and-Progression-Map-2023-006.pdf (moorside-academy.co.uk) | To use technology with support, to create, store (name) and retrieve digital content such as text and images.

To use a simple search to find information or files and access online resources.

Purple Mash Units:

1.2 – Grouping and sorting.
1.3 – Pictograms
1.6 – Animated stories.
1.7 – Coding
1.8 – Spreadsheets. | To use technology with purpose to create, store (name), organise, retrieve and manipulate digital content.

To learn to make a range of simple digital assets such as presentations, movies, audio files and graphs.

To navigate the web and carry out simple searches using suitable search engines and begin to understand that not everything on the internet is true.

To use simple simulations and understand how they work.

Purple Mash Units:

2.3 – Spreadsheets
2.4 – Questioning
2.5 – Effective searching
2.6 – Creating pictures
2.7 – Making music
2.8 – Presenting ideas | To use a variety of software and devices to create digital assets such as programs, graphs and multimedia content for a defined purpose. This includes analysing data using features within software. (Excel)

To develop their search strategies further by refining their use of keywords and starting to use appropriate key phrases and questions.

To use more complex simulations and understand the effects of changing variables.

Purple Mash Units:

3.3 – Spreadsheets
3.4 – Typing
3.5 – Email
3.6 – Branching data
3.7 – Simulations
3.8 – Graphing
3.9 – Presenting | To use and combine a variety of software and devices with increasing independence, to create a range of digital assets such as programs, databases, systems and multimedia content.

To understand the purpose of search engines and the main features within them.

To look at information on a webpage and make predictions about the accuracy of information contained.

To use models and simulations to produce graphs and explore patterns and relationships.

To share digital content using a variety of applications such as: 2Blog, 2Email and Display Boards.
Purple Mash Units:

4.1 – Coding
4.3 – Spreadsheets
4.4 – Writing for different audiences.
4.6 – Animation
4.7 – Effective searching
4.8 – Making music | To select, use and combine a range of software and use a wider range of devices to create a variety of digital assets such as programs, systems, databases, spreadsheets and multimedia content for a defined purpose.

To understand about the use of operators in searching and continue developing their effective search techniques by using Boolean operators in their searches.

To create simple spreadsheet models to investigate real life problems.

I can explain in detail how accurate, safe and reliable the content is on a webpage.

Purple Mash Units:

5.1 – Coding
5.2 – Online safety
5.3 – Spreadsheets
5.4 – Databases
5.5 – Game creator
5.6 – 3D modelling
5.7 – Concept maps
5.8 – Word processing | To independently select, use and combine a wide range of software on a variety of devices.

To design and create a range of digital assets such as programs, systems and multimedia content for a defined purpose and audience.

To use advanced searches including the use of operators.

To create spreadsheet models to investigate real life problems, using their knowledge to make predictions.

To design and create their own online blogs.

To consider the intended audience carefully when designing and making digital content.

To explain in detail how accurate and reliable a webpage and its content is.
Purple Mash Units:
6.1 – Coding
6.2 – Online Safety
6.3 – Spreadsheets
6.4 – Blogging
6.5 – Text adventures
6.7 – Quizzing
6.9 – Spreadsheets (Excel) |

Digital Literacy	EYFS-Skills-and-Progression-Map-2023-006.pdf (moorside-academy.co.uk)	To recognise common uses of information technology and identify a variety of examples both in and beyond school.	To know their responsibilities from their school's acceptable use policy and how to report any concerns they have to a trusted adult.	To use technology safely and respectfully and have an understanding of how to keep information secure.	To use technology respectfully, responsibly and safely, knowing how to keep their information and passwords secure.	To use technology safely, respectfully and responsibly and continue to develop skills to identify risks involved with contact and content including developing an understanding of digital footprints.	To be competent users of technology using it safely, respectfully and responsibly and know about digital footprints and 'strong' passwords.
KS1 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. **KS2** Understand the opportunities (networks) offer for communication and collaboration. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Be discerning in evaluating digital content.		To understand the rules and responsibilities outlined by the school's acceptable use policy and begin to understand where to go for help when they have concerns. To develop an understanding of how to keep their personal information, such as their usernames and passwords, private and understand they need to use technology safely and respectfully. **Purple Mash Units:** **1.1 – Online Safety** **1.9 – Tech outside school**	To understand the consequences of not searching online safely, including uploading digital content (taught using 2Email and PM display boards). To begin to develop an understanding of the importance of computers and the internet to communicate. To develop their knowledge of the technology used in everyday life in a range of situations and be able to discuss their ideas. (Taught through use of 2Code to create an everyday program). **Purple Mash Units:** **2.1 – Coding** **2.2 – Online Safety** **2.5 – Effective searching**	To realise the importance of reporting any concerns they have using the internet and other communication technologies, and know some ways in which they can do it. To develop an understanding of what is unacceptable and unacceptable online behaviour, including internet safety. To realise that not all information on the internet is trustworthy and there is a need to verify its reliability **Purple Mash Units:** **3.2 – Online Safety** **3.5 - Email**	To know different ways of reporting concerns about content and contact involving the internet and other communication technologies. To have a greater understanding of what is acceptable and unacceptable online behaviour. To start to develop strategies to verify the reliability and accuracy of information on the internet and develop an awareness of copyright. To recognize that my wellbeing can be affected by how I use technology. **Purple Mash Units:** **4.2 - Online safety**	To know a range of ways of reporting concerns about content and contact involving the internet and other communication technologies. To understand what acceptable and unacceptable online behaviour is and to have a secure knowledge of online safety rules taught at school. To use strategies to verify the reliability and accuracy of information on the internet and understand copyright. To know how to not let my mental wellbeing or others be affected by use of online technologies and services.	To demonstrate that they can identify the risks involved with content and contact and they know a wide range of ways of reporting any concerns they have. To understand what acceptable and unacceptable online behaviour is. To use strategies to verify and evaluate the reliability and accuracy of information on the internet and understand what copyright and plagiarism is and how it relates to their work. To understand the value of protecting their privacy and others online.

						Purple Mash Units: 5.2 – Online safety Purple Mash Units: 6.2 – Online safety 6.4 – Blogging	To identify more discrete inappropriate behaviours online.