KS1 Computing Progression of Knowledge & Skills

KS1 National Curriculum

Pupils should:
- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- Create and debug simple programs
- Use logical reasoning to predict the behaviour of simple programs
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content
- Recognise common uses of information technology beyond school
- Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies

Cycle A Progression of Knowledge and Skills		
Computer Science	- Understand that an **algorithm** is a set of instructions used to solve a problem or achieve an objective. - Know that an algorithm written for a computer is called a **program**. - Recognise what is wrong with a simple algorithm when the steps are out of order - Write their own simple algorithm - Know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code. - Read **code** one line at a time and make good attempts to predict the overall effect of the program. - Explain that an **algorithm** is a set of instructions to complete a task. - When designing simple **programs**, children show an awareness of the need to be precise with their algorithms so that they can be successfully converted into code. - Create a **simple program** that achieves a specific **purpose**. - Identify and correct some errors and display a growing awareness of the need for **logical**, programmable steps - Identify the parts of a program that respond to specific events and initiate specific actions.	Purple Mash Unit: 1.7: Coding - **2Code (Year 1 Unit)** Purple Mash Unit 2.1: Coding - **2Code (Year 2 Unit)**
Information Technology	**Sort**, **collate**, **edit** and store simple **digital content**. **Name**, **save** and **retrieve** work and follow simple instructions to access **online** resources. - Demonstrate an ability to **organise data**. **Retrieve** specific data for conducting simple **searches**. - Edit more complex digital data such as music compositions. - Children use a range of media in their **digital content** including photos, text and sound.	Purple Mash Unit 1.5: Animated Story Books - **2Create A Story (Year 1 Unit)** Purple Mash Unit 1.2: Sorting – **2Quiz (Year 1 Unit)** Purple Mash Unit 2.8: Presenting Ideas Differently - **2Connect/2Quiz (Year 2 Unit)**

Digital Literacy	• Effectively retrieve relevant, purposeful digital content using a **search engine**. • Apply their learning of effective searching beyond the classroom and share this knowledge	Purple Mash Unit 2.5: Effective Searching - online searches **(Year 2 Unit)**

Cycle B Progression of Knowledge and Skills		
Computer Science	• Understand that an **algorithm** is a set of instructions used to solve a problem or achieve an objective. • Know that an algorithm written for a computer is called a **program**. • Recognise what is wrong with a simple algorithm when the steps are out of order • Write their own simple algorithm • Know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code. • Read **code** one line at a time and make good attempts to predict the overall effect of the program.	Purple Mash Unit: 1.5 :We are Maze Explorers - **2Go** **(Year 1 Unit)** Purple Mash Unit: 1.4: We are Lego Builders (non-computer based) **(Year 1 Unit)**
Information Technology	• Demonstrate an ability to **organise data**. • **Retrieve** specific data for conducting simple **searches**. • Edit more complex digital data such as music compositions. • Children use a range of media in their **digital content** including photos, text and sound. • **Sort**, **collate**, **edit** and store simple **digital content**. • **Name**, **save** and **retrieve** work and follow simple instructions to access **online** resources.	Purple Mash Unit 2.3: Spreadsheets - **2Calculate** **(Year 2 Unit)** Purple Mash Unit 2.7: Making Music - **2Sequence** **(Year 2 Unit)** Purple Mash Unit 1.3: Pictograms - **2Count** **(Year 1 Unit)**
Digital Literacy	• Understand the importance of keeping information, such as their usernames and passwords, **private** and actively demonstrate this in lessons. • Take ownership of their work and save this in their own **private space**.	Purple Mash Unit: 1.1: Online Safety (Purple Mash dashboard) **(Year 1 Unit)**

Assessment End Points Year 1	
Knowledge	**Skills**
- I know how to name, save and retrieve my work. - I know what group and sort means. - I know to 'stop and think before I tap or click'.	- I can **identify** different steps in a sequence. - I can write my own simple algorithm. - I can **sort** items on the computer using 'Grouping' activities.

Assessment End Points Year 2	
Knowledge	**Skills**
- I know that an **algorithm** is a set of instructions to complete a task. - I know how I can organise data. - I know that I need to tell an adult if something makes me feel uncomfortable online.	- I can create a **simple program** that achieves a specific **purpose**. - I can use a range of media in my **digital content** including photos, text and sound. - I can effectively retrieve relevant, purposeful digital content using a **search engine**.