Progression of Skills – Computing

	National Curriculum Aims The national curriculum for computing aims to ensure that 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 **Curriculum Enhancements** **EYFS –** Barefoot Computing – completing the computational thinking activities and embedding into continuous provision. **Year 2 –** UK bebras computational thinking challenge (register October and participate any time in November each year)		
Skill	**EYFS**	**Year 1**	**Year 2**
Problem Solving	• Understands a simple set of verbal instructions and then begins to **follow simple procedures.** • Can press a button, or pull/twist/lift part of a toy to achieve an effect such as a movement, or sound **(understanding cause and effect).**	• Understand what algorithms are • Understand how algorithms are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions – **can program floor turtles.**	• Understand what algorithms are • Understand how algorithms are implemented as programs on digital devices and that programs execute by following precise and unambiguous instructions – **can program on screen**.
Programming	• Sequence events or instructions accurately – **The child can begin to understand that instructions follow a particular order for something to work correctly** and can use this to give out their own set of instructions. • **Make a Bee-bot move.**	• Create and debug simple programs - **The child can give a sequence of instructions to a floor turtle.**	• Create and debug simple programs - **The child can create a simple program on screen, correcting any errors.**
Logical Thinking	• Understand that different technology has a different purpose – **Child can select a piece of technology for a specific purpose** e.g. a camera for taking a photo, an IPad for a game, a phone to communicate. • Shows awareness of how to **sort objects/events based on their criteria** – grouping.	• Use logical reasoning to predict the behaviour of simple programs - **The child can give explanations for what they think a program will do.**	• Use logical reasoning to predict the behaviour of simple programs - **The child can give logical explanations for what they think a program will do.**
Esafety	• **Begin to understand there are rules when using the internet** to keep safe and have an	• Use technology safely and respectfully **- The child can**	• Use technology safely and respectfully - **The child can keep safe and show respect to**

	awareness of some of these rules .e.g. not sharing personal information. • Identify where to go for help and support – **The child knows to talk to an adult if they see inappropriate content.**	**keep themselves safe while using digital technology.** • Keep personal information private - **The child can understand that information on the internet can be seen by others.** • Identify where to go for help and support when they have concerns about content or contact online **- The child can understand what to do if they see disturbing content online at home or at school.**	**others while using digital technology.** • Keep personal information private - **The child can understand that they should not share personal information online.** • Identify where to go for help and support when they have concerns about content or contact online - **The child can understand what to do if they have concerns about content or contact online.**
Using IT beyond school	• Understand that technology has different uses: children **show awareness of technology in their wider environment** e.g. pressing the button at a crossing; using a light switch; using digital weighing scales/whisk etc. • Children show awareness that we can use technology to retrieve information.	• Recognise common uses of information technology beyond school - **The child can show an awareness of how IT is used for communication beyond school.**	• Recognise common uses of information technology beyond school - **The child can show an awareness of how IT is used for a range of purposes beyond school**
Creating Content	• **Use technology or a device to create something new** e.g. use a camera or Ipad to take a photo, use a paint software to draw a picture, use the keyboard to type.	• Use technology purposefully to organise, store and retrieve digital content - **The child can use digital technology to store and retrieve content.** • Use technology purposefully to create and manipulate digital content - **The child can create original content using digital technology e.g. paint program software for making pictures, word documents for writing etc.**	• Use technology purposefully to organise, store and retrieve digital content - **The child can store, organise and retrieve content on digital devices for a given purpose.** • Use technology purposefully to create and manipulate digital content - **The child can create and edit original content for a given purpose using digital technology.**