Progression of Computing

Subject content	EYFS: Development matters - Understanding the world: Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, **technologically** and ecologically diverse world. KS1 Pupils should be taught to: • 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.

Teach Computing is an educational programme provided by the National Centre for Computing Education. It provides high-quality support for the teaching of computing from KS1 to KS2 and beyond. Our high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world.

Skills	EYFS	Year 1	Year 2
Understanding Technology	**Using iPads** To name different technology. To name different parts of an iPad. To recognise the internet helps us find out different things. To recognise that iPads can help us complete our work and we can do different things, eg drawing picture, taking photo.	**Seesaw** To understand that Seesaw is an app to help us complete our learning. To use different parts of an iPad. To understand that different parts of the iPads will help you respond to different tasks eg microphone for using voice tool.	**Computing Systems & Networks – IT around us** To identify examples of computers and that they are part of information technology (IT). To describe some uses of computers. To sort school IT by what it is used for. To identify and find examples of IT. To sort IT by where it is found. To talk about uses of IT. To demonstrate how IT devices work together. (eg barcode, scanner, till) To say why we use IT.
Online safety	To recognise, online or offline, that anyone can say 'no' – 'please stop' 'I'll tell' 'I'll ask' to somebody who makes them feel sad, uncomfortable, embarrassed, or upset. To recognise some ways in which the internet can be used to communicate. To identify ways that I can put information on the internet. To describe ways that some people can be unkind online.	To recognise that there may be people online who could make someone feel sad, embarrassed or upset. To give examples of when I should ask permission to do something online and explain why this is important. To recognise that information can stay online and could be copied. To describe how to behave online in ways that do not upset others and can give examples. To know/understand that we can encounter a range of things online including things we like and don't like as well as things which are real or make believe/a joke.	To explain how other people may look and act differently online and offline To identify who can help me if something happens online without my consent. To explain how information put online about someone can last for a long time. To explain what voice activated searching is and how it might be used, and know it is not a real person e.g. Alexa, Google Now, Siri.

	To identify some simple examples of personal information and describe who I can share this with e.g. name, address, birthday, age, location. To know that work I create belongs to me.	To understand that work created by others does not belong to me even if I save a copy.	To explain simple guidance for using technology in different environments and settings e.g. accessing online technologies in public places and the environment. To describe and explain some rules for keeping personal information private e.g. creating and protecting passwords.
Programming	**Moving a Robot (Beebots)** To predict the outcome of a command or sequence (using up to 4 commands including forwards, backwards, left and right) To follow an instruction To give clear instructions To say what a given command does and to match it to an outcome To run a command on a floor robot To combine 4 directional commands (eg.forwards, backwards, left right) to make a sequence with support To plan a simple program with support To run a program on a device To debug my program, to correct errors To create more than one program to achieve a task To evaluate how successful they were at meeting the task requirements	**Programming Animations [ScratchJr]** To find and use commands to use a sprite. To predict the outcome of a command. To explain what a sprite is. To compare different programming tools. To use a start block To use more than one block, by joining them together and know they form a program. To change the value of a block and say what happens when I do. To plan a project and show that a project can include more than one sprite To understand that a program is a set of commands a computer can run. To predict the outcome of a command. To delete a sprite To create an algorithm for each of my sprites. To use my algorithm to create a program. To debug a program. To test a program created and how successful it has been. To identify how closely a plan matches the outcome.	**Programming Quizzes {Scratch Jr]** To identify the start of a sequence and run my program. To predict the outcome of a sequence of commands To change the sequence of commands and change the outcome. To plan a project including changing backgrounds. To create and change a program with a given design. To create a program of my own design. To select the correct tools. To know that a sequence can be started using a variety of event blocks To know that a sequence has an outcome, and identify different programs that have the same outcome To know the backgrounds can be changed through the programming blocks To understand the role of the numbers on ScratchJr blocks To write and run a simple program with a start block, and an end block which changes the background To adapt a given design to create a program with multiple sprites and backgrounds which uses the blocks given in the example To create and program a quiz with at least two backgrounds which switch based on an action To identify errors in their program, and debug them To test a program created and evaluate how successful it has been To identify how closely a plan matches the outcome To test a program created and evaluate how successful it has been To Identify how closely a plan matches the outcome

Digital Literacy	**Digital Painting and Photography** To use the iPad to draw a self portrait (Sketches) To use the iPad to take a photo To edit my photo To use the iPad to take a short video	**Digital Writing** To open a word processor. To identify and find keys on a keyboard. To enter text into an iPad. To use letter, number, and Space keys. To use Backspace to remove text. To type capital letters. To identify the toolbar and use bold, italic, and underline. To select a word by double-clicking and select all of the text by clicking and dragging To change the font. To say what tool I used to change the text. To decide if my changes have improved my writing. To use 'Undo' to remove changes. To say why I prefer typing or writing, To save my and retrieve my work, at a later time. To evaluate how successful they were in meeting the task requirements To identify the differences between writing on a computer and on paper, and explain their own preference **Seesaw** To use the green tick to save our work. To use the different tools on Seesaw to respond to a task. To upload photos to respond to a task.	**Digital Photography** To use an iPad to take a photo. To explain the key requirements of the task. To compose and capture good photos and explain some aspects of these. To identify why some of the reasons a photo may be bad or good. To know a photo can be portrait or landscape To make suggestions on how to improve my photo. To use tools to change an image. To say what the best lighting source is for a photo I retake. To use the autofocus to make an object in the photo stand out. To experiment when taking photos with different light sources To identify a photo that has been enhanced using tools when asked questions To evaluate how successful they were in meeting the task requirements **Seesaw** To use the green tick to save our work. To use the different tools on Seesaw to respond to a task. To upload photos and use voice recording to respond to a task.

How will we implement computing in our school?

- Planned teaching of computing each term through **enquiry** lessons, which is progressive, and provides purpose and meaning for children.
- Children will use technology in their classrooms as part of their **daily life at school** to apply skills taught. For example, Bugclub, Numbots, Seesaw, Research through Kiddle
- **Evidence** of computing can be seen on Seesaw, class learning journey displays, enquiry organisers and on medium term and long term planning.
- Technology will be integral to **support children in their learning**. E.g. use of iPads to enquire.
- Children will apply computational thinking to solve problems across the curriculum.
- Children will be able to **express themselves** through information and communication technology.
- Children will be able to discuss how to **stay safe on the internet**.
- Annual **e-safety assemblies** and information for parents.
- All children, and staff, are to adhere to **an Acceptable Use Policy** (AUP) in line with CAM guidance.
- Staff will have a shared understanding of how to keep our children safe through our **e-safety knowledge** and all staff will know the procedures for **reporting incidents.**

- We use the **Project Evolve** resources for out online safety unit (planned by Trust computing leads)
- We use the **Teach Computing Scheme of Work** in our lessons.
- We use the **Educated for a Connected World framework** in our lessons on Online Safety.
- We organise a **Safer Internet Day** to engage pupils and further their online education
- We organise **visitors and workshops** to support children to be safe on technology.
- We have an **Online Safety Lead** who liaises with SLT and staff to ensure that safer internet practises are used by all.