Progression of Skills Abbey Meads

Based on National Curriculum

RED = PC, BLUE =iPad, PURPLE = Purple Mash

Year group	Strand			
	Computer Science (Programming)	Information Technology		Digital Literacy
		Databases and spread sheets	Multimedia communication	E-safety
Reception	Use sequences of instructions to make something happen (program a remote control car, use a series of instructions in a computer game) – and know when it goes wrong to backtrack and think about what they did. Know that technology is used at home (washing machines, TVs etc)		Use drawing and word processing to communicate information (Tizzy's Toybox,) (MiniMash)	Know not to use the internet unless a trusted adult is near and to know what to do if they need help. Understand what a password is and why people use them.
Y1	To be able to use a simple screen turtle or BeeBot to create a series of instructions to give a definite end result. To be able to review the instructions they have given to refine and improve them to make them work. (BeeBot, 2Simple Infant Video Toolkit) (Purple Mash – 2Code – Chimp level, 2Go – on screen "bee" bot)	To be able to create and use a simple pictogram to find and sort information (2Calculate, Infant Video Toolkit) (2Count)	To use drawing, word processing and other multimedia technology (recording devices) to communicate information. To be able to save and retrieve information that they have made. (Tizzy's Toybox, Video recorders, iPads, voice recorders) (2Create a Story, 2Paint, 2Paint a Picture, 2Paint Projects)	Know not to use their name or address online. Know that if they feel funny about something that happens they should tell an adult that they trust. Know how to use a "safe" search engine
Y2	To be able to program a screen turtle or BeeBot/ Pro Bot to carry out a specific task (such as draw a shape, write a word, find a specific location). To be able to work out what a set of instructions for a screen turtle/ BeeBot/ ProBot might produce.	To be able to use a graphing program to present simple data. To be able to investigate simple data from a graphing program. (2Ivestigate, 2Graph)	To be able to use drawing and multimedia communication programs to create purposeful documents that are aware of the audience. Understand the importance of drafts of a piece of work	Know that the internet is not controlled by any one person. Know that there are organisations that help to keep an eye on what is going on the internet and help when needed (CEOP, NetNanny software) Know that not everything found on the internet is true.

	To be able to identify and refine instructions to achieve a given goal. (BeeBot, ProBot, MS Logo) (Purple Mash – 2Code – Chimp level, Logo)		and be able to save and retrieve work across the network on a variety of devices. (Revelation Natural Art, PowerPoint, Movie Maker, iMovie, Word, Pages, E-Book Creator) (2Create a Story, 2Paint, 2Paint a Picture, 2Paint Projects, 2Animate,)	(Purple Mash – Computing – Online Safety)
Y3	Be able to program a screen turtle, beebot/probot, Scratch sprite to carry out specific tasks (linked to topic work) and use a "repeat" command. Be able to break a task down into a set of simpler steps and understand how to backtrack those instructions to refine/ debug to ensure that they work efficiently. Know what a network is and how to use it. (Scratch, BeeBots, ProBots) (Purple Mash – Logo, 2Code – Chimp and Gibbom levels)	To be able to enter data into a spreadsheet and explain the position of specific data. Understand what a spreadsheet allows them to do and be able to use simple functions (auto sum, graph and sort) of a spreadsheet. To be able to know what a database is and be able to use and/or search protocols to find information. (Excel, Numbers) (2Investigate, 2Question)	To be able to combine text and graphics within a piece of word processing and change the properties of them. To be able to use a simple animation to demonstrate understanding of a concept. To use music software to create a piece of simple music to a given theme. Understand that they can access their work through a series of computers around the school and at home. (Word, Pages, E-Book Creator, Garage Band, Scratch) (2Publish, 2Publish2, 2Animation, 2Sequence)	Know how the internet basically works and be able to use a safe search. Know that whatever they put "online" can be seen by lots and lots of people Understand how to make a "powerful" password. (Internet Explorer, Safari) (Purple Mash – Computing – Online Safety)
Y4	To be able to program a Scratch sprite to carry out a specific task . To be able to use input and output commands. Be able to explain how they have debugged a piece of code. Be able to make sure that code is efficient (without any spare bits).	To be able to use a spreadsheet to represent real data and to be able to insert simple formula to manipulate the information (addition of columns, multiplication of columns etc). To be able to create	To be able to use a word processing package to enable them to edit and present information with a given audience in mind. Be able to create and present information using multimedia (images, sound,	Know what to do if something happens whilst searching the internet that makes them feel uncomfortable. Know how to evaluate the effectiveness of a website and whether the information can be trusted (Internet sites: Dog Island, Pacific North West Tree Octopus).

	(Scratch, BeeBots, ProBots) (Purple Mash – Logo)	different types of graph in a spreadsheet and think about audience when colouring. To be able to create their own database about real data and interrogate using the search function. Know the internet is a large database and the same rules for searching can still be applied. (Excel, Internet Explorer, Safari, Numbers) (2Investigate)	video) using PowerPoint, video or iPad. Be able to manipulate an photograph using an arts package. Music (Word, Pages, E-Book Creator, Garage Band, Music Toolkit, Powerpoint, Movie maker, iMovie, RNA) (2Publish, 2Publish2, 2Animation,2Paint a Picture, 2Design and Make)	Know what a virus is and how to protect themselves against them . Understand how it can be powerful to collaborate over the internet and the possible risks. (Purple Mash – Computing – Online Safety)
Y5	Be able to create a program to achieve a specific task in Scratch, using more advanced rules such as "if". To be able to translate this to a physical representation (using Lego WeDo of other interface device). Be able to explain how they will debug the program to ensure that is works efficiently. Know that there are different ways to program (Logo, Scratch, and other languages like Python). (Scratch, Logo, Python) (Purple Mash – 2Code: Gibbon and Principles)	Use a spreadsheet to model how values change (party planning, maths investigations). To be able to export data form a spreadsheet in different ways (graph and table). To be able to create a database for a specific task linked to the topic and populate with information. To link the understanding of databases to using the internet. (Excel, Internet Explorer, Safari, Numbers) (2Investigate)	To be able to apply their skills in a word processor to topic work (keeping the audience in mind). To be able to use hyper-links within a PowerPoint (or multimedia presentation). Be able to plan out a website and recreate within a PPT format. To use the advanced tools within a graphics package (such as blur/sharpen) to create an image to use in another media package. (Word, Pages, E-Book creator, Garage Band, Music Toolkit, Powerpoint, Movie maker, iMovie, RNA) (2Publish, 2Publish2, 2Animation,2Paint a Picture, 2Design and Make)	Know what cyber bulling is and know how to avoid/ deal with the consequences of it. Understand what acceptable/ unacceptable behaviour is in the use of electronic communication devices (internet, social media, text, Skype etc). Know how to validate information found over the internet (Purple Mash – Computing – Online Safety)

Y6	Understand how to use programming to achieve a specific task (either using Scratch or a more advanced programming version such as Python) and translate this into the physical world. Be able to work with variables. Know how to debug their program and improve the performance/ effectiveness using flow charts and sequences of commands. (Scratch, Python)	Applying spreadsheet modelling to real life situations within the curriculum and exporting the information to other programs. Applying database understanding to situations within the curriculum and presenting the information. Using/ searching the internet efficiently to find detailed and specific information. (Excel, Internet Explorer, Safari, Numbers) (2Investigate)	Use a range of media programs (word processing, imaging, sound) in a cross curricular format – showing an awareness of audience. (Word, Pages, E-Book creator, Garage Band, Music Toolkit, Powerpoint, Movie maker, iMovie, RNA) (2Publish, 2Publish2, 2Animation,2Paint a Picture, 2Design and Make)	Understand how to report/ deal with inappropriate situations whilst using electronic communication. Understand about their "digital footprint" and how to keep themselves safe. Understand what SPAM and copy write is and how this might affect them. (Purple Mash – Computing – Online Safety)