Computing Progression of Skills

	EYFS	Key Stage 1		Lower Key Stage 2		Upper Key Stage 2	
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
E safety	Understand that pop ups need reporting to a trusted adult, not clicked on Understand that password should be kept safe and not shared	Understand that log in information needs to be kept safe. Save work in a safe personal folder	Understand what may happen if online searching is not safe. Be aware of how to report unkind behaviour and things that upset me online to a trusted adult	Explain the importance of having a secure password and not sharing it with others and what could happen if password not secure. Understand the importance of keeping safe online and behaving respectfully Use communication tools respectfully and use good etiquette Know how to report unacceptable content and contact online to a trusted adult	Understand that information put online leaves a digital footprint. Understand what malware is and how they can reduce the risks by being careful when downloading new software and apps. Understand the difference between researching information and copying it and the consequences of plagiarism. Understand the positive and negative influences of technology and how to balance screen time and other parts of their lives.	Understand the impact of sharing digital content to others and themselves. Understand advantages and disadvantages of altering images digitally and give reasons for this. Be aware of the impact of sharing inappropriate text, photographs and videos online. Ensure reliability when searching for information and how to check validity of their searches.	Identify benefits and risks of mobile devices sharing or accessing your location. Understand how to maintain appropriate online behaviour and how this can protect themselves from dangers online, understanding the risks of giving away personal information. Explore the reasons why people may be tempted to spend more time playing games or find it difficult to stop playing and the effects on their health.
Computer science	Be able to program a Beebot to get from one point to another Begin to understand the term debugging,	Explain that an algorithm is a set of instructions Know that Computer programmes turn algorithms into a code that the	Explain that an algorithm is a set of instructions Algorithms need to be carefully planned so it can work when turned into a code	Design an algorithm carefully, thinking about what it can do and how it can be turned into a code Identify errors in codes and fix them (debug)	Plan a range of algorithms for a scene created by different objects. Understand selection in programming and how an IF statement works.	Review existing coding knowledge and begin to simplify code when making a playable game. Understand what decomposition and abstraction make good	Plan a playable game using selection and variables and to understand the launch command. Use functions and understand why they are

	when beebot doesn't go where you want it to	computer can understand Work out what is wrong when the steps are out of order in instructions Say that if something doesn't work how it should, the code is incorrect Fix a code that isn't working properly (debug) Make predictions of what is going to happen in a program.	Design a simple program that achieves a purpose Find and correct errors in simple programs (debug) Say what will happen in a program Spot something in a program that has an action or effect (it does something)	Identify the difference between the effect of a timer or repeat command in my code Know that variables store information while a program is running (executing) Identify if statements, repetition and variables Read programs with several steps and predict what they will do Identify different ways that the internet can be used for communication	Understand how to use co-ordinates with programming by using x and y properties of objects. Understand the repeat until command and explain how it works. Understand variables and to use a number variable. Create a program which includes an IF/ELSE statement.	attempts to break down a task into achievable steps. Understand friction in code and how functions work in code to make their work more efficient. Understand different types of variables and some of the ways they can be used differently when coding.	useful as well as how they are created. Identify errors in coding and debug them. Understand different user input and how to use it in a program. Understand how to create a text-based game and design their own carefully considering how to turn their algorithms into code.
Information Technology	Log on and off Open up programs Shut down programs Begin to use a range of hardware Collect information as photos or sound files	Recognise what is text, sound and pictures Use text, sound and pictures in a presentation Change the text, sound and pictures in a file Name and save work Retrieve work to continue working on Take photographs, video and record sound to record learning experiences	Edit digital data such as data in music composition software Name, save and find work Include photos, text and sound in creations Organise data Find data using specific searches Use several programs to organise information, using binary trees or spread sheets	Carry out searches to find digital content on a range of online systems, using an internet search engine. Consider the most appropriate software to use when given a task Create purposeful (appropriate) content and attach it to an email Collect data and input it into software Analyse data using features within software to help (spreadsheets) Present data and information using	Use search technologies effectively and understand the layouts of search technology. Create content to achieve specific goals such as collecting, analysing, evaluating and presenting data. Explore how font size and style can affect the impact of a piece of text. Assess texts using criteria to judge suitability for the intended audience. Interpret a variety of incoming	Make connections between thoughts and ideas. Understand what word processing is used for and how to create a document by altering the look of the text. Add features to a document to enhance its look and usability. To use tables to present information by using editing properties Use formulae to convert measurements of length and distance.	Understand how blogs can be used as an informative text. Understand the approval process that posts go through and demonstrate awareness of inappropriate posts and cyber bullying. Assess the impact of blog posts and consider the end user. Know what a spreadsheet looks like using Microsoft Excel and how to enter data into cells.

	Use a simple pictogram or set of photos to count and organise information	Look at how data is representing digitally Contribute to and interpret a pictogram		different software such as branching database or graphing tools	communications and apply these to their word processing. Explore how numbers entered into cells can be set to currency or decimals. Explore how to add formulae to a cell to carry out a calculation within the cell. Create line graphs using appropriate data before interpreting the information. Use number formatting tools to appropriately format numbers.	Use formulae to calculate area and perimeters of shapes. Create formulae that uses text variables. Understand the different ways to search a database and use the information to answer questions. Create a database and understand how to word questions so they can be effectively answered when the database is searched.	Understand basic formulae in Excel and how using this software can save time when performing calculations. Use the SUM function within Excel. Create graphs to represent their data. Use formulae for percentages, averages, max and min within a spreadsheet.
Digital Literacy	Talk about the different kinds of technology we have in the world around us.	Recognise what technology is. Talk about the different technology in school Talk about different technology at home Understand the differences between old technology and new technology	Find information using a search engine Share work and communicate electronically, using emails Talk about where technology is used in school Understand that our work needs similar skills to the adult world,	Recognise common uses for technology beyond the school environment. Use technology safely and respectfully ensuring personal information is kept private. Identify where to go for support when they have concerns about content online.	Talk about the school network & the different resources they can access, including the Internet Frame questions & identify key words to search for information on the Internet Consider reliability of information & ways it may influence you	Identify different parts of computing devices. Identify different parts of the Internet Choose appropriate tools for communication and collaboration and use them responsibly Use effective strategies to search with appropriate search engines Talk about the different elements on web pages	Describe different services provided by the Internet & how information moves around the Internet. Describe different parts of a computing device & how it connects to the Internet. Connect a computing device to a keyboard, mouse or printer Identify appropriate forms of online communication for different audiences.