William Gilbert Endowed C of E Primary School and Nursery Computing Progression Map

		EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Computer Science (CS)	**Programming**	a) Use a CD player. b) Give examples of programmable toys. c) Press buttons on programmable toys and notice the effect. d) Program a toy to perform a simple action.	a) Understand what instructions are and why they need to be clear. b) Use specific vocabulary to ensure instructions are accurate. c) Push buttons to create simple programs. d) Suggest ways to fix an error in a program.	a) Explain what an algorithm is. Using Bee-Bots: b) Create sequences of instructions to move programmable toys c) Predict what might happen if an algorithm is followed. d) Debug programs created	a) Explain that coding is the language used to give instructions to computers. On Scratch: b) Create a background and sprite. c) Add simple inputs to an algorithm to give a certain output. d) Debug errors in digital programs.	On Scratch: a) Use sequence in a program to make actions happen one after another. b) Use repetition to control the sprite c) Detect errors in programs and debug them through trial and error.	On Scratch: a) Predict the outcome of programs. b) Use selection to control the sprite (if...then...) c) Create and edit variables.	On Scratch: a) Design, write and debug programs to achieve a specific goal. b) Solve problems in programs using decomposition. c) Evaluate programs to improve their efficiency. Physical Systems: d) Understand what a physical system is and give examples. e) Use simulation to imitate a real-life scenario.	Spring 1 – Programming Shapes On Scratch: Draw shapes and produce Mondrian style artwork. Use iteration, repetition and programming blocks to make codes more efficient. Using decomposition. Spring 2 – Inside a computer and binary Recognise key components and architecture of a computer system. Understand how computers think using the binary system. Exploring how computers can be used to represent numbers, text (ASCII), images and sound. Consider the use of hexadecimal to represent colour values.
	Online	a) Play games and watch videos online. b) Use the internet to support learning.	a) Identify pieces of technology that go on the internet. b) Describe what the internet can be used for. c) Explore websites to find out new information.	a) Explain what a website is and describe its features. b) Navigate through websites using different buttons. c) Answer questions using the information on websites.	d) Retrieve text and images from the world wide web.	a) Recognise that not all content and contacts online are trustworthy. b) Understand that not all online sources of information are reliable. c) Ensure information online is reliable through cross-checking.	a) Describe what a computer network is and how content can be shared. b) Explain how the internet works. c) Understand how search results are selected and ranked by the search engine.	a) Explain how a website is made up of webpages. b) Describe and evaluate features of a webpage. c) Understand what is meant by copyright. d) Use hyperlinks to link different web pages together.	Autumn 1 – E-Safety Using search engines with sensible use of key words, filtering of results and consideration of reliability of content. Summer 1 – Web Authoring Using HTML and CSS mark up languages to make a website.
Information Technology (IT)	**Uses of Technology**	d) Give examples of technology. e) Identify uses of technology. f) Say how technology can help us.	a) Recognise what technology us and how it helps us. b) Identify the main parts of a computer. c) Use the mouse to move the cursor and select things.	a) Describe uses of technology at home, in school and within the community. b) Technology has different benefits, but can also cause problems.					
	Word Processing	a) Explore pressing keys on keyboards. b) Identify letters and numbers on keyboards. c) Recognise keyboards on different pieces of technology.	a) Recognise that keyboards are used for typing letters, symbols and numbers. b) Use the back space key to delete content. c) Use the space bar to separate words.	a) Use the 'caps lock' and 'enter' keys. b) Use full stops are used to separate sentences. c) Save work using 'Save As' and retrieve work from files.	a) Insert varying punctuation to punctuate sentences. b) Change text by font, size and colour. c) Underline text and make it bold.	a) Change the orientation of a page. b) Insert and manipulate text boxes. c) Insert bullet points to create a list. d) Use spell check to edit text.	a) Organise text in different ways to suit the purpose of a task. b) Insert tables to show information. c) Manipulate cells in tables to suit the purpose of a task.	a) Manipulate, text, graphics and page layout within different software programmes according to the purpose/requirements of the task	Autumn 2 – House Play Project On Microsoft Word: Writing a letter, editing text and using functions.
	Multimedia	a) Watch and listen to music, sounds and video using technology. b) Take photos using cameras/iPads. c) Create pictures using technology. d) Play games on the interactive whiteboard.	a) Recognise that pictures can be created in different ways. b) Use different tools on the computer to create different lines and patterns. c) Create artwork on a computer using digital tools.	a) Create digital music using a computer. b) Compare digital music to music played by hand. c) Evaluate and edit digital music.	a) Retrieve images from files and from the world wide web. b) Copy images from the internet and paste them into a document. c) Edit images by size, position and rotation. On PowerPoint: d) Insert slides. e) Change backgrounds of slides. f) Insert text and images onto slides.	On PowerPoint: a) Insert and manipulate a range of media. b) Use transitions to move from one slide to another. c) Use animations to change how media enter and exit the slide.	On PowerPoint: a) Use transitions and animations to improve the quality of their presentation b) Present to a large group/class using notes/presentation made	On PowerPoint: a) Insert hyperlinks. b) Add timings to transitions/animations. c) Combine text, graphics and sound to suit an audience and purpose. d) Rehearse timings before presenting to an audience.	Autumn 1 – E-Safety On PowerPoint: Understanding design principles such as use of white space and simplicity of design. Manipulating font and editing images. Autumn 2 – House Play Project Designing a logo. Making an animation using media editing software. Summer 2 – Bitmaps and Sound Exploring how computers store images and sound using binary. Produce Pixel art using Excel. Consider how bitmap images differ from Vector images.
	Data Handling	a) Collect objects in different ways. b) Sort objects in different ways.	a) Label and group objects in different ways. b) Count objects to create a tally. c) Ask questions about objects that have been sorted.	a) Use tally charts show how many of each object/thing have been counted. b) Describe what a pictogram is. c) Use computers to create a pictogram.	a) Sort objects/things on their attributes. b) Describe what a branching database (or data branch) is. c) Use yes/no questions within a branching database to classify things.	a) Explain what a database is. b) Create a database to organise data. c) Search databases for specific information.	a) Enter data into a spreadsheet b) Select data to produce a graph. c) Manipulate the design of a graph using editing tools.	a) Identify types of data within cells. b) Use formulae to complete simple calculations. c) Use functions to complete more complex processes.	Autumn 2 – House Play Project Build a model using Microsoft Excel. Using spreadsheet terminology Formatting tables. Using simple formulars
Digital Literacy (DL)	**Online Safety**	a) Too much time on a device isn't healthy for us.	a) Understand that information on the internet can be seen by others. b) Know to tell an adult when something worrying is seen online.	a) Understand why personal information should be kept private. b) Know to report anything heard or seen online that we are concerned about to a trusted adult.	a) Recognise that websites and online games are designed for different age groups. b) List benefits on playing online games. c) Understand problems that can occur when playing online games.	a) Explain what is meant by social networking. b) Recognise chat features/apps and what can be sent through these. c) Understand different types of chats and their dangers.	a) Recognise that online identities can be different to 'real-life'. b) Explore how online images can be manipulated. c) Understand the importance of communicating with people you trust. d) Know to report any concerns about online behaviours.	a) Explain what is meant by a digital footprint. b) Give examples of unacceptable online behaviour (age and stage appropriate). c) Understand how online behaviours can impact how people feel and behave. d) Know different ways to report and evidence concerns of online activity.	Autumn 1 – E-Safety Being safe when using computers, computer skills such as basic operation, e-mail, web browsing and making folders in order to promote fluency in the use of technology such as saving and retrieving work, filenames and structures
	Evaluating Digital Content					a) Recognise that not all content and contacts online are trustworthy. b) Understand that not all online sources of information are reliable. c) Ensure information online is reliable through cross-checking.	a) Understand how search results are selected and ranked by the search engine.	a) Evaluate webpages and websites. b) Understand what is meant by copyright.	