Little Heaton C of E Primary Long term plan Computing overview.

(insert SUBJECT NAME) will be taught in a block for one half term each term through weekly lessons – Our subject focus, knowledge and skills are sequentially planned so progress and links occur over the 7 years of Primary Education EYFS,KS1-KS2).

KEY: DIGITAL LITERACY COMPUTER SCIENCE INFORMATION TECHNOLOGY

	Autumn 1	Spring	Summer
EYFS Reception			
KS1 Year 1	**Internet safety. What do we know about the internet? Introduction to school systems and expectations when online.** **Password Safety.** **Logging into a network. Introduction on how to log in independently using a generic password.** **Technology outside school. We ask pupils to consider how technology is used outside of the school environment. To help do this, the pupils go on a walk around their local community.** **Pictograms. An introduction to pictograms and looking at how they can be used to represent data.**	Using Purple Mash using username & password. Introduction into using home/school facility on Purple Mash called 2Do. Work is set at school and done at home independently. Maze Explorers! Using direction function keys and number keys to move a 'sprite' through ever increasingly complex mazes. Animated Story Books! We provide an opportunity for the pupils to develop the skills to create, organise, store, manipulate and retrieve digital content through the creation of their own animated story book.	**Coding:** **Introduction to 'drag & drop' skills – build on using directional function keys and changing backgrounds needed to build code strings, make a sprite move by writing an unambiguous a code string and changing backgrounds. Introduction to the language of coding and understanding systematic working.** **Grouping & Sorting** Pupils will sort items by different criteria away from the computer before doing the same at the computer using an online app. Introduction to Spreadsheets. Spreadsheets. An introduction to a simple spreadsheet for beginners.
KS1 Year 2	**Internet safety. What we know about how our school systems work, and expectations when online.** **Online Safety.** **Introduction to understand the dangers when working collaboratively on-line, receiving emails or sharing work.** **Begin to log in independently to the school network using a personal user name & generic password and accessing Teams independently.** **Coding.**	Questioning. Pupils learn about the importance of phrasing questions and that certain data-handling resources are limited in the answers they can provide. Effective Searching. Children learn that skilful searches are essential for 21st-century learning and information literacy. With abundant information at our fingertips, it is important to understand and reinforce good searching.	**Spreadsheets.** **Creating a Spreadsheet from cross-curricular activities such as maths or science.** **Making Music. Using home/school 2Do application children work on projects at school and finish at home.** **Children build on knowledge and understanding to create simple and more complex animations using a software Sequence suite. The pupils will use 2Sequence to explore harmony and build up musical scores.**

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	Building on Year 1 children now explore program design and put computational thinking into practice using more complex language and coding blocks. Begin to understand and try to debug a code string.		**Creating Pictures.** **Children use Purple Mash - Microsoft Paint - Apple Paintbrush to explore different image creating software.**
KS2 Lower Year 3	**Internet Safety.** **Online Safety.** **Introducing personal password access for the school online network. Introduction to blogging. Reminder of not believing everything is true on the internet.** **Coding.** **Building on Year 2. Children begin to understand the wider concepts of code, including explaining what they will do and why before building a program.** **Understanding why it is important to work systematically when debugging a code string.**	Spreadsheets Creating charts, bar charts and graphs from data created using an electronic format. Data processing skills taught for input of data via a tablet & keyboard. Touch Typing. Using home/school 2Do facility children are encouraged to work from home to practise and improve their digital literacy skills. M.S. PowerPoint. Introduction to creating a PowerPoint Presentation. Link to cross-curricular activity Geography. Children will use Teams Home/school to look at PowerPoint desktop and online versions and the different platforms 'cloud' & 'drive' to save their work.	**Using Stop-Motion Animation Software.** **Looking at Aardman Animation films and the techniques used to create animated movement from photographing an object that is physically manipulated in small increments so that they will appear to exhibit independent motion or physical change.** **Simulations.** **An introduction in to what a simulation is and why they are used. Children explore what the advantages and disadvantages of simulations are.** **Introduction to Scratch Coding Software.** **Children will follow the planning from Year 6 using Scratch animation Software.** **Children In Year 6 will have created a set of algorithms for the children to use to make a simple coded animation in Scratch as an introduction to scratch.**
KS2 Lower Year 4	**Internet Safety. Based on NOL Safety Initiatives. Using a relevant online safety issue Posters directly affecting students.** **Online safety.** **Understanding identity theft, digital footprints and how phishing sites can steal your online identity.**	Writing for Different Audiences. Children look at a variety of online communication applications. They then write a newspaper report – email with attachments – M.S Word desktop and Online version, changing fonts and styles– PowerPoint is then used to create a presentation on their learning using explaining the differences. Coding & Debugging CAD/CAM able software.	**Animation using Scratch** **Scratch is a block-based visual programming language website and builds on the Purple Mash Coding software and the introduction to Scratch in Year 3.** **Spreadsheets.**

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	Effective Searching. **How to be a good researcher. Builds on from Year 2.** **Using search engines effectively. Looking at a variety of search engines Safari – Edge – Google - duckduckGo** **Hardware.** **To develop a greater understanding of what makes up a computer. Naming the parts and what they do.**	Code 2Logo design software to create a variety of ever more complex shapes and diagrams that could be used with a computer aided machine.	**Using the formatting and formula functions in a spreadsheet. Looking at how we can explore numbers and make practical use of a spreadsheet in maths.**
KS2 Upper Year 5	Internet Safety. Online Safety. Responsibility and Behaviour online. Understanding the digital world beyond school, and realise online activity leaves a 'digital footprint' that can be tracked and traced. Word Processing with M.S Word. Using both desktop and online versions children will consider copyright and plagiarism issues when choosing images or copy & paste facility.	Using LEGO WeDo2. Understanding the difference between an Instruction and an algorithm. Children follow instruction to build a LEGO programmable Robot and the use algorithms to make the robot move. Teaching Lego WeDo2 Coding to Younger Children Designing and creating a simple Lego Model for Year 2 to build and then code. Cross-Key stage collaboration. Children in Year 6 using their knowledge to help younger children how to code a programmable robot. **3D Modelling.** **Creating 3D models using design software. Children create a variety of 3D models from paper 'nets.'**	**Excel Spreadsheets.** **Introduction on how to use a specific universally accepted data processing software.** **Concept Maps** **Using Mapping software to how electronic concept maps help with all aspects of effective planning. They can be added to and deleted in parts as you go along and how they make collaborative research easier.**
KS2 Upper Year 6	Internet Safety Online Safety Wider World Ready. Social Media, privacy and respect. Standing up to peer pressure and understanding behaviour in a virtual world needs constant self-awareness. Text Adventures. Building on M.S Word in Year 5 children write up hand written English using laptop and a tablet. They then email	**Blogging.** **Creating a class blog for feelings and thoughts and sharing their news.** **Networking.** **How did old people communicate?** **Children use the questionnaire to generate responses from people who were around before the internet. They create a concept map on how they use the internet. What is the world wide web and what is difference between it and the internet.**	**Understanding Binary.** **Introduction 'ready for High school' in understanding code for computers are 1's & 0's called binary digits and that is why it is called digital technology.** **Creating a Scratch Animation Plan for a Younger child to follow. A follow on from Year 5. Children use prior knowledge of coding to help introduce Scratch to Year 3. The design and animate a simple 'sprite'**

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	their work to a peer group for peer assessment using edit tool.	**Excel Spreadsheets.** **Introduction on how to use a specific universally accepted data processing software.**	**Quizzing.** **Using a variety of electronic question based software to create fun quizzes. To use 2quiz to create a picture based quiz for KS 1 – M.S. Forms software for older children to have an end-of-Year social quiz.**