Ash Grove Primary Academy
Computing Progression Grid

As technology is integral to today's society, our pupils will develop many skills such as; keeping safe, problem solving, communication and logical reasoning. They will be able to present their work using various software, creating charts and navigating the online world safely and confidently whilst ensuring they are digitally literate.
We have created a comprehensive progression document for staff to follow to best embed and cover every element of the computing curriculum. The knowledge and skills statements build year on year to deepen the understanding of our learners. All staff are aware of their year group expectations, and what comes prior/next in order to maximise pupil progress. We endeavour to weave this curriculum into everyday lessons in order to facilitate and develop digital literacy through application.

At Key Stage One:	**At Lower Key Stage Two:**	**At Upper Key Stage Two:**
Children will learn the basics of digital literacy, computer science and information technology. They will start to use Microsoft word packages, basic coding skills as well as understand the importance of keeping safe on the internet. In KS1 children will understand and start to use basic apps for a variety of computing elements.	Children will further develop their understanding of the 3 main elements of computing; including Powerpoint and Publisher. They will also discover a variety of apps. In LKS2 children are aware of the dangers of the internet and devlop this further to undertsand internet jargon. They will also further develop their coding based on KS1 and look at more in depth algorithms and how to debug and fix them.	Children are secure in all computing elements and start to use the skills learnt in KS1 and LKS2 to develop games and other media from prior knowledge. Children will know how to code and debug games and will be proficient in the use of all Microsoft packages. They will also be aware of the dangers of the internet and how to keep safe when online.

The Key Stage One curriculum builds on the experiences gained throughout the Early Years. The following identifies Early Years computing experiences at Ash Grove.

Technology – Knowledge	Digital literacy	Information Technology	Computer Science	Vocabulary
Early Learning Goals: Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. Children find out about and use a range of everyday technology. They select appropriate applications that support an identified need – for example in deciding how best to make a record of a special event in their lives, such as a journey on a steam train.	I can identify what technology is in the classroom I can identify and explain, the uses of technology, in and around, my classroom (including Twitter etc.) I can discuss what technology is in my home and what is used for. I can explain that information can be retrieved from computers.	I can turn on digital equipment. I can handle technology with care. I can interact with technology. I can turn on/off digital equipment. I can interact with technology purposefully (navigating an iPad). I can use technology to take a picture. I can use technology to record a video	I can complete a simple programming sequence using a range of technology (BeeBots, programming games online) I can give instructions using Walkie Talkies (algorithms)	Sequence Technology Digital Equipment information Tweet

Computing – Digital Literacy (An individuals ability to fimd, evaluate and compose clear information through various mediums and digital platforms)			
	Key Stage One	**Lower Key Stage Two**	**Upper Key Stage Two**
Knowledge	• How can we be safe online • How can we communicate online • Can you give advice on how to keep others safe online	• Understand what the term cyber bullying means • How can we keep our personal information safe? • Understand what adverts are and how companies use them • How are websites and search engines different?	• What impact does emailing have on today's society? • How has the internet changed over time? • How do you know data is accurate?
Disciplinary Knowledge	I can explain what 'Online Safety' means. I can explain how to communicate safely online. I can explain who to tell if I feel unsafe online. I can recall the 'SMART' rules for online safety. I can understand what personal information should be kept safe online. I can give advice to others about keeping safe online.	I can explain 'Cyberbullying' I can explain where cyberbullying can take place. I can identify adverts online including how a website is organised including (hyperlinks, graphics and text) I can find specific information from a website safely. I can explain how companies use websites for their products. I can create a strong password. I can explain why a strong password is important. I can explain what privacy settings are. I can identify online communities I am part of. I can discuss the positive and negative aspects of online communities.	I can explain what 'phishing' is and can recognise the signs. I can identify a 'spam' email. I can explain what to do with spam email. I can explain the steps to take to avoid spam emails. I can create a strong password using a set of given rules. I can understand that not everything I see online is true. I can identify unsafe online behaviour. I can collaborate and create an online blog and discuss its features. https://www.squarespace.com/templates I can use a range of sources for research to check validity and the impact of incorrect data.
Vocabulary	technology purposes E-safety cyberbullying personal information private	World Wide Web (WWW) navigate web page dynamics search engine	electronic communication implausible copyright web tools authority sponsored link advertising publish spam virus validity

Expectation of skills progression			

Computing – Computer Science (The study of computer hardware and software design. It encompasses both the study of theoretical algorithms and the practical problems involved in implementing them)			
	Key Stage One	**Lower Key Stage Two**	**Upper Key Stage Two**
Knowledge	Understand the purpose of a range of different technology, e.g. tablets, laptops, microphones, cameras etc. To understand what algorithms are and how we use them	Design and create a range of programs, systems and content	Develop understanding of how technology works; how computers process instructions and commands, including the use of coding languages. (Scratch) Deconstruct and investigate the effect of changing variables in simulations. (Scratch and Program) Use assisted programming software, then more complex programming software which interacts with external controllers, and elements on screen, creating algorithms and using logic and calculations. (program)
Disciplinary Knowledge	*Children to continue using BeeBots to develop understanding of coding and programming moving onto using Scratch JNR as an iPad/laptop based program.* I can create instructions using pictures I know what an algorithm is I can see how a product changes when I change the instructions. I can de-bug my work. I can program a Bee Bot to move I can describe and use instructions to program a character I can program a character to grow and shrink I can use instructions to make characters move at different speeds and distance I can use a repeat instruction I can create programs with a sequence of linked instructions	I can create and debug using the move, repeat and rotate commands I can create and debug algorithms using pen up and pen down I can create and debug algorithms that draw regular polygons I can create and debug algorithms to draw shapes I can create and debug algorithms to draw patterns I can write a variable value where required (input/output) I can use calculations as variables	I can design and program a character game I can design my own characters and backdrops I can add features or effects to enhance a game I can create an original animated game with a specific goal I can program costume changes for a sprite I can add point scoring and levels to game code. I can create events as a consequence to another action I can use code to code to increase the value of a variable
Vocabulary	Algorithms Debug Data Program precise evaluate, arrow buttons	clear screen (sc) variable rotate sprite block background/backdrop decompose logical sequence variables input output	script gradient animate animation iteration transition

Expectation of skills progression			

Computing – Information Technology (Is the use of computers to store, retrieve, transmit and manipulate data or information, often in the context of a business or enterprise)			
	Key Stage One	**Lower Key Stage Two**	**Upper Key Stage Two**
Knowledge	To use technology purposefully to create digital content, begin to save and retrieve pictures and text (PowerPoint, Microsoft Word – children will need to already have prior knowledge of login on to a laptop, locating and launching the programs needed)	Know that ICT enables access to a wider range of information & tools to help find specific information quickly.	Know that ICT can be used for a range of purposes and that it can be used to collate data and
Disciplinary Knowledge	I can use two hands to type on a keyboard I can use the shift key for capital letters I can type symbols I can edit text I can use undo and redo I can select and format text I can format the font- colour, size, style bold, italics and underline I can create a simple presentation I can use a search engine (Google) to research information I can use navigation skills to access the correct parts of a website I can follow links made by the teacher to research information	I can use <shift>, <CAPS LOCK> and <space> correctly I can edit using <backspace>, <delete>, the arrow keys, undo and redo I can align text I can use bullets and numbering I can insert and format text boxes I can create slide templates and organise slides with hyperlinks I can add theme, transitions and animation to a presentation I can insert audio and video into slides.	I can format images for a purpose (snipping tool adding to a document) I can use formatting tools to create an effective layout (publisher) I can use the spellcheck tool (word) I can insert and format a table in a word processing document (Microsoft word) I can change a page layout for a purpose- orientation, size and using columns. I can create hyperlinks with a word document I can create the layout of a comic strip using photos in a desktop (publisher) I can edit and enhance photos and text for presentation (iMovie) (Adobe I can arrange and layer objects, including titles and backgrounds I can add and arrange photos to a movie presentation.
Vocabulary	Word processor launch type shift key caps lock undo, redo, bold, italic, edit, backspace, arrow keys, format, font, layout, insert.	align copyright bullets review spelling spellcheck highlight, audio embed	production audio and video segments timeline transitions publish convert

Expectation of skills progression			