Wilkinson Primary School - Progression in Computing Skills and Knowledge

*Please see Computing Long Term Plan to see which Year Group these skills are taught in

Programmer		
KS1	Lower KS2	Upper KS2

• Press the buttons in the correct order to make my robot do what I want.
• Describe what actions I will need to do to make something happen and begin to use the word algorithm.
• Begin to use the word debug when I correct mistakes in a program.
• Begin to predict what will happen for a short sequence of instructions.
• Create a simple computer program that includes multiple instructions.
• Test a simple program, notice bugs and make changes to improve it
• Use the words debug and algorithm
• Describe to other children how they created a program, and what they hoped to achieve.
• Be able to describe what happened when a set of instructions was run, and whether it achieved the desired outcome.
• Suggest simple reasons why a program did not work correctly.
• Be able to predict the behaviour of a simple program, and to test that prediction.
	• Be able to explain, in simple terms, key vocabulary in programming, including algorithm, program, code/ instruction, variable
	  ○ if-then
	  ○ loop
	  ○ broadcast/receive
	  ○ if/then/else
	• Work independently or with other learners to create pieces of code in age appropriate software and combine sections of code to solve a problem.
	• Be able to predict the behaviour of an algorithm or section of code and to test that prediction.
	• Where a program did not work correctly, locate the specific code, and work (with support if required) to solve issues.
	• Work independently or with other learners to create more complex pieces of code including loops in age appropriate software and combine sections of code to solve a problem.
	• Enhance games by using, for example, sound recordings
	• Work independently or with other learners to create complex pieces of code including:
	  ○ broadcast and receive
	  ○ if-then-else
	instructions in age appropriate software and combine sections of code to solve a problem.
		• Work in 3 dimensions combining the code of different elements
		• Plan the purpose and environment of their games in advance
		• Be able to explain, in simple terms, key vocabulary in programming, including when-then
		• Work independently or with other learners to create complex pieces of code including
		  ○ 'when-then'
		  ○ Multiple variables (e.g. timers, scores – both adding and removing)
		  ○ Multiple actions
		  ○ Consequences
		  ○ Constraints
		in more complex age appropriate software
		• Enhance games by using sound and visual effects, camera angles
		• Share programs or games and give/receive feedback to other children about their programs or games.
		• Plan the purpose, components, degrees of difficulty and environment of their games in advance
		• Share programs or games and give/receive feedback to other children about their programs or games.

• Suggest specific reasons why a program did not work correctly, and work, with support, to solve issues.		

Publisher		
KS1	Lower KS2	Upper KS2
• Design and create publications (e.g. eBooks) that combine text and images • Format text and images in a publication to engage and interest the reader. • View own publications and evaluate against agreed success criteria.	• Understand that web designers will adapt the style, content and structure of a website based on their audience • Work independently or with other learners to plan the structure of a webpage with a specific audience and purpose in mind. • Add a range of objects to a webpage, such as text, titles, images, graphs/charts, hyperlinks and buttons. • Evaluate the effectiveness and suitability of own webpages against agreed success criteria. Give useful feedback to other learners • Design and create multimedia publications (e.g. eBooks) that combine text, images and audio/ video. • Add hyperlinks in to an e-book to link contents to sub sections.	• Embed media (e.g. video/audio) into a website • Adapt language, formatting and objectives to different media or target audiences. • Create a website with multiple pages, each page being a different area within the overall subject • Create links within webpages and hyperlink to other sites and resources • Ensure a professional 'look and feel' to digital publications • Design and create multimedia publications (e.g. e-zine) that combine text, images and audio/ video. • Add hyperlinks in to an e-zine to link contents to sub sections and to external sources. • Combine content created in different applications into a single publication

Designer		
KS1	Lower KS2	Upper KS2
• Understand that technology can be used to manufacture objects created on-screen • Work individually or with others learner to modify and/or create a simple design • Select and use a range of simple drawing tools with software to produce a design	• Work individually to modify and/or create a simple design in 3 dimensions • Select and use a range of tools to create and manipulate shapes to produce a design in 3 dimensions • Suggest possible improvements to a design	• Modify and/or create complex designs with multiple elements with accuracy • Select and use a range of drawing tools to create complex and compound shapes, including extruding and hollowing shapes • Select and use a greater range of textures and surfaces to accurately represent reality

Broadcaster		
KS1	Lower KS2	Upper KS2
• use their voice expressively to bring the story to life • begin to use the basic principles of editing (trimming audio, moving audio around, the idea that sound is shown as a waveform) • suggest ways they could improve their work	• Listen to, reflected on and shared a range of recordings • Recognise the differences between a live and recorded broadcast • Plan and script a broadcast, include the place/timings of music and sound effects in a script • Use sounds/music to represent objects or create moods • Use effective expression and volume when speaking on a recording	• Understand what a WIKI is and how/why it is used • Embed media (e.g. images) into a wiki within a learning platform. • Adapt language, formatting and objectives to different media or target audiences. • Share publications beyond the school e.g. onto the school website.

Data Handler		
KS1	Lower KS2	Upper KS2
• View a range of graphs, charts and spread sheets and understand the differences between the ways in which the data can be presented. • Identify where data is presented in graphical form in the wider world. • Work independently or with other learners to decide on the types of data to be collected and how that data can be presented. • Use a simple graphing application to present previously collected data.	• Understand that data is structured information and that it can be collected in a number of ways. • Work independently or with other learners to decide on the types of data to be collected and how that data can be presented. • Begin to sort the data in a simple spread sheet in order that conclusions can start to be drawn. • Present the database or spread sheet to others in order for the data to be interrogated.	• Decide upon what data is needed to be collected and select an appropriate way of collecting it. • Interrogate a set of data and draw sensible conclusions from it. • Arrange data in a spread sheet in order that conclusions can start to be drawn. • Present the conclusions from an interrogation of a set of data in an appropriate visual form.

Film Maker		
KS1	Lower KS2	Upper KS2
• Begin to understand the basic principles of editing (trimming, moving clips, etc.) • Use a plan as a basis for filming scenes. • Work with other learners to write a simple script and storyboard in response in preparation for filming. • Work with others to use a recording device to record digital video footage, following a simple script or storyboard.	• Independently use a recording device to record digital video footage, following a simple script or storyboard. • Work independently or with other learners to write a simple script and storyboard in response in preparation for filming. • Use video editing software to place clips in the correct order, to trim clips to an appropriate length, and to add simple titles.	• Work independently or with other learners to structure a film script and storyboard to include clear sections and a variety of filming techniques and media. • Use a recording device to frame shots appropriately (wide shot, close up etc.) • Be proficient at basic video shooting: holding the camera still, use of a tripod, simple panning. • Use video editing software to edit a narrative film, using a variety of techniques: trimming clips, splitting clips, adding images, sound effects, transitions and music.

Musician		
KS1	Lower KS2	Upper KS2
• Select audio clips that bring a story to life • understand and use the basic principles of editing (trimming, reordering, fading in and out the idea that sound is shown as a waveform) • suggest ways they could improve their work	• Evaluate a range of digital music and offer an opinion about its success and ways it may be improved. • Begin to use more complex software to compose own digital music, selecting from a range of loops and sound effects.	• Begin to use more complex software to compose own digital music, selecting from a range of loops and sound effects. • Trim, duplicate and adjust the volume and timing of loops and sound effects placing them in the most effective place within a piece.

Animator		
KS1	Lower KS2	Upper KS2
• Use onion skinning techniques • Understand the process of animation • Use the language of animation	• Begin to understand the principles of stop motion animation. • Plan a sequence of movements on a storyboard • Use a simple background and models/figures to create a short animation	• Understand the process and application of the stop motion technique of animation • Prepare detailed storyboards for projects, and actively evaluate and modify these before creating animations. • Review animations as they progress to ensure continuity

Presenter		
KS1	Lower KS2	Upper KS2
• View a variety of presentations; understand that some presentations are more effective than others and be able to offer a simple explanation as to why. • Work independently or with other learners to plan a simple presentation e.g. using a storyboard/plan. • Work independently or with other learners to add a selection of simple objects, including text and media, to a presentation. • Use simple appropriate animations to add emphasis.	• Understand what a blog is and how/why it is used • Embed media (e.g. video) from an external website into a blog post. • Adapt language, formatting and objectives to different media or target audiences. • Understand the etiquette of commenting on others' blog posts and comments	• Design and create multimedia publications (e.g. e-zine) that combine text, images and audio/ video. • Add hyperlinks in to an e-zine to link contents to sub sections and to external sources. • Combine content created in different applications into a single publication