Old Park Primary School Computing Skills Progression

Statements included show new learning in each year group. Learning from previous year groups is revisited across the curriculum, particularly in the first three coding sections.

KS1: Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions

KS2: Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Experiment with different programmable toys.	Follow given commands as a computer would (1.3) Know that a series of commands can be joined together (1.6) Create a simple algorithm to move a sprite (1.6)	Describe a series of instructions as a sequence (2.3) Recognise that programming projects need code and this is known as an algorithm (2.3) Know that a sequence of commands has a start and an outcome (2.6)	Build a longer sequence of commands to accomplish a set goal (3.6) Evaluate by design critically and add additional features based on this (3.6)	Identify that accuracy in programming is important (4.3) Decompose a program into parts (4.3) Create own program using loops (4.3)	Create algorithms using a wider range of programming techniques (5.3) Work with physical inputs or outputs (5.3) Design and create a program that uses selection (5.6) Evaluate the program to find ways it could be extended or improved (5.6)	Create algorithms for a project and explain choices (6.3) Experiment with different physical outputs (6.6) Determine the flow of program using selection (6.6) Design an algorithm for a project (6.6) Create a program based on a design (6.6)

Old Park Primary School Computing Skills Progression

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
	Make simple sequences using four directional commands (1.3) Plan and debug a simple program to move a robot. (1.3) Find more than one solution to the same problem (1.3) Sequence blocks of code correctly to move a sprite (1.6)	Design an algorithm (2.3) Create and debug a simple program (2.3) Begin to self-select simplified blocks of code to accomplish a given goal (2.6) Make any changes necessary to code to overcome problems (2.6)	Identify which blocks can be used to start commands (3.3) Create a project from a task description (3.3) Self-select blocks of code to accomplish a given goal (3.3) Select an appropriate input to trigger an algorithm (3.6) Design and evaluate own project (3.6) Create a program to move a sprite in four different directions (3.6)	Create a simple program in a text based language (4.3) Explain what repeat means and use a simple repeat command (4.3) Use a simple loop (4.3) Create own program using loops (4.3) Develop a design which uses two or more loops at the same time (4.6) Modify an infinite loop in a given program. (4.6) Design a project that includes repetition. (4.6)	Control a simple circuit connected to a computer (5.3) Design a project that uses a physical output (5.3) Write a program that includes count-controlled loops (5.3) Explain that a loop can stop when a condition is met (5.3) Create a controllable system that includes selection (5.3) Design and create a program that uses selection (5.6)	Define a variable as something changeable and give examples of them (6.3) Explain why and where variables might be used in a program (6.3) Use variables in a project creation (6.3) Test a program in an emulator and transfer it to a controllable device (6.6) Explain how selection can control the flow of a program (6.6) Update a variable with a user input (6.6) Use conditional statements to compare a variable to a value (6.6) Design a project that uses inputs and outputs on a controllable device (6.6)

Old Park Primary School Computing Skills Progression

			KS1: Use logical reasoning to predict the behaviour of simple programs KS2: Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs			
EYFS	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**	**YEAR 6**
	Explain what a simple command will do (1.3) Identify the effect of changing values within blocks of code (1.6) Explain what the different block of code within a program accomplish (1.6)	Explain what happens when we change the order of instructions. (2.3) Use logical reasoning to predict the outcome of a series of commands (2.3)	Identify the effect of given commands on sprites (3.3) Recognise that sequencing commands in different ways will have different outcomes (3.3) Test a program to find and fix bugs (3.6)	Identify the effects of changing values in a text based language (4.3) Predict the outcomes of code snippets and alter them to achieve the desired goal (4.6)	Test and debug programs (5.3) Identify and modify conditions relating to selection within a program (5.6) Know what effect conditional statements (if/then/else) will have on an output (5.6) Test a program (5.6)	Test the code that has been written and identify ways to improve and extend it. (6.3) Use a range of approaches to find and fix bugs (6.6) Test a program against a design (6.6)

Old Park Primary School Computing Skills Progression

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Recognise that a range of technology is used in different places around the home and school.	Identify examples of technology and say how they help us (1.1) Name the main parts of a computer (1.1) Know that computers can be used to store, organise and search information (1.4)	Identify some practical uses of computers in school, in the home and in wider society. (2.1) Explain how technology benefits us as a society (2.1) Know which devices might be used to take photographs (2.3)	Explain how digital devices function in a simple manner (3.1) Identify input and output devices (3.1) Recognise how devices affect the way we work (3.1) Know that computers can be used to share information and explore how they are connected to each other (3.1) Recognise the physical components of a network (3.1)	Demonstrate how information is shared across the internet (4.1) Describe where websites are stored and what types of media can be shared via the web (4.1) Describe how content can be accessed and added to on the web (4.1) Recognise how content on the web is created (4.1) Recognise that sound can be recorded digitally and identify the inputs and outputs needed to do this (4.2)	Explain that computers can be connected together to form systems (5.1) Recognise the role of computer systems in our lives. Explain their benefits and tasks managed by them (5.1) Recognise how information is transferred over the internet (5.1) Explain how sharing information online lets people in different places work together (5.1) Contribute to a shared project online (5.1)	Choose methods of communication to suit different purposes (6.1) Evaluate different methods of online communication (6.1)

Old Park Primary School Computing Skills Progression

KS2 ONLY: Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content						
EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
			Consider the benefits of desktop publishing (3.5) Consider how different layouts can suit different purposes (3.5) Recognise the advantages and disadvantages of using text and images to convey information (3.5) Use a search engine effectively (3.3)	Evaluate the consequences of unreliable content on the web (4.1) Explain how images can be changed for different uses (4.5)	Evaluate different ways of working together online (5.1) Compare computer and paper-based databases (5.4) Explain the benefits of using computer programs to compare data (5.4)	Compare results from different search engines (6.1) Refine web searches (6.1) Describe how a search engine selects results (6.1) Explain how search results are ranked (6.1) Describe ways that search results can be influenced and used to make money (6.1) Recognise the limitations of a search (6.1) Find copyright free images (6.2)

Old Park Primary School Computing Skills Progression

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Print out work unaided	Use a mouse and keyboard effectively to enter and manipulate content (1.1, 1.5)	Use a digital device to take a photograph (2.2)	Use digital photography and editing skills to create a stop-frame animation (3.2)	Use a digital device to record and playback sound (4.2)	Recognise that a video is just a series of pictures (5.2)	Discuss types of media used on websites (6.2)
Use a word bank to create simple sentences	Open and save work (1.1, 1.2, 1.5)	Explain what makes a good photograph and how photographs could be improved (2.2)	Import media from other sources (3.2)	Edit audio digitally including combining audio from other sources (4.2)	Identify digital devices that can record video and select the most suitable (5.2)	Know that websites are written using HTML (6.2)
Enter single letters from a keyboard to write words and sentences	Use a variety of tools to create digital pictures (1.2)	Use tools to edit and improve images (2.2)	Create questions with yes/no answers (3.4)	Evaluate editing choices made (4.2)	Select and use suitable devices and software to capture video (5.2)	Add content to a web page (6.2)
Use spacebar	Know how to alter the appearance of tools (1.2)	Recognise the different ways that data can be represented including tally charts, tables and pictograms (2.4)	Know that objects can be sorted by their attributes (3.4)	Describe how digital audio is stored on a computer (4.2)	Recognise the features of an effective video. (5.2)	Review and edit content on a webpage (6.2)
Use delete/backspace key	Identify when it is best to use a computer to complete a task and when it is not (1.2, 1.5)	Select objects by simple attributes and make comparisons (2.4)	Create branching databases and use them to identify objects (3.4)	Know that data gathered over time can be used to answer questions (4.4)	Identify how videos can be improved through reshooting and editing (5.2)	Understand what a navigation path is and link web pages using hyperlinks (6.2)
Move pictures into the correct positions	Know how to label, count, group and sort objects in the real world and link this knowledge to how computer databases work (1.4)	Begin to explain how we can use computers to present information in different ways (2.4)	Explain why a database needs to be well structured (3.4)	Use a digital device to collect data over time and identify appropriate data points to collect (4.4)	Use a form to record information (5.4)	Identify which questions can be answered using a set of data (6.4)
Use a painting program to create a representation and simple patterns	Answer questions about groups of objects (1.4)	Use digital technology to create musical patterns (2.5)	Edit the layout of text and images on screen (3.5)	Identify the data needed to answer questions (4.4)	Order, sort and group data cards (5.4)	Explain the relevance of data headings (6.4)
Select and add stamps or clipart to a picture	Improve fluency when using a keyboard (1.5)		Edit page settings (3.5)	Interpret collected data to answer questions (4.4)	Explain what a field and a record are (5.4)	Build a data set using a spreadsheet application (6.4)
Record and play sounds	Be able to edit text and change its appearance (1.5)		Add content to a desktop publishing application (3.5)	Change the composition of an image (4.5)	Outline how grouping and sorting data in different ways can help us answer questions (5.4)	Apply formulas to multiple cells and recognise that these can carry out mathematical operations (6.4)
Use buttons to navigate Internet	Make thoughtful choices about the appearance of text on the screen (1.5)			Select and use appropriate tools effectively to edit an image (4.5)	Choose multiple criteria to sort and group data including 'AND' and 'OR' (5.4)	Calculate, record and present the data needed to answer a given question (6.4)
Use keywords to describe objects					Apply my knowledge of databases to ask	Create and manipulate 3D digital objects (6.5)
Use a sound recorder to collect and store information as sound						
Explore a variety of ICT tools						
Talk about use of ICT						

| | | | | | and answer real-world questions (5.4)
Identify which tools are needed to produce a desired outcome (5.5)
Create a vector drawing (5.5)
Move, resize and rotate objects (5.5)
Use layers within a drawing (5.5)
Group objects to make them easier to work with (5.5)
Evaluate my work (5.5) | Construct a digital model of a physical object (6.5)
Compare working digitally with 2d and 3d graphics (6.5)
Suggest ways that models can be developed and improved (6.5) |

Old Park Primary School Computing Skills Progression

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
	Create and discuss rules for using technology responsibly. (1.1)	Recognise that there are rules to follow when using technology (2.1) Explain simple guidance for using different types of technology safely (2.1) Know that the right choices need to be made when using technology (2.1) Recognise that images can be altered digitally and may not always be real (2.2) Recognise what information is personal (2.3)	Begin to understand copyright and issues around it (3.3)	Discuss why a network needs protecting (4.1) Understand that not everything on the web is true and think carefully about content found online (4.1) Know that the content of websites is owned by the person who created them and that there are rules in place to protect this (4.1) Recognise that not all images are real and identify real and fake images. (4.5) Discuss the positive and negative effects of retouching images (4.5)	Consider the impact of the choices made when making and sharing a video (5.2)	Describe ways that search results can be influenced and used to make money (6.1) Decide what should and shouldn't be shared online and recognise that nowhere online is a private space. (6.1) Find copyright free images (6.2) Understand what is meant by the term 'fair use' (6.2) Recognise the implications of linking to content owned by other people (6.2)

The seperate Online Safety curriculum sets out coverage and progression of online safety skills more clearly. The skills in the Online Safety curriculum are embedded into each computing lesson to ensure full coverage across the year.