	CODING AND PROGRAMMING		
	ELG: PSED and EAD		
EYFS	•Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. •Explain the reasons for rules, know right from wrong and try to behave accordingly. •Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.		
KS1	Children understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions. They create, debug and use logical reasoning to predict the behaviour of simple programs.	Children can: • give commands one at a time to control direction and movement, including straight, forwards, backwards, turn; • control the nature of events: repeat, loops, single events and add and delete features; • give a set of instructions to follow and predict what • will happen; • improve/change their sequence of commands • by debugging;	Key Vocabulary: algorithm, instruction, order, debug, program, turn, left, right, clockwise, anticlockwise, blocks, sequence, project, repeat, repeat forever, invisible, grow, shrink.
LKS2	Children design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; they solve problems by decomposing them into smaller parts. They use sequence, selection, and repetition in programs and work with variables and various forms of input and output. They use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Children can: • use logical thinking to solve an open-ended problem by breaking it up into smaller parts; • write a program, putting commands into a sequence to achieve a specific outcome; • give a set of instructions to follow and predict what will happen; • keep testing a program and recognise when it needs to be debugged; • use variables to create an effect, e.g. repetition, if, when, loop;	Key Vocabulary: logical sequence, flowchart, sprite, block, command, algorithm, answer, correct, errors, program, algorithm, instructions, commands, forward (fd), left (lt), right (rt), move, turn, clear screen (cs), variable.
UKS2	Children design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; they solve problems by decomposing them into smaller parts. They use sequence, selection, and repetition in	Children can: • use external triggers and infinite loops to demonstrate control; • follow a sequence of instructions, e.g. in a flowchart and modify a flowchart using symbols; • use conditional statements and edit variables;	Key Vocabulary: flowchart, algorithm, control, output, symbol, start, stop, delay, process, decision, loop, backdrop, script, block, repeat, commentary,

	programs and work with variables and various forms of input and output. They use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	• decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program; • keep testing a program and recognise when it needs to • be debugged;	sequence, consequence, debug, program, world, object, tool palette, program environment, smooth, flatten, raise.