SCRATCH PROGRESSION

From first scripts to full games

Year 3 to Year 7

	Year 3	Year 4	Year 5	Year 6	Year 7
CONCEPT The big idea	**Sequence and events** Code runs in order, starting when something happens.	**Repetition and loops** Loops repeat code so programs are shorter and smarter.	**Selection and sensing** Programs make decisions about what is happening.	**Variables and operators** Programs store, change and compare values.	**Clones, lists and Python** Bigger programs built from reusable parts.
SKILLS What pupils learn to do	Y3.1 Workspace Find your way around the stage, sprite list, blocks and code area Y3.2 Sprites Add sprites from the library or paint your own Y3.3 Events Start a script with the green flag or a click Y3.4 Motion Move and turn a sprite, and set where it starts Y3.5 Looks Sound Change costumes, add speech and play sounds Y3.6 Sequence Put blocks in order, then spot and fix mistakes	Y4.1 Control Use repeat instead of copying blocks Y4.2 Control Use forever for things that never stop Y4.3 Events Control a sprite with key presses Y4.4 Motion Position and glide sprites using x and y Y4.5 Sprites Give several sprites their own scripts Y4.6 Predict Change a loop's numbers and predict the result	Y5.1 Control Use if to make a decision Y5.2 Control Use if else for two different outcomes Y5.3 Sensing Detect touching sprites and colours Y5.4 Sensing Ask a question and use the answer Y5.5 Variables Keep score with a first variable Y5.6 Testing Test a friend's project and suggest fixes	Y6.1 Variables Use variables for score, lives and timers Y6.2 Operators Compare values with >, < and = Y6.3 Operators Combine conditions with and, or, not Y6.4 Operators Use random numbers and calculations Y6.5 Events Send messages between sprites with broadcast Y6.6 Planning Plan a game with an algorithm first	Y7.1 Control Use clones for many copies of a sprite Y7.2 Lists Store and use data in a list Y7.3 My Blocks Make your own blocks with inputs Y7.4 Planning Break a big project into smaller parts Y7.5 Testing Follow variables with a trace table Y7.6 Python Rebuild a Scratch project in Python
BLOCKS To introduce this year	when green flag clicked when this sprite clicked move 10 steps turn 15 degrees go to x: 0 y: 0 next costume say Hello! for 2 seconds start sound	repeat 10 forever wait 1 seconds when space key pressed glide 1 secs to x: y: if on edge, bounce change colour effect by 25 switch backdrop to	if then if then else touching Wall? touching colour? key space pressed? ask and wait answer change score by 1	set lives to 3 change lives by -1 pick random 1 to 10 > < = and or not join apple banana broadcast message when I receive message	create clone of myself when I start as a clone delete this clone add thing to list item 1 of list define draw shape (sides) pen down set pen colour to
KEY WORDS Vocabulary to use	sprite, stage, script, sequence, event, costume, debug	loop, repeat, forever, coordinates, x and y, efficient	condition, selection, sensing, input, output, variable	operator, random, Boolean, broadcast, algorithm	clone, list, procedure, parameter, decomposition, Python

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