COMPUTING CURRICULUM

KS1 Progression

Knowledge | Skills | Vocabulary | Year 1 to Year 2

Purpose of this document

This document sets out how pupils' computing knowledge, practical skills and vocabulary develop through Key Stage 1 at Park Road Academy. It follows the twelve units in the supplied Computing progression and the school's use of Kapow Primary. It shows progression from Year 1 to Year 2 and readiness for Year 3 through purposeful, increasingly independent and safe use of technology.

Key Stage 1 curriculum position

Key Stage 1 curriculum coverage

Pupils learn what algorithms are, how they become programs and why instructions must be precise. They create and debug simple programs and predict behaviour using logical reasoning. They use technology to create, organise, store, change and retrieve content; recognise uses beyond school; and practise safe, respectful use, privacy and seeking help.

Progression principles

BUILD FROM EYFS	REVISIT & DEEPEN	MODEL, PRACTISE & APPLY	CHOOSE, EXPLAIN & IMPROVE
Earlier exploration becomes controlled use of devices, instructions and safe routines.	Sequencing, digital content, data and safety recur with increasing depth and precision.	Teachers model new concepts and tools; pupils practise and apply them purposefully.	Pupils select tools, explain decisions, test outcomes and make improvements.

Curriculum strands

Systems & Networks	Programming	Creating Media	Data Handling	Purpose & Evaluation	Digital Literacy & Safety

Key vocabulary is indicative rather than exhaustive. Revisit earlier language and expect pupils to use precise terms when predicting, creating, explaining, debugging and reflecting.

Year 1 Computing Curriculum Map

Units, core learning and progression emphasis

How the map should be used

The six half-term units retain Park Road's supplied Kapow sequence. Begin with prior EYFS experiences, model the new concept and allow supported practice before independent application. Revisit safe searching, privacy, kindness, healthy use and trusted-adult help across units.

Year 1

Half term	Unit	Core learning	Progression emphasis	Links to strands
Autumn 1	Systems & networks: Improving mouse skills	Log in with support; click, drag and draw with a mouse. Use familiar tools and save and reopen simple digital work.	Builds device control, vocabulary and independent routines from EYFS exploration.	Systems; Media; Safety
Autumn 2	Programming 1: Algorithms unplugged	Follow and create clear, ordered instructions; predict the result and identify and correct errors in a simple sequence.	Moves from following instructions to explaining order, precision and debugging.	Programming; Evaluation
Spring 1	Skills showcase: Rocket to the moon	Plan, make and improve a solution for a clear purpose; apply sequencing, design, testing and evaluation through the rocket project.	Applies familiar skills to a practical problem; explains a plan and identifies improvements.	Purpose; Programming; Evaluation
Spring 2	Programming 2: Bee-Bot	Use directional commands to program a short route; predict where the robot will move, test the sequence and correct it.	Connects an algorithm to device commands; checks predictions against actual outcomes.	Programming; Evaluation
Summer 1	Creating media: Digital imagery	Plan a photo story; take, select and edit photographs; search with adult guidance and combine images in a collage.	Chooses images for a purpose; begins to edit and organise content responsibly.	Media; Purpose; Safety
Summer 2	Data handling: Introduction to data	Collect and record information; represent it with pictures or charts; sort using questions and explore a simple branching database.	Moves from noticing features to organising information and answering simple questions.	Data; Purpose; Evaluation

Year 2 Computing Curriculum Map

Units, core learning and progression emphasis

Year 2 progression

Year 2 revisits Year 1 concepts with greater precision and independence. Pupils explain inputs and outputs, compare and debug algorithms, combine digital tools and interpret information. Online safety remains a recurring thread, including privacy, responsible sharing and questioning online information.

Year 2

Half term	Unit	Core learning	Progression emphasis	Links to strands
Autumn 1	Systems & networks 1: What is a computer?	Identify common computer parts, inputs and outputs; recognise technology in school and the wider world and explain its purposes.	Develops device familiarity into explanations of how input leads to output.	Systems; Purpose; Safety
Autumn 2	Programming 1: Algorithms and debugging	Develop and compare algorithms using maps and mazes; break a problem into smaller steps, predict results and explain corrections.	Uses logical reasoning to find errors and explain why a changed sequence works.	Programming; Evaluation
Spring 1	Systems & networks 2: Word processing	Use a keyboard and word processor to enter, edit and format text, insert images, save and retrieve a purposeful document.	Combines tools deliberately; improves accuracy, presentation and file-handling independence.	Systems; Media; Purpose
Spring 2	Programming 2: ScratchJr	Build block sequences with movement, animation and sound; follow an algorithm, run the program and test and correct its behaviour.	Transfers sequencing to screen-based programming; links blocks to intended actions.	Programming; Media; Evaluation
Summer 1	Creating media: Stop motion	Explain how animation uses a sequence of still images; plan, capture consistent frames, play back and improve a short animation.	Controls small changes between frames and reviews timing, clarity and continuity.	Media; Purpose; Evaluation
Summer 2	Data handling: International Space Station	Use digital maps and tools; record, compare and interpret information, including simple numerical and temperature data.	Uses recorded information to answer questions and explain comparisons accurately.	Data; Systems; Purpose

KS1 Computing Progression at a Glance

Concise progression from Year 1 to Year 2 and readiness for Year 3

Progression focus

This overview draws together the supplied Kapow unit sequence into connected knowledge, skills and vocabulary. Learning is revisited through explicit teaching, unplugged tasks and practical digital work. Assess what pupils can recall, explain and apply as adult support reduces.

Area	Year 1	Year 2	End of KS1 / Year 3 readiness	Key vocabulary
Systems & networks	Controls a mouse and familiar devices; recognises that actions produce responses and follows basic routines.	Identifies common parts, inputs and outputs; explains uses of technology in school and beyond.	Selects familiar hardware and software for a purpose and explains everyday uses of information technology.	computer, device, hardware, software, input, output
Programming & reasoning	Understands algorithms as ordered instructions; predicts and programs short Bee-Bot routes.	Creates and compares algorithms; builds block sequences with movement, sound or animation.	Explains how precise instructions become programs and uses logical reasoning to predict behaviour.	algorithm, instruction, sequence, command, program, block
Debugging & problem-solving	Notices when a sequence gives an unexpected result; changes an instruction and tries again.	Breaks tasks into steps, identifies errors and explains how a correction improves the program.	Creates and debugs simple programs; tests a prediction and explains a purposeful correction.	predict, test, error, debug, decompose, correct
Creating media & content	Captures, selects and edits photographs; combines images into a story or collage and saves work.	Enters and formats text, inserts images and plans and creates a short stop-motion animation.	Uses technology to create, organise, store, change and retrieve digital content for a clear purpose.	image, text, edit, format, save, retrieve, animation, frame
Data handling	Collects, sorts and represents simple data using pictures, charts and branching questions.	Records, compares and interprets information using digital tools, including numerical and temperature data.	Organises information, reads a simple representation and uses data to answer a question.	data, collect, record, sort, pictogram, chart, compare

Area	Year 1	Year 2	End of KS1 / Year 3 readiness	Key vocabulary
Purposeful use & evaluation	Follows a plan, makes an outcome and identifies a simple improvement with support.	Chooses appropriate tools, reviews a product and explains how changes better meet its purpose.	Selects technology for a clear task, explains choices and makes justified improvements.	purpose, plan, select, create, evaluate, improve
Digital literacy & safety	Uses technology safely and kindly; asks before sharing and seeks help when worried.	Keeps personal information private, considers others when sharing and questions whether online information is true.	Uses technology safely and respectfully, protects personal information and knows where to seek help.	online, private, password, share, reliable, trusted adult

Implementation note: Progress is cumulative. Look for secure concepts, purposeful choices, accurate vocabulary, effective debugging and increasing independence. Online safety is taught explicitly and reinforced whenever pupils use technology.

Using the KS1 Progression Document

Planning, teaching, assessment and transition

Planning from the progression

1 START WITH PRIOR LEARNING Identify relevant EYFS experiences and knowledge from earlier KS1 units.	**2 MODEL THE NEW STEP** Demonstrate the concept, vocabulary and safe routines before guided practice.	**3 PLAN FOR APPLICATION** Provide a purposeful task that allows pupils to select, apply and explain learning.
4 ASSESS PROCESS Notice predictions, choices, explanations and debugging as well as saved outcomes.	**5 BUILD LANGUAGE** Model technical vocabulary through practical work, questioning and reflection.	**6 SUPPORT INDEPENDENCE** Use paired work, visual steps and accessible input methods while retaining the concept.

What progression should look like in pupils' learning

KNOW MORE Recalls connected concepts and vocabulary.	**DO MORE** Uses tools and programs more accurately.	**CHOOSE MORE** Selects tools for a clear purpose.	**EXPLAIN MORE** Predicts and gives reasons for choices.	**IMPROVE MORE** Tests, debugs and refines outcomes.

Suggested evidence for assessment and subject leadership

PUPIL VOICE Can pupils explain what will happen, why and what they changed?	**SAVED WORK & OUTCOMES** Do programs, documents, animations and data tasks show application?	**TEACHING & INCLUSION** Are core concepts, accessible tools and safe routines modelled and revisited?	**TRANSITION** Does evidence show readiness to apply concepts in new KS2 contexts?

End-of-KS1 readiness for Year 3 Computing

SYSTEMS & NETWORKS Identifies inputs, outputs and uses of technology beyond school.	**PROGRAMMING** Creates and debugs simple programs and predicts their behaviour.	**DIGITAL CONTENT** Creates, organises, stores, changes and retrieves content.
DATA & INFORMATION Records, compares and interprets simple information.	**SAFETY & RESPECT** Protects personal information and seeks help from a trusted adult.	**CHOICE & REFLECTION** Selects tools, explains decisions and improves an outcome.

Read alongside Park Road's Computing overview, Kapow lesson resources, assessment evidence and KS2 progression. Source: supplied KS1 Computing sequence; Kapow Primary Computing curriculum overview and unit information.