



Computing Long term plan 2024-2025

	Advent 1	End points	Advent 2	End points	Lent 1	Lent 1	End points	Lent 2	End points
EYFS	Computer systems and networks Using a computer All 5 lessons) https://www.kapowprimary.com/subjects/computing/eyfs/eyfs-years/using-a-computer/		Programming All about Instructions (All 5 Lessons) https://www.kapowprimary.com/subjects/computing/eyfs/eyfs-years/all-about-instructions/		Online safety week (Whole school)	Computing Systems and networks Exploring Hardware (4 lessons 1-4) https://www.kapowprimary.com/subjects/computing/eyfs/eyfs-years/exploring-hardware/		Data Handling Introduction to data (4 lessons 1-4) https://www.kapowprimary.com/subjects/computing/eyfs/eyfs-years/an-introduction-to-data/	
Year 1	Computer systems and networks Improving Mouse skills 3 lessons 1-3) https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/improving-mouse-skills/	<ul style="list-style-type: none"> Use computers more purposefully Log in and navigate around a computer Drag, drop, click and control a cursor using a mouse Use software tools to create art on the computer 	Programming 1 Algorithms unplugged (4 lessons 1,2,4,and 5 https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/algorithms-unplugged/)	<ul style="list-style-type: none"> Explain what an algorithm is. Write clear algorithms. Follow an algorithm. Explain what inputs and outputs are. Create an achievable programme. Decompose a design into steps. Identify bugs in an algorithm and how to fix them. 	Online safety week (Whole school)	Creating Media Digital Imagery 3 lessons 1-3) https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/creating-media-digital-imagery/	<ul style="list-style-type: none"> Plan a pictorial story using photographic images in sequence. Explain how to take clear photos. Take photos using a device. Edit photos by cropping, filtering and resizing. Search for and import images from the internet. Explain what to do if something makes them uncomfortable online. Organise images on the page, orientating where necessary. 	Programming 2 Beebot (option 1: Beebot) https://www.kapowprimary.com/subjects/computing/key-stage-1/year-1/programming-prgramming-beebot/	<ul style="list-style-type: none"> Recognise cause and effect when pressing buttons on a Bee-Bot. Discuss and demonstrate how the Bee-Bot works. Record video, ensuring everyone is in the shot. Give several clear instructions in sequence. Program a Bee-Bot to reach a destination. Identify and correct mistakes in their programming.
Year 2	Computing systems and networks 1 What is a computer? (3 lessons: 1, 2 and 5 only) https://www.kapowprimary.com/subjects/computing/key-stage-1/year-2/what-is-a-computer/	<ul style="list-style-type: none"> Name some computer peripherals and their functions. Recognise that buttons cause effects. Explain that technology follows instructions. 	Programming 1 Algorithms and debugging (4 lessons 1, 2, 4 and 5) https://www.kapowprimary.com/subjects/computing/key-stage-1/year-2/programming-1/	<ul style="list-style-type: none"> Decompose a game to predict the algorithms. Give a definition for 'decomposition'. Write clear and precise algorithms. Create algorithms to solve problems. 	Online safety week (Whole school)	Data Handling International space station 3 lessons 1, 3 and 5 https://www.kapowprimary.com/subjects/computing/key-stage-1/year-2/international-space-station/	<ul style="list-style-type: none"> Describe and explain how astronauts' survival needs are met aboard the ISS. Identify and digitally draw items which fulfil basic human needs when aboard the ISS. Read the correct temperature on a thermometer. 	Programming 2 Scratch Jr 4 lessons 1,2,4 and 5 https://www.kapowprimary.com/subjects/computing/key-stage-1/year-2/programming-scratch-jr/	<ul style="list-style-type: none"> Explore a new application independently. Explain what the blocks on ScratchJr do and use them for a purpose. Recognise a loop in coding and why it is useful.

		<ul style="list-style-type: none"> Recognise different forms of technology. Design an invention which includes inputs and outputs. Explain the role of computers in the world around them. 	2/algorithms-and-debugging/	<ul style="list-style-type: none"> Use loops in their algorithms to make their code more efficient. Explain what abstraction is. 			<ul style="list-style-type: none"> Design a display showing everything that needs to be monitored by sensors on the ISS. Create an algorithm that addresses all plants' needs. Explain how space exploration can benefit life on Earth. Read data to identify whether a planet might be habitable. 	https://www.wickieduncle.co.uk/jokes/age/jokes-for-6-year-olds	<ul style="list-style-type: none"> Use a code to create an animation of an animal moving.
Year 3	Computing systems and networks 1 Networks (3 lessons 1,3 and 5) https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/networks/	<ul style="list-style-type: none"> Recognise that a network is two or more devices connected and its purpose. Identify key components that make up the school's network. Explain the difference between wired and wireless connections. Recognise that files are saved on a server. Understand the role of the server in a network when requesting a website. Identify parts of a website's journey to reach your computer. Recognise that routers connect to send information. Understand that data is broken into packets. 	Computing systems and networks 3 Journey inside a computer (4 lessons 1,2,3 and 5) https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/journey-inside-a-computer/	<ul style="list-style-type: none"> Recognise inputs and outputs and that the computer sends and receives information. Explain that the parts of a laptop work together and the purpose of each part. Explain what an algorithm is. 	Online safety week (Whole school)	Creating Media Video trailers Option 2: using iPadS (IMOVIE) (4 lessons 1_4) https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/digital-literacy-2/video-trailers-using-ipads-assessment/	<ul style="list-style-type: none"> Describe the purpose of a trailer. Create a storyboard for a book trailer. Consider camera angles when taking photos or videos. Import videos and photos into film editing software. Add text to a video. Incorporate transitions between images. Evaluate their own and others' trailers. 	Programming Programming Scratch (4 lessons 1,2,3 and 5) https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-3/programming-scratch/	<ul style="list-style-type: none"> Explain what some of the blocks do in Scratch. Explain what a loop is and include one in their program. Suggest possible additions to an existing program by remixing code. Recognise where something on screen is controlled by code. Use a systematic approach to find bugs. Understand the definitions of decomposition and algorithm and how they are used to create accurate code.
Year 4	Computing systems and networks Collaborative learning (Option 2: Microsoft teams (4 lessons 1, 3,4, and 5) https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/collaborative-learning/	<ul style="list-style-type: none"> Understand the need to be thoughtful when working on a collaborative document. Use comments to suggest changes to a document and 	Programming 1 Further coding with Scratch (3 lessons: 2-4 only) https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/further-coding-with-scratch/	<ul style="list-style-type: none"> Understand how to create a simple script in Scratch. Add or change a sprite and prevent it from rotating. Use decomposition 	Online safety week (Whole school)	Data Handling Investigating weather (3 lessons 1,3 and 4) https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/investigating-weather/	<ul style="list-style-type: none"> Search the web efficiently to find temperatures of different cities and record this accurately. Design a weather station that gathers and records sensor data, explaining how it works and the units of 	Programming 2 Computational thinking (4 lessons 1-4) https://www.kapowprimary.com/subjects/computing/lower-key-stage-2/year-4/computational-thinking/	<ul style="list-style-type: none"> Understand that problems can be solved more easily using computational thinking. Understand what the different code blocks do and create a simple game.

	ower-key-stage-2/year-4/collaborative-learning-2/microsoft-collaborative-learning/	<ul style="list-style-type: none"> understand how to resolve comments. Plan a survey for Microsoft Form with a range of different question types that will provide different types of answers, e.g. text, multiple choice or numerical values. Create a Microsoft Form with a range of different question types that will provide different types of answers, e.g. text, multiple choice or numerical values. Export data to a spreadsheet, highlighting data, using conditional formatting and calculating averages and sums of numbers. 	-key-stage-2/year-4/programming-1-further-coding-with-scratch/	to identify key features and understand how to decipher actions that make the quiz game work.			2/year-4/investigating-weather/	<ul style="list-style-type: none"> measurement it would use. Design an automated machine that uses selection to respond to sensor data. Search for and record weather forecast information in a spreadsheet and explain how this data is collected. Create a video which includes weather forecast information. 	ing/lower-key-stage-2/year-4/computational-thinking/	<ul style="list-style-type: none"> Understand the terms pattern recognition and abstraction and how they help to solve a problem.
Year 5	Computing systems and networks Search engines (4 lessons 1-3 and 5) https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/computing-systems-and-networks-search-engines/	<ul style="list-style-type: none"> Explain what a search engine is, suggest several search engines to use and explain how to use them to find websites and information. Suggest that things online are not always true and recognise what to check for. Explain why keywords are important and what TASK stands for, using these strategies to search effectively. Recognise the terms 'copyright' and 'fair use' and combine text and images in a poster. Make parallels between book 	Data Handling Mars Rover 1 (3 lessons 1,2 and 4) https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/mars-rover-1/	<ul style="list-style-type: none"> Identify some types of data the Mars Rover could collect (for example, photos). Explain how the Mars Rover transmits the data back to Earth and the challenges involved. Read any number in binary, up to eight bits. Identify input, processing and output on the Mars Rovers. 	Online safety week (Whole school)		Creating media Option 1: Stop motion studio. (4 lessons 1-4) https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/stop-motion-animation-2/stop-motion-animation/	<ul style="list-style-type: none"> Create a toy with simple images and a single movement. Create a short stop motion with small changes between images. Think of a simple story idea for their animation and then decompose it into smaller parts to create a storyboard with simple characters. Make small changes to the models to ensure a smooth animation and delete unnecessary frames. Add effects such as extending parts and titles. Provide helpful feedback to other groups about their animations. 	Programming Programming music Option 1 sonic Pi (4 lessons 1-4) https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-5/programming-music/sonic-pi/	New unit/ being reviewed.

		searching and internet searching, explaining the role of web crawlers and recognising that results are rated to decide rank.								
Year 6	Computing systems and networks Bletchley Park and the history of computers (4 lessons 1,2,3,5) https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-6/computing-systems-and-networks-bletchley-park-and-the-history-of-computers/	<ul style="list-style-type: none">Explain that codes can be used for a number of different reasons and decode messages.Explain how to ensure a password is secure and how this works.Present information about their historical figures in an interesting and engaging manner.Produce a simple audio advert with simple edits, which demonstrate an understanding of how to use the software.	Data Handling Big Data 1 (4 lessons 1,3,4 and 5) https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-6/big-data-1/	<ul style="list-style-type: none">Understand why barcodes and QR codes were created.Create (and scan) their own QR code using a QR code generator website.Explain how infrared can be used to transmit a Boolean type signal.Explain how RFID works, recall a use of RFID chips, and type formulas into spreadsheets.Take real-time data and enter it effectively into a spreadsheet.Presenting the data collected as an answer to a question.	Online safety week (Whole school)		Computing systems and networks 2 AI (3 lessons 1,2 and 5) Year 6 Computing Unit: Systems And Networks - AI	<ul style="list-style-type: none">Explain what AI is and its basic functions.Identify real-life applications of AI that are commonly used in everyday life.Identify how AI understands and processes text and image prompts.Generate and refine prompts to achieve the best possible response from AI.Identify how AI generates code and how it can be useful in web design.Identify how AI can be a useful starting point for a project.Explain the key ethical considerations of AI.Debate the potential of AI replacing human roles, presenting well-structured arguments.	Programming Intro to Python (4 lessons 1-4) https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-6/intro-to-python/	<ul style="list-style-type: none">Iterate ideas, testing and changing throughout the lesson and explain what their program does.Use nested loops in their designs, explaining why they need two repeats.Alter the house drawing using Python commands; use comments to show a level of understanding around what their code does.Use loops in Python and explain what the parts of a loop do.Recognise that computers can choose random numbers; decompose the program into an algorithm and modify a program to personalise it.