WHITMORE
PRIMARY SCHOOL AND NURSERY

Computing Overview 2025 – 26

		End of Year Objectives	
Year		Understanding the World ICT	Kapow ICT Objectives
EYFS	N1	*I can use iPads/other technology for photographs/stories/educational games*	
	N2	*I know how to turn on/off/swipe/operate a game/story/camera*	
	R	*I use the camera for a purpose* *I can use the magnifier when outside looking at insects, etc* *I understand you can find out information on google, etc* *I am beginning to understand how to use technology safely*	**Computing Systems and Networks: Using a Computer** *I understand what a computer keyboard is and recognise some letters and numbers* *I know that a mouse can be used to click, drag and create simple drawings* *I know that to use a computer I need to log in to it and then log out and the end of my session*
Notes for teachers		Understanding the World objectives are taught in class in explicit sessions, or through free flow activities throughout the year In reception, children start to use the ICT suite for half an hour per week whole class or split into two groups that are rotated	
Links to future learning		To use the keyboard to spell simple familiar words To move and use the mouse with increased accuracy, including clicking, releasing and dragging To log in and log out independently	

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
1	**Data Handling** *I know that sorting objects into various given categories can help to locate information* *I can choose how to sort objects, including sorting other children into groups* *I am beginning to sort independently using my own categories* *I know that using yes/no questions to find an answer is known as a branching database* *I can ask and answer yes/no questions to create a branching database* *I know how to create a branching database*	**Programming** *I know that being able to follow and give simple instructions is important in computing* *I am able to follow and give simple instructions to a game or activity* *I understand that it is important for instructions to be in the right order* *I understand why a set of instructions may have gone wrong* *I am beginning to make corrections in instructions that may have gone wrong* *I can explain what inputs and outputs are*	**Online Safety** *I can discuss what the internet is and how it can be used* *I recognise that the internet may affect mood or emotions* *I recognise how internet use can affect and upset others* *I can identify which information is appropriate to share and post online and which is not* *I know what to do if I feel unsafe or worried online – tell a trusted adult* *I know that people I do not know on the internet (online) are strangers and are not always who they say they are*	**Computing Systems and Networks** *I can use computers more purposefully* *I can log in and navigate around a computer* *I can drag, drop, click and control a cursor using a mouse* *I can use software tools to create art on the computer* *I can use a computer and mouse to click, drag, fill, select, add backgrounds, text, layers, shapes and clipart* *I know passwords are important for security and to keep us safe*	**Programming** *I can explain what an algorithm is* *I can write clear algorithms* *I can follow an algorithm* *I can decompose a design into steps* *I can identify bugs in an algorithm and say how to fix them* *I can write an achievable algorithm*	**Creating Media** *I can plan a pictorial story using photographic images in sequence* *I can explain how to take clear photos* *I can take photos using a device* *I can edit photos by cropping, filtering and resizing and organise images on the page, orientating where necessary* *I can search for and import images from the internet* *I can explain what to do if something makes me uncomfortable online*
Notes for teachers	Up to 6 ICT slots in Autumn 1 Kapow Unit: EYFS Introduction to Data Lessons 1-4	Up to 5 ICT slots in Autumn 2 Kapow Unit: EYFS All About Instructions All lessons	Up to 5 ICT slots in Spring 1 Kapow Unit: Year 1 Online Safety All 4 lessons	Up to 5 ICT slots in Spring 2 Kapow Unit: Year 1 Improving mouse skills Lessons 1-3	Up to 3 ICT slots in Summer 1 Kapow Unit: Year 1 Algorithms Unplugged Lessons 1, 2, 4 and 5	Up to 5 ICT slots in Summer 2 Kapow Unit: Year 1 Digital Imagery Lessons 1 - 3
Links to prior learning			EYFS: Computing Systems and Networks: Using a Computer	EYFS: Computing Systems and Networks: Using a Computer	EYFS: Programming 1: All about Instructions (Year 1 Autumn 1)	
Links to future learning	To continue to sort and categorise during play and to be able to justify the ways in which they choose to do this	To learn that an algorithm is a set of instructions to carry out a task, in a specific order To use logical reasoning to read simple instructions and predict the outcome	All future online safety units Links to learning in PSHE units as well	Year 2: Computing Systems and Networks: What is a Computer? (Year 2 Autumn 2)	Year 1: Programming Bee-Bots (taught in Year 2 Autumn 2)	Year 5 Creating Media: Stop Motion (Year 5 Spring 2)
Key Vocabulary	Column Row Graph	Instruction Direction Program	Feelings Online Appropriate	Click Cursor Drag	Debug Algorithm Output	Background Editing Save

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
2	**Computing Systems and Networks** *I can name some computer peripherals and their functions* *I recognise that buttons cause effects* *I can explain that technology follows instructions* *I recognise different forms of technology* *I can design an invention which includes inputs and outputs* *I can explain the role of computers in the world around me*	**Programming** *I recognise cause and effect when pressing buttons on a Bee-Bot* *I can discuss and demonstrate how the Bee-Bot works* *I can record video, ensuring everyone is in the shot* *I can give several clear instructions in sequence* *I can program a Bee-Bot to reach a destination* *I can identify and correct mistakes in my programming*	**Online Safety** *I can explain what is meant by online information and what information is safe to be shared online* *I can explain why we need passwords and what makes a strong password* *I understand that I need to ask permission before sharing content online and explain why* *I understand that I have the right to deny my permission to information about me being shared online* *I can say who I can ask for help with online worries* *I can use some strategies to work out if online information is reliable or not*	**Programming** *I can decompose a game to predict the algorithms* *I can give a definition for 'decomposition'* *I can write clear and precise algorithms* *I can create algorithms to solve problems* *I can use loops in my algorithms to make my code more efficient* *I can explain what abstraction is*	**Data Handling** *I can describe and digitally draw items that humans need and explain how astronauts' survival needs are met aboard the ISS* *I can read the correct temperature on a thermometer* *I can design a display showing everything that needs to be monitored by sensors on the ISS* *I can create an algorithm that addresses all plants' needs* *I can explain how space exploration can benefit life on Earth* *I can read data to identify whether a planet might be habitable*	**Programming** *I can explore a new application independently* *I can explain what the blocks on Scratch Jr do and use them for a purpose* *I can recognise a loop in coding and why it is useful* *I can use a code to create an animation of an animal moving and create an algorithm* *I can program code to run 'on tap'* *I can explain the role of the blocks in a program I have created*
Notes for teachers	Up to 6 ICT slots in Autumn 1 Kapow Unit: Year 2 What is a Computer? Lessons 1, 2 and 5	Up to 5 ICT slots in Autumn 2 Kapow Unit: Year 1: Option 1 Bee bots Lessons 1,3,4,5	Up to 5 ICT slots in Spring 1 Kapow Unit: Year 2 Online Safety All four lessons	Up to 5 ICT slots in Spring 2 Kapow Unit: Year 2 Algorithms and Debugging Lessons 1,2,4,5	Up to 3 ICT slots in Summer 1 Kapow Unit: Year 2 International Space Station Lessons 1,3,5	Up to 5 ICT slots in Summer 2 Kapow Unit: Year 2 Scratch Jr Lessons 1,2,4,5
Links to prior learning	EYFS Computing Systems and Networks: Using a Computer		Online safety: Year 1	Programming 1: Algorithms Unplugged (Year 1 Summer 1)	EYFS Data handling: Introduction to Data (Year 1 Autumn 1)	Year 2 Programming: Algorithms and Debugging (Year 2 Spring 2)
Links to future learning	Year 3 Computing Systems and Networks: Journey inside a computer (Year 3 Summer 1)	Year 2 Programming: Algorithms and Debugging (Year 2 Spring 2)	All future Online Safety learning Also links to PSHE curriculum	Year 2 Programming: Scratch Jr (Year 2 Summer 2)		Year 3 Programming: Scratch (Year 3 Summer 2)
Vocabulary	Desktop Technology Digital	Code Predict Inputting	Consent Permission Reliable	Abstraction Decompose Key features	Data Sensor Interpret	Sequence Blocks Loop

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
3	**Computing Systems and Networks** *I recognise that a network is two or more devices connected and its purpose and identify key components that make up the school's network* *I can explain the difference between wired and wireless connections* *I understand the role of the server in a network when requesting a website and recognise that files are saved on a server* *I can identify parts of a website's journey to reach my computer* *I recognise that routers connect to send information* *I understand that data is broken into packets*	**Computing Systems and Networks** *I can log in and out of email* *I can edit and send a simple email with a subject plus 'To' and 'From' in the body of the text* *I can type in the email address correctly and send the email* *I can add an attachment to an email* *I can write an email using positive language, with an awareness of how it will make the recipient feel* *I recognise when an email may be fake and explain how I know*	**Online Safety** *I can differentiate between fact, opinion and belief online* *I can explain how to deal with upsetting online content* *I know how to support others who may have encountered upsetting content* *I can recognise that digital devices communicate with each other to share personal information* *I can explain what social media platforms are used for* *I recognise why social media platforms are age-restricted*	**Creating Media** *I can describe the purpose of a trailer* *I can create a storyboard for a book trailer* *I consider camera angles when taking photos or videos* *I can import videos and photos into film editing software* *I can incorporate transitions between images including adding text to a video* *I can evaluate my own and others' trailers*	**Computing Systems and Networks** *I recognise inputs and outputs and that the computer sends and receives information* *I can explain that the parts of a laptop work together* *I can explain the purpose of each part of a computer* *I can explain what an algorithm is* *I can make suggestions as to what the memory inside a computer is for* *I can make comparisons between different types of computer*	**Programming** *I can explain what some of the blocks do in Scratch* *I can explain what a loop is and include one in my program* *I can suggest possible additions to an existing program by remixing code* *I recognise where something on screen is controlled by code* *I can use a systematic approach to find bugs* *I understand the definitions of decomposition and algorithm and how they are used to create accurate code*
Notes for teachers	Up to 6 ICT slots in Autumn 1 Kapow Unit: Year 3 Networks Lessons 1,3,5	Up to 5 ICT slots in Autumn 2 Kapow Unit: Year 3 Emailing All 5 lessons	Up to 5 ICT slots in Spring 1 Kapow Unit: Year 3 Online Safety All 4 lessons	Up to 5 ICT slots in Spring 2 Kapow Unit: Year 3 Video Trailers Option 2: Using iPads Lessons 1-4	Up to 3 ICT slots in Summer 1 Kapow Unit: Year 3 Journey inside a Computer Lessons 1,2 and 5	Up to 5 ICT slots in Summer 2 Kapow Unit: Year 3 Programming: Scratch Lessons 1,2,3,5
Links to prior learning	Year 2: Computing Systems and Networks: What is a Computer? (Year 2 Autumn 1)	Year 3: Computing Systems and Networks: Networks (Year 3 Autumn 1)	All previous Online Safety learning Links with PSHE curriculum		Year 2: Computing Systems and Networks: What is a Computer? (Year 2 Autumn 1)	Year 2 Programming: Scratch Jr (Year 2 Summer 2)
Links to future learning	Year 3: Computing Systems and Networks: Emailing (Year 3 Autumn 2)	Year 4: Computing Systems and Networks: Collaborative Learning Microsoft Office 365 (Year 4 Autumn 1)	All future Online Safety learning Also links to PSHE curriculum	Year 4: Creating media: Website Design Microsoft Office 365 (Year 4 Summer 1)		Year 4 Programming: Further coding with Scratch (Year 4 Autumn 2)
Vocabulary	World Wide Web WIFI Network Internet	Email Subject bar Compose Attachment	Accurate Digital devices Age restrictions	Transition Import Trailer Graphics	Hard drive Memory Storage	Repetition Animation Application tinker

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
4	**Programming** *I understand what the different code blocks do* *I understand the terms pattern recognition and abstraction, and how they help to solve a problem* *I can create a Scratch program which draws a square and at least one other shape* *I understand how computational thinking can help to solve problems* *I can apply computational thinking to problems I face* *I can create a simple game*	**Programming** *I understand what the different code blocks do* *I understand the terms pattern recognition and abstraction, and how they help to solve a problem* *I can create a Scratch program which draws a square and at least one other shape* *I understand how computational thinking can help to solve problems* *I can apply computational thinking to problems I face* *I can create a simple game*	**Online Safety** *I can describe how to search over multiple platforms and be aware of the accuracy of the results presented* *I can describe some of the methods used to persuade people to buy online* *I can explain the difference between fact, opinion and belief and recognise these online* *I can explain what a bot is and give examples of different bots* *I can explain some positive and negative distractions of using technology* *I can suggest small strategies for reducing the time spent on technology*	**Data Handling** *I can search the web efficiently to find temperatures of different cities and record this accurately* *I can design a weather station that gathers and records sensor data, explaining how it works and the units of measurement it would use* *I can design an automated machine that uses selection to respond to sensor data* *I can search for and record weather forecast information in a spreadsheet* *I can explain how my data has been collected* *I can create a video which includes weather forecast information*	**Creating Media** *I can create a Sway with a title, image and a completed first header section* *I can create a clear plan for my web page and begin to create it* *I can create a professional-looking web page with useful information and a clear style* *I can create a webpage which is easy for the user to read and find information from* *I can refer back to my checklist to ensure I include a range of features* *I can create a web page with clear sections and with a range of features in*	**Computing Systems and Networks** *I understand the need to be thoughtful when working on a collaborative document* *I can use comments to suggest changes to a document* *I understand how to resolve conflicts when disagreements arise* *I can plan a survey for Microsoft Form with a range of different questions types that will provide different types of answer* *I can create a Microsoft Form with a range of different question types that will provide different types of answer, e.g. text, multiple choice or numerical values* *I can export data to a spreadsheet, highlighting data, using conditional formatting and calculating averages and sums of numbers*
Notes for teachers	Up to 5 ICT slots in Autumn 2 Kapow Unit: Year 4 Further Coding with Scratch Lessons 2,3,4	Up to 5 ICT slots in Summer 2 Kapow Unit: Year 4 Computational Thinking Lessons 1,2,3,4	Up to 5 ICT slots in Spring 1 Kapow Unit: Year 4 Online Safety All four lessons	Up to 5 ICT slots in Spring 2 Kapow Unit: Year 4 Investigating Weather Lessons 1,3,4	Up to 3 ICT slots in Summer 1 Kapow Unit: Year 4 Website Design Option 2: MS Office All 5 lessons	Up to 6 ICT slots in Autumn 1 Kapow Unit: Year 4 Collaborative Learning: Option 2 – Microsoft 365 All 5 lessons
Links to prior learning	Year 3 Programming: Scratch (Year 3 Summer 2)	Year 2 Programming: Algorithms and Debugging (Year 2 Spring 2)	All previous Online Safety teaching Links to PSHE curriculum		Year 4 Computing Systems and Networks: Collaborative Learning (Year 4 Autumn 1)	Year 3 Computing Systems and Networks 2: Emailing (Year 3 Autumn 2)
Links to future learning	Year 5 Programming Music (Year 5 Autumn 2)	Year 5 Programming Music (Year 5 Autumn 2)	All future Online Safety learning Also links to PSHE curriculum	Year 5 Data Handling: Mars Rover (Year 5 Summer 1)	Year 5 Creating Media: Stop-motion Animation (Year 5 Spring 2)	Year 5 Computing Systems and Networks: Search Engines (Year 5 Autumn 1)
Vocabulary	Broadcast Conditional Parameters Variables	Computational thinking Logical thinking Pattern recognition	Trustworthy Bot Implications Screen time	Satellite Forecast Weather Presenter	Embed Hyperlinks Web page Web browser	Collaboration Format Contribution Numerical Data

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
5	**Computing Systems and Networks** *I can explain what a search engine is, suggesting several search engines to use and explain how to use them to find websites and information* *I can suggest that things online aren't always true and recognise what to check for* *I can explain why keywords are important and what TASK stands for, and use these strategies to search effectively* *I recognise the terms 'copyright' and 'fair use'* *I can combine text and images in a poster* *I can make parallels between book searching and internet searching, explaining the role of web crawlers and recognising that results are rated to decide rank*	**Programming** *I can iterate ideas, testing and changing throughout the lesson* *I can correct my own simple mistakes* *I can include a repeat and explain its function to enhance music* *I can code a piece of music that combines a variety of structures* *I can use loops in my programming* *I recognise that programming music is a way to apply my skills*	**Online Safety** *I understand that passwords need to be strong and that apps require some form of password* *I can recognise some types of online communication and know who to go to if I need help with any communication matters online* *I can search for simple information about a person, such as their birthday or key life moments* *I know what bullying is and that it can occur both online and in the real world* *I recognise when health and well-being are being affected in either a positive or negative way through online use* *I can offer some advice and tips to combat the negative effects of online use*	**Creating Media** *I can create a toy with simple images and a single movement* *I can create a short stop motion with small changes between images* *I can think of a simple story idea for my animation and then decompose it into smaller parts to create a storyboard with simple characters* *I can make small changes to the models to ensure a smooth animation and delete unnecessary frames* *I can add effects such as extending parts and titles* *I can provide helpful feedback to other groups about their animations*	**Data Handling** *I can identify some types of data the Mars Rover could collect (for example, photos)* *I can explain how the Mars Rover transmits the data back to Earth and the challenges involved* *I can read any number in binary, up to eight bits* *I can identify input, processing and output on the Mars Rovers* *I can grasp the concept of binary addition* *I can relate binary signals (Boolean) to a simple character-based language, ASCII*	**Programming** *I can clip blocks together and predict what will happen* *I can make connections with previous programming interfaces I've used, e.g., Scratch* *I can create my own images to make the animation and recognise the difference between 'on start' and 'forever'* *I recognise blocks I've used previously, identifying inputs and outputs used and make predictions about how variables work* *I can choose appropriate blocks to complete the program and attempt the challenges independently* *I can break a program down into smaller steps, suggesting appropriate blocks and match the algorithm to the program*
Notes for teachers	Up to 6 ICT slots in Autumn 1 Kapow Unit: Year 5 Search Engines Lessons: 1-4	Up to 5 ICT slots in Autumn 2 Kapow Unit: Year 5 Programming Music: Option 2 Scratch Lessons: 1-4	Up to 5 ICT slots in Spring 1 Kapow Unit: Year 5 Online Safety All four lessons	Up to 5 ICT slots in Spring 2 Kapow Unit: Year 5 Stop-motion Animation Option 1: Stop Motion Studio Lessons: 1-4	Up to 3 ICT slots in Summer 1 Kapow Unit: Year 5 Data Handling: Mars Rover 1 Lessons: 1,2,4	Up to 5 ICT slots in Summer 2 Kapow Unit: Year 5 Micro:Bit All lessons
Links to prior learning	Year 4 Computing systems and networks: Collaborative Learning (Year 4 Autumn 1)	Year 4 Programming: Further coding with Scratch (Year 4 Autumn 2)	All previous Online Safety teaching Links to PSHE curriculum	Year 4 Creating Media: Website Design (Year 4 Summer 1)	Year 4 Data Handling: Investigating Weather (Year 4 Spring 2)	Year 5 Programming Music – (Year 5 Autumn 2)
Links to future learning	Year 6 Computing Systems and Networks: Bletchley Park (Year 6 Spring 2)	Year 5 Programming: Micro:bit (Year 5 Summer 2)	All future Online Safety learning Also links to PSHE curriculum	Year 6 Creating Media: History of computers (Year 6 Spring 1)		Year 6 Programming: Intro to Python (Year 6 Summer 2)
Vocabulary	Copyright Deceive Index Rank Web crawler	Beat Command Mind map Tutorials Soundtrack	Opinion Trusted adult Contribution Well-being Health	Still images Decomposition Onion skinning Storyboard Model	Binary Communicate Data transmission Radio signal Transmit	Bluetooth Load Pairing Systematic USB

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
6	**Online Safety** *I can discuss various issues online that can leave children feeling sad, frightened, worried or uncomfortable and can describe numerous ways to get help, including how sharing online can have both positive and negative impacts* *I am aware of how to seek consent from others before sharing material online and describe how content can still be shared online even if it is set to private* *I can explain what a digital reputation is and what it can consist of* *I understand the importance of capturing evidence of online bullying and demonstrate some of these methods on the devices used at school* *I can describe ways to manage passwords and strategies to add extra security, such as two-factor authentication and explain what to do if passwords are shared, lost or stolen* *I can describe strategies to identify scams and ways to increase my privacy settings and understand why it is important to keep my software updated*	**Data Handling** *I understand why barcodes and QR codes were created then create (and scan) my own QR code using a QR code generator website* *I can explain how infrared can be used to transmit a Boolean type signal* *I can explain how RFID works, recall a use of RFID chips, and type formulas into spreadsheets* *I can take real-time data and enter it effectively into a spreadsheet* *I can present data I have collected as an answer to a question and recognise the value of analysing real-time data* *I can analyse and evaluate transport data and consider how this provides a useful service to commuters*	**Creating Media** *I can explain how to record sounds and add in sound effects over the top* *I can produce a simple radio play with some special effects and simple edits which demonstrate an understanding of how to use the software* *I can create a document that includes correct date information and facts about the computers and how they made a difference* *I can demonstrate a clear understanding of my device and how it affected modern computers* *I can include well-researched information with an understanding of the reliability of my sources* *I can describe all of the features that we'd expect a computer to have including RAM, ROM, hard drive and processor, but of a higher specification than currently available*	**Computing Systems and Networks** *I can explain that codes can be used for a number of different reasons and decode messages* *I can explain how to ensure a password is secure and how this works* *I can create a simple website with information about Bletchley Park* *I can explain why people needed to build electronic thinking machines to solve cipher codes* *I can explain the importance of historical figures and their contribution towards computer science* *I can present information about my historical figure in an interesting and engaging manner*		**Programming** *I can iterate ideas, testing and changing them throughout the lesson, and explain what my program does* *I can use nested loops in my designs, explaining why I need two repeats* *I can alter the house drawing using Python commands and use comments to show a level of understanding around what my code does* *I can use loops in Python and explain what the parts of a loop do* *I recognise that computers can choose random numbers* *I can decompose a program into an algorithm and modify a program to personalise it*
Notes for teachers	Up to 6 ICT slots in Autumn 1 Kapow Unit: Year 6 Online Safety All four lessons	Up to 5 ICT slots in Autumn 2 Kapow Unit: Year 6 Big Data Lessons 1,3,4,5	Up to 5 ICT slots in Spring 1 Kapow Unit: Year 6 History of Computers All 5 lessons	Up to 5 ICT slots in Spring 2 Kapow Unit: Year 6 Bletchley Park Lessons 1,2,3		Up to 5 ICT slots in Summer 2 Kapow Unit: Year 6 Introduction to Python Lessons 1,2,3,4
Links to prior learning	All previous Online Safety teaching Links to PSHE curriculum	Year 5 Data Handling: Mars Rover (Year 5 Summer 1)	Year 5 Creating Media Stop-motion Animation (Year 5 Spring 2)	Year 5 Computing Systems and Networks: Search Engines (Year 5 Autumn 1)		Year 5 Programming: Micro:bit (Year 5 Summer 2)
Vocabulary	Phishing Malware Two-factor authentication Digital personality	Barcode Infrared Proximity RFID Transmission	Background music Hardware Operating systems Processor Sound	Acrostic code Cipher Combination Contribute Scrambled		Import Indentation Random Remix Shape