

BURGHFIELD ST. MARY'S – WHOLE SCHOOL COMPUTING COVERAGE

Computing at Burghfield St. Mary's is taught in line with the National curriculum. At Burghfield St Mary's we follow a comprehensive and hands on approach to the Computing curriculum based on the Kapow scheme of work. The Kapow Primary Computing scheme of work is underpinned by a clear progression of knowledge and skills, designed to develop pupils' understanding of computer science, information technology, and digital literacy. Through a spiral curriculum approach, key concepts and skills are revisited and built upon throughout the primary years, enabling pupils to deepen their understanding and make connections between previous and new learning. The scheme ensures that units are sequenced progressively from one year group to the next, supporting all pupils to develop confidence, competence, and creativity in computing. At Burghfield St Mary's we cover a lot of online safety topics in our PSHE sessions but we also teach online safety the Kapow Scheme of work. This ensures that online safety is taught thoroughly, in line with national expectations and is high profile in our school.

Our principle aim, as a school, is to ensure every child in school has access to a high-quality computing education, which inspires them to achieve high standards. We aim for our learners to use technology independently, safely, respectfully and know how to make sensible choices online. The learning needs of individual pupils are then addressed through careful scaffolding, skillful questioning and appropriate support, in order to provide the necessary support and challenge.

EYFS						
EYFS will use the Barefoot resources to build computational thinking. These resources will be used by the teacher throughout the year when it best suits the children's interest or what is in happening in the school, local or wider environment.						
KEY STAGE 1						
Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Computing systems and networks 1: Improving mouse skills Unit summary: Pupils develop confidence using a computer by improving mouse control, logging in independently and creating digital artwork	Programming 1: Commands unplugged Unit summary: Pupils learn that algorithms are sets of instructions and begin creating, following and improving simple commands	Skills showcase: Rocket to the Moon Unit summary: Pupils apply keyboard, mouse and drawing skills through an engaging cross-curricular digital project	Programming 2: Bee-Bots Unit summary: Pupils create, test and debug simple programs using Bee-Bots while developing logical thinking	Creating media: Digital imagery Unit summary: Pupils capture, edit and combine photographs to produce creative digital images	Data handling: Introduction to data Unit summary: Pupils explore how data is collected, organised and interpreted in everyday life and computing
Year 2	Computing systems and networks 1: What is a computer? Unit summary: Pupils investigate how computers receive, process and output information before designing their own digital invention.	Programming 1: Algorithms and debugging Unit summary: Pupils write, test and improve algorithms while learning how debugging helps programs work correctly.	Computing systems and networks 2: Word processing Unit summary: Pupils develop typing, formatting and editing skills to create well-presented digital documents	Programming 2: Scratch Jr Unit summary: Pupils create and test simple programs using block-based coding and develop confidence in programming concepts.	Creating media: Stop motion – Using tablets Unit summary: Pupils plan, capture and edit images to produce their own stop-motion animation.	Data handling: International Space Station Unit summary: Pupils investigate how data is collected and used on the International Space Station and why it is important

KEY STAGE 2

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	Computing systems and networks 1: Networks Unit summary: Pupils learn how computers connect through networks and how information is shared between devices.	Programming: Coding using Scratch Unit summary: Pupils create animations and interactive projects while developing sequencing, repetition and debugging skills.	Computing systems and networks 2: Microsoft Office 365 & Emailing Unit summary: Pupils learn how to send emails safely, use attachments and communicate responsibly online.	Computing systems and networks 3: Journey inside a computer Unit summary: Pupils investigate computer components and discover how hardware works together.	Video trailers (2 options) Unit summary: Pupils plan, film and edit a digital trailer using a range of creative techniques.	Data handling: Comparison card databases Unit summary: Pupils sort, filter and interpret information using simple databases.
Year 4	Computing systems and networks: Internet Unit summary: Pupils use shared online tools to collaborate, communicate and produce digital work together.	Programming 1: Coding using Scratch Unit summary: Pupils develop more advanced coding skills using variables, selection and debugging.	Creating media: Website design Unit summary: Pupils design and build websites for a specific audience using Google Sites.	Skills showcase: HTML Unit summary: Pupils will learn how to edit the HTML of a webpage and the text and images.	Programming 2: Computational thinking Unit summary: Pupils solve problems using decomposition, pattern recognition, abstraction and algorithms.	Data handling: Investigating weather Unit summary: Pupils collect, analyse and present weather data to answer questions.
Year 5	Computing systems and networks: Search engines Unit summary: Pupils learn how search engines work and develop effective strategies for finding reliable information.	Programming 1: Music Unit summary: Pupils create digital music using coding, loops and repetition.	Data handling: Mars Rover 1 Unit summary: Pupils explore binary and how computers represent and store digital information.	Programming 2: BBC micro:bit Unit summary: Pupils program physical computing devices using sensors, variables and selection.	Stop-motion animation: Using Stop Motion Studio or cameras Unit summary: Pupils plan, create and refine their own stop-motion animation.	Skills showcase: Mars Rover 2 Unit summary: Pupils apply computing knowledge to design and evaluate a Mars Rover solution.
Year 6	Computing systems and networks: Bletchley Park and the history of computers Unit summary: Pupils explore codebreaking, cybersecurity and the development of modern computing.	Computing systems and networks: Exploring AI Unit summary: Pupils investigate artificial intelligence, prompt writing and the ethical implications of AI.	Data handling 1: Big Data 1 Unit summary: Pupils investigate how digital data is collected, stored and transmitted.	Programming: Exploring Python Unit summary: Pupils develop text-based programming skills while writing and debugging Python code.	Data handling 2: Big Data 2 Unit summary: Pupils explore smart technologies, connected devices and the Internet of Things.	Skills showcase: Inventing a product Unit summary: Pupils apply their computing skills to design, develop and present an innovative digital product.

ONLINE SAFETY

Online Safety is taught throughout the year through Kapow's dedicated Online Safety unit and reinforced within all computing lessons. Learning includes privacy, respectful communication, digital footprints, managing information, wellbeing and knowing how to seek help online, with content matched to the age of pupils.