

Year 6 Computing Curriculum



Autumn	Computing systems and networks: Bletchley Park and the history of computers	Data handling: Big Data 1
Year 6	- The importance of having a secure password and what brute force hacking is. - The first computers were created at Bletchley Park to crack the Enigma code to help the war effort in World War 2. - About some of the historical figures that contributed to technological advances in computing. - What techniques are required to create a presentation using appropriate software. - Sound clips can be recorded using sound recording software. - Sound clips can be edited and trimmed.	- Data contained within barcodes and QR codes can be used by computers. - Infrared waves are a way of transmitting data. - Radio Frequency Identification (RFID) is a more private way of transmitting data. - Data is often encrypted so that even if it is stolen it is not useful to the thief.

Spring	Code.org
Year 6	• Create an animation using sprites, and behaviours. • Create new sprites and assign them costumes and behaviours. • Develop programs that respond to timed events and user input. • Create an interactive virtual pet using events, behaviors, and custom art. • Program solutions to problems that arise when designing a virtual pet, like feeding it. • Assign a variable a value • Call a variable multiple times in a program. • Determine the relationship between how a variable is defined, stored, and retrieved when we press “Run” on a program. • Use variables in conjunction with prompts • Use variables to hold words and phrases. • Create Sprite Lab programs where sprites are created in groups, and controlled individually using events. • Create a variable that stores information and changes over time. • Create double line graph to compare data about two different sources. • Use a computer simulation to collect data about a model. • Play through the puzzles to find any potential problem areas for your class. • Discuss the role artificial intelligence plays in their lives. • Reason about how human bias plays a role in machine learning. • Learn about the complexity of sending messages over the internet. • Translate URLs into IP Addresses. • Articulate the design process and how it helped shape the finished culminating project. • Be able to explain how system limitations can affect project design. • Draft and implement plans to resolve any issues in their code.

Summer	Computing systems and networks: Exploring AI	Programming: Intro to Python
Year 6	- AI is artificial intelligence and is used in everyday life. - AI is trained on data to recognise patterns and generate outputs. - AI can be used to generate written content. - AI can be used to create visual content like pictures. - AI can help generate basic HTML code to create the structure and layout of a website. - There are ethical issues surrounding AI, including data privacy, bias and responsible use.	- To know that there are text-based programming languages such as Logo and Python. - To know that nested loops are loops inside of loops. - To understand the use of random numbers and remix Python code.