Computing Progression of Skills
Year 6

Year 6 National Curriculum Objectives for Computing: Children will be taught to:	
Online Safety (6.2) • Identify benefits and risks of mobile devices broadcasting the location of the user/device, e.g., apps accessing location • Identify secure sites by looking for privacy seals of approval, e.g., https, padlock icon • Identify the benefits and risks of giving personal information and device access to different software • Review the meaning of a digital footprint and understand how and why people use their information and online presence to create a virtual image of themselves as a user • Have a clear idea of appropriate online behaviour and how this can protect themselves and others from possible online dangers, bullying and inappropriate behaviour • Begin to understand how information online can persist and give away details of those who share or modify it • Understand the importance of balancing game and screen time with other parts of their lives, e.g., explore the reasons why they may be tempted to spend more time playing games or find it difficult to stop playing and the effect this has on their health • Identify the positive and negative influences of technology on health and the environment.	**Understanding Binary (6.8)** • Examine how whole numbers are used as the basis for representing all types of data in digital systems • Recognise that digital systems represent all types of data using number codes that ultimately are patterns of 1s and 0s (called binary digits, which is why they are called digital systems) • Understand that binary represents numbers using 1s and 0s and these represent the on and off electrical states respectively in hardware and robotics • Examine how whole numbers are used as the basis for representing all types of data in digital systems • Recognise that the numbers 0, 1, 2 and 3 could be represented by the patterns of two binary digits of 00, 01, 10 and 11 • Represent whole numbers in binary, for example counting in binary from zero to 15, or writing a friend's age in binary • Examine how whole numbers are used as the basis for representing all types of data in digital systems • Represent whole numbers in binary, for example counting in binary from zero to 15, or writing a friend's age in binary • Explore how division by two can be used as a technique to determine the binary representation of any whole number by collecting remainder terms • Examine how whole numbers are used as the basis for representing all types of data in digital systems • Represent the state of an object in a game as active or inactive using the respective binary values of 1 or 0.
Networks (6.6) • Explain what they know about the Internet • Understand what a LAN and WAN are • Explain how we access the internet in school • Research and find out about the age of the internet • Postulate about what the future might hold for technology.	**Spreadsheets (6.3)** • Use a spreadsheet to investigate the probability of the results of throwing many dice • Use a spreadsheet to calculate the discount and final prices in a sale. • Create a formula to help work out the prices of items in the sale • Use a spreadsheet to plan how to spend pocket money and the effect of saving money • Use a spreadsheet to plan a school charity day to maximise the money donated to charity.

Coding (6.1)	**Blogging (6.4)**
- Design a playable game with a timer and a score - Plan and use selection and variables - Understand how the launch command works - Use functions and understand why they are useful - Understand how functions are created and called - Use flowcharts to test and debug a program - Create a simulation of a room in which devices can be controlled - Understand the different options of generating user input in 2Code - Understand how user input can be used in a program - Understand how 2Code can be used to make a text-based adventure game.	- Understand the purpose of writing a blog - Identify the features of successful blog writing - Plan the theme and content for a blog - Understand how to write a blog and a blog post - Consider the effect upon the audience of changing the visual properties of the blog - Understand how to contribute to an existing blog - Understand the importance of commenting on blogs - Peer-assess blogs against the agreed success criteria - Understand how and why blog posts and comments are approved by the teacher.
Text Adventures (6.5)	**Quizzing (6.7)**
- Explore an example adventure game made in 2Create a Story - Use 2Connect to plan a 'Choose your own Adventure' type story - Use 2Connect plans for a story adventure to make the adventure using 2Create a Story - Use written plans to code a map-based adventure in 2Code.	- Create a picture-based quiz for young children - Learn how to use the question types within 2Quiz - Explore the grammar quizzes - Make a quiz that requires the player to search a database - Make a quiz to test teachers or parents.
Spreadsheets (6.9) Microsoft Excel / Google Sheets - Know what a spreadsheet looks like - Navigate and enter data into cells - Introduce some basic data formulae - Demonstrate how the use of Excel / Google Sheets can save time and effort when performing calculations - Use a spreadsheet to model a situation - Demonstrate how Excel / Google Sheets can make complex data clear by manipulating the way it is presented - Use formulae for percentages, averages, max and min in spreadsheets - Create a variety of graphs - Use a spreadsheet to model a real-life situation - Apply spreadsheet skills to solving problems	

Notes

Children working below objectives listed above	**Children who are working above objectives listed above**