Y6 Computing (Computer Science)

National Curriculum	Knowledge	Skills	Y5 Vocab	Y6 Vocab
• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	• Understand the importance of the order of code. • Understand why code does not respond when an input is not recognised. • Understand the effect of changing a variable. • Understand that loops are efficient ways of coding. • Understand how computer programs can be applied to real life situations and physical systems.	• Use an 'if' command to test an input. • Use variables to perform more complex calculations using * and /. • Modify the name or value of a variable. • Modify the direction or length of an object by numerical values or a variety of commands. • Import an object. • Use a loop to draw a shape. • Generate a random number. • Combine a variety of commands to create the desired outcome. • Add and retrieve items to and from an array	• HTML • Tag • Paragraphs • Headings • Jpg • png • img src • graphics • source • CSS • Pixels • Font (family & size) • Background • RGB • Hexadecimal • Margin • Padding • Hyperlink • URL • br	• Input command • Input/Output • If • Selection • Password • Modify • turtle.turtle() • Import • Pixels • Loop • Range • For • Generate • Random • Coordinates • Array

Units to Teach	Key Questions		Maths Links
• Python – Introduction to Python • Python – Python Graphics • Python – R Numbers & Simulations • Python – Python Functions	• *Why do you think coders often work in pairs?* • *What are the advantages of pair programming?*	• What do you understand pixels to mean in Python? • What function does the penup command have?	• Coordinates

Previous Learning	Future Learning
• Begin to understand that there are multiple programming languages used for a variety of reasons. • Understand the web-sites are built using HTML. • Create a simple program in HTML. • Resize and image and set the pixel size of an image in html. • Change the colour, font and size of texts within html.	• Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical system • Understand several key algorithms that reflect computational thinking use logical reasoning to compare the utility of alternative algorithms for the same problem. • Use 2 or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures design and develop modular programs that use procedures or functions