

Year 8 Big Picture – Computer Science

<i>Autumn Weeks 2-15 7 Lessons</i>	<i>Spring Weeks 16-27 4 Lessons (2 lessons allocated to BT & CFS)</i>	<i>SUMMER Weeks 27-39 4 Lessons (2 lessons allocated to BT & CFS)</i>
<p>Networks</p> <p>This unit begins by defining a network and addressing the benefits of networking, before covering the types of hardware required are explained.</p> <p>Learners will develop an understanding of the terms ‘internet’ and ‘World Wide Web’. Learners will develop a network diagram and cost a new network infrastructure. The final lesson discusses operating systems and introduced graphical user interfaces (GUI) & Command line interfaces (CLI).</p>	<p>Python Programming</p> <p>During this unit students will build on the skills and knowledge taught in Year 7.</p> <p>Students will gain an in-depth understanding of how to use variables, data types, and string/ number manipulation.</p> <p>Students will learn about sequencing, selection and iteration and will be introduced to debugging, functions and lists in Python.</p>	<p>Plan and Create a website</p> <p>In this unit, learners will plan a Moodboard and Wireframe for a given scenario</p> <p>Learners will either use HTML or an Online Platform to create the website for a client</p>
<p>Content</p> <ul style="list-style-type: none"> Define what a computer network is and explain the advantages and disadvantages of using a network List examples of the hardware necessary for connecting devices to networks Define what the internet is Explain how data travels between computers across the internet 	<p>Content</p> <ul style="list-style-type: none"> Write simple Python programs that display messages, assign values to variables, and receive keyboard input Use simple arithmetic expressions in assignment statements to calculate values Receive input from the keyboard and convert it to a numerical value Use binary selection (if, else statements) to control the flow of program execution 	<p>Content</p> <ul style="list-style-type: none"> Compare planning tools available for pre-production Describe what HTML is Identify and explain the features of a website Know the basics of good Web Design Understand the purpose of CSS and why it is needed in addition to HTML

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<ul style="list-style-type: none"> • Explain the difference between the internet, its services, and the World Wide Web • Create a network diagram using a range of hardware solutions & pricing to enable re world understanding and context. • Understand what an operating system is and be able to define a Graphical user interface & a Command line interface. 	<ul style="list-style-type: none"> • Describe how iteration (for statements) controls the flow of program execution 	<ul style="list-style-type: none"> • Understand the purpose of DIV tags • Create a two-page website to showcase the skills learnt throughout this unit of study
	Big Test 1 from 12th Jan to 23rd Jan	Big Test 2