

Year 9 Computer Science

Year 9	Autumn Term:	HT3; HTML, CSS and Javascript	HT4: Web Graphics and HTML	HT5: Advanced Python Programming	HT6 Part 1: Artificial Intelligence and Big Data	HT6 Part 2: Digital Dirt
Topics/Units to Be studied	Theatre Project	Introduction to HTML, CSS and Javascript	Introduction to Web graphics and HTML	Advanced Python Programming	Artificial Intelligence and Data Science	ESafety
Core Knowledge and Skills	Students will undertake creative projects that involve selecting, using and combining multiple applications preferably across a range of devices to achieve challenging goals including collecting and analysing data and meeting the needs of known users. Students will learn how to produce letters, financial documents and interactive	Students will explore the technologies that make up the internet and World Wide Web. Starting with an exploration of the building blocks of the World Wide Web, HTML, and CSS. Students will learn how to create a basic website using HTML, they will then learn how to format the website using consistent colors, font using CSS and finally they will learn how to make an interactive website using	Students will build upon the knowledge they learnt during the last topic of HTML and create a website using a graphics package to create roll over buttons, navigation bars. They will create their web graphics using Fireworks and will be given a scenario.	Students will build upon content taught in year 8. This unit takes learners from being complete novices to having the confidence to tackle any GCSE level programming challenge. Essential programming theory is also interleaved into the practical elements of programming to provide tangible links between required knowledge and skills.	This unit gives students a first insight into the fascinating world of Artificial Intelligence and Machine Learning. Pupils begin by considering where AI is used from simple problems such as solving a maze to those more advanced, such as self driving cars. Students will then look at how machine learning and deep learning are used in image recognition. This is a fast moving area of development, so students will learn	Students will build upon their knowledge taught in year 7 and Year 8: Students will learn about how digital dirt sticks and how they use social media could impact on their future

	presentations for a given scenario	Javascript to program buttons			about the Ethics of AL. And understand the phrase "Big Data". Students will also be taught about the ever growing world of Data Science and how data is used to inform decisions/forecast and make decisions.	
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Assessment (How do we know if pupils have learnt what we've taught them?⁸)	<p>Formative: MCQS midterm</p> <p>Formative: key word definitions</p> <p>Summative: Evaluation on practical activities and written theory based test.</p>	<p>Formative: MCQS midterm</p> <p>Formative: key word definitions</p> <p>Summative: Evaluation on practical activities and written theory based test.</p>	<p>Formative: MCQS midterm</p> <p>Formative: key word definitions</p> <p>Summative: Evaluation on practical activities and written theory based test.</p>	<p>Formative: MCQS midterm</p> <p>Formative: key word definitions</p> <p>Summative: Practical challenges</p>	<p>Formative: MCQS midterm</p> <p>Formative: key word definitions</p> <p>Summative: Practical challenges</p>	<p>Formative: MCQS midterm/class discussions</p> <p>Formative: key word definitions</p>
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