

Key Stage 3 – YEAR 9 COMPUTER SCIENCE AND ICT
Curriculum Map for Students

	Autumn	Autumn	Winter	Spring	Summer
Theme	eSafety Refresher	Unit 1 - Python Programming	Unit 2 - Data Representation: Sounds & Images	Unit 3 - Mobile APP Development	The iDEA Award
Topic Overview	Reigniting the conversation on how to stay safe in an ever-changing online world.	A sequence of lessons designed to delve deeper into the world of text-based programming using Python.	A colourful topic introducing different image file types, the digital vs analogue debate and managing sound and images file sizes.	Creating, testing and evaluating mobile applications for the world's most popular mobile operating system (Android OS).	The Innovative Digital Enterprise Award. Developing wide and varied digital skills and being rewarded with a widely recognised award.
Focus	Students will spend two lessons revisiting some of the key features of online safety and will look at specific age-related issues surrounding their online lifestyles. Students will work in small groups to create a piece of work designed to increase awareness of online dangers and how to deal with them including issues such as Cyberbullying, Trolling and Oversharing.	Students will continue to develop their programming skills from Year 8 using the Python programming language. Students will revisit their skills using Sequence, Selection and Iteration and will also be introduced to new content such as the creation of data structures within programming languages and the creation of user-defined functions.	Students will learn about how binary is used to manage colours within a computer system including the creation of bitmap images using different colour depths. Students will create a piece of pixel art and will learn how to represent vector images using series of geometric shapes. Students will learn how sound can be converted from analogue and stored digitally within a computer and the implications of larger images and sound files on their computer's storage space.	Students will study the short history of mobile phone devices and their evolution over a relatively short space of time. Students will learn about the different mobile operating systems available to use across mobile devices. Students will then learn a series of skills that allow them to develop simple mobile applications for the Android operating system. Students will run these applications on mobile devices and carry out simple debugging and testing of their applications.	Students will spend their remaining time in Year 9 working towards a Bronze award of the iDEA award. This award is designed to teach students a range of technical knowledge across a wide and varied range of areas. Students will work towards gaining 250 points in the different badges available in order to attain a Bronze award before the end of Year 9. Students can then continue to work towards the Silver and Gold award in their own time.
Assessment	<i>Students are assessed based on their contribution to a piece of eSafety work that provides a series of guidelines on how to stay safe online.</i>	<i>Students are assessed on the production of a program based on a given scenario designed to allow them to demonstrate the programming skills gained during this unit. Students will also complete a 45-minute online assessment that includes a mix of multiple choice and short answer questions. Students classwork will be assessed against the I CAN statements within their workbooks.</i>	<i>Students are assessed by completing a 45-minute online assessment that includes a mix of multiple choice and short answer questions. Students classwork will be assessed against the I CAN statements within their workbooks.</i>	<i>Students are assessed based on the mobile application they produce within 4 lessons, that meets the requirements of the program specification provided. Students classwork will also be assessed against the I CAN statements within their workbooks.</i>	<i>Student's progress is tracked based on the amount of points achieved during lesson times. Whilst students may not make it to 250 points before the end of Year 9, they will have made a great start towards achieving this genuine award which can be added to their CV's and/or college/apprenticeship applications.</i>