Curriculum Map

Subject: Computer Science

Year group: 9

	Autumn1	Autumn 2	Autumn 2/Spring1	Spring 2/Summer 1	Summer 2
Content *Declarative Knowledge – 'Know What'*	Python Programming with PRIMM This topic will revisit Python programming but allow students to go into more advanced concepts. Students considering Computer Science for GCSE will benefit from this content that is the ideal bridge between KS3 and KS4 programming. *Programming* *Algorithms*	Python Programming with PRIMM *Programming* *Algorithms*	Tech Through Time "Tech Through Time" aims to take students through the history of computing and key computer scientists. There will also be a focus on current and future technologies so students will learn just how far technology has come. *Information Technology* *Hardware* *Digital Literacy*	My Digital World Students will create a video advert to raise awareness for mental health and social media. The best videos across the year group will be shown in a celebration assembly. *Information Technology* *Data & Data Representation*	Designing for the Web This topic looks at the best ways to design images for the web. Students will use Photoshop and learn how to design and edit images that are best suited for the web. *Information Technology* *Communication & Networks*
Skills *Procedural Knowledge – 'Know How'*	I can represent solutions using a structured notation. I know that different algorithms exist for the same problem. I know that programming bridges the gap between algorithmic solutions and computers.	I know that for some problems I can share the same characteristics and use the same algorithm to solve both (generalisation). I know the difference between, and I can use appropriately, procedures and functions.	I can identify and explain how the use of past, modern and future technology can influence society. I can evaluate and debate the impact of particular technology innovations has had in the past, present and future concerning legal, moral and ethical values.	I can justify the choice of and independently combine and I use multiple digital devices, internet services and application software to achieve given goals. I can identify and explain how the use of technology can impact on society.	I know how to construct media using image-editing tools such as Photoshop. I am able to use multimedia for specific online purposes. I know how to use web based languages such as HTML, CSS and JavaScript to develop webpages.
Key Questions	How can I use computational thinking to solve complex problems? How can I use sequence, selection and iteration to develop a program to solve a problem?	What is the general software life cycle for a computer program? How can I decipher and understand error messages as a way to improve my program?	What are the latest technological advances that will affect society? What are the benefits and pitfalls of specific current and future technology initiatives?	How can I create and reuse digital artefacts and multiple applications across a range of devices to present information suitable for my audience?	How can I use Photoshop to improve the quality of websites? What is the difference between good and bad forms of media? How does CSS and JavaScript bolster website user experience?
Assessment	Online Baseline assessment at start of topic	Programming project assessment (Maze Game) Online Baseline assessment revisited	Mini Group Project	Group Video Project on the affects of social media and mental health	Assessment of mini projects

Literacy/Numeracy/ SMSC/Character	Creativity, Resilience, Initiative. Peer support. Algorithmic Thinking	Writing and presenting information suitable for audience and purpose	Writing and presenting information suitable for audience and purpose. Integrity.	Initiative. Moral and Ethical decision-making. Mental Health. Integrity. Understanding Legislation.	Initiative, Aspiration, Creativity. Integrity.