

Computer Science Curriculum Map

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	Topic	Introduction to Computing Students will familiarise themselves with the systems used at Shenfield, and be taught how to navigate technology safely	Digital literacy Students will explore various software packages, including Word, Powerpoint and Excel	Computer systems Students will be introduced in the fundamentals of computer systems, looking at hardware, software, storage and binary	Block based programming Students will be introduced to the key fundamentals of programming via code.org's express programming course	Digital enterprise - IDEA Bronze Award Students will work towards an online qualification, called IDEA. Students will complete numerous online challenges based around being a digital citizen and digital worker	Vector graphics Students will learn to create vector graphics
	Assessment	Google forms quiz - How to stay safe online - Online risks	Google forms quiz - Identifying key features of each software package	Google forms quiz - Identifying hardware, software and storage components -Converting from binary to denary and vice versa -Binary addition	Google forms quiz - Identify examples of variables, sequencing, selection and iteration -Predict outputs of programmes	Google forms quiz - Cyber security -eSafety - Social media ethics - Digital ethics	Google forms quiz - End of year quiz recapping all of the key content covered over the year
	PREP	Revision for assessment	Revision for assessment	Revision for assessment	Revision for assessment	Revision for assessment	Revision for assessment
Year 8	Topic	Network security	Gaining support for a business	Boolean logic	Programming in Python	Digital enterprise -	Animations

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		Students will explore what a compute network is, and how it can be vulnerable to hackers	Students will come up with their own business idea, and then use various software packages to gain support for their business	Students will learn about Boolean logic, and how computers are designed using this logic	Students will apply their fundamental knowledge of programming to Python, a common text based programming language	IDEA Bronze Award Students will work towards an online qualification, called IDEA. Students will complete numerous online challenges based around using technology to make content as well as using technology in business	Students will learn to create animations that they commonly see in films and TV programmes
	Assessment	Google forms quiz - Identify key network threats -Identify how to prevent being a victim of network threats	Google forms quiz - Key features of each software package	Google forms quiz - Identifying AND, OR, NOT gates - Be able to complete truth tables	Programming project - Students will be asked to programme a car using Python turtle. Students will have their projects marked to assess their use of key programming skills	Google forms quiz - Problem solving -Social media in business - Coding	Google forms quiz - End of year quiz recapping all of the key content covered over the year
	PREP	Revision for assessment	Revision for assessment	Revision for assessment	Revision for assessment		Revision for assessment
Year 9	Topic	Your data	Spreadsheets	How data is represented by a computer	Programming in Python	Digital enterprise - IDEA Silver Award	Hour of code programming challenges

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		Students will explore why social media is free, and how big tech companies use our data, and for what purpose	Students will learn how to use functions and formula to analyse data	Students will explore how computers store different forms of data	Students will develop their programming in Python knowledge by exploring sequencing, selection and iteration in more detail	Students will continue to work towards an online qualification, called IDEA. Students will complete numerous online challenges based around being a digital citizen and entrepreneur	Students will finish their KS3 Computing journey by completing various programming challenges, practising both their programming skills as well as their problem solving skills
	Assessment	Essay - Students will be asked to write an essay style answer explaining their opinion on big tech companies using our data	Google forms quiz - How and when to use MIN,MAX,AVERAGE,SUM,COUNT AND COUNTIF -How to use + - / *	Google forms quiz - How sound, images and text are stored by computers -How to convert between binary, denary and hexadecimal numbers	Programming project - Students will create a 10 question general knowledge quiz, using Python, that gives feedback on user answers, as well as keeping track of their score	Google forms quiz - Problem solving -Time management -Market research - Financial investment	Google forms quiz - End of year quiz recapping all of the key content covered over the year
	PREP	Revision for assessment	Revision for assessment	Revision for assessment	Revision for assessment	Revision for assessment	Revision for assessment
Year 10	Topic	2.4 – Boolean Logic 1.2.4 – Data storage - numbers	2.2.1 – Programming fundamentals 2.2.2 – Data types	2.2.3 – Additional programming techniques 1.2.4 – Data storage – images, sound, characters	1.2.5 – Compression 1.1 – Systems architecture	2.1 – Designing, creating and refining algorithms	Pre mock revision Pre mock review and consolodation

