

Fareham Academy – Computer Science Overview – Year 9

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Real World A focus on the digital world around us		The Cyber World Awareness of risks and responsibilities		The Future World Focus on developing for the future	
Topic(s)	<ul style="list-style-type: none"> Digital Communication 	<ul style="list-style-type: none"> Data Science 	<ul style="list-style-type: none"> Threats 	<ul style="list-style-type: none"> Solutions 	<ul style="list-style-type: none"> Enhanced programming skills 	<ul style="list-style-type: none"> End of Year Project
Topic Objectives	<ul style="list-style-type: none"> How do computers communicate Networking Devices Network sharing - what is a network, Internet, WANs, LANs, Cloud, Internet of Things, Wireless v Wired networks What risks are involved in using a network Cyber crimes and cyber security in real life 	<ul style="list-style-type: none"> E-safety v Cyber security Risks to your personal information Laws on Information Using Data Analytics Searching and Sorting data Data management using programming 	<ul style="list-style-type: none"> Cyber risks beyond personal threats Cyber Security Ethical Hacking 	<ul style="list-style-type: none"> Develop coding skills using Python to solve problems. Compare development of programming in a text based environment vs GUI User and programming considerations Programming a Python GUI to address security risks 	<ul style="list-style-type: none"> Algorithmic modelling for real life situations Using Logic, Computational Thinking and Resilience Throughout the Software Development Lifecycle 	<ul style="list-style-type: none"> Raising awareness of future careers Machine Learning Application Programming using knowledge gained throughout the year
Acquired Knowledge/Skills	Applied knowledge of networking equipment and use, understanding of connectivity, awareness of risks involved in use of connectivity	Enhanced awareness of the importance of information, and the ability to use information to make sense of the world, now and in the future	Develop understanding of Cyber Risks and Security and how this applies to job roles, becoming a 'hacker'	Enhanced Python skills in a GUI environment, Applied programming skills using Python	Ability to use the Software Development Lifecycle to design, plan and build a program to solve a life problem	Help a computer learn. Discover the role of Predictive technologies and machine Learning/AI Develop your own AI by using Machine Learning examples.
Assessments	<ul style="list-style-type: none"> Base Assessment 	<ul style="list-style-type: none"> End of Topic Analytics Presentation 	<ul style="list-style-type: none"> End of Topic 	<ul style="list-style-type: none"> End of Topic Python Program 	<ul style="list-style-type: none"> End of Topic Evidence of Software Development Lifecycle stages 	<ul style="list-style-type: none"> End of Topic Final Program

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