

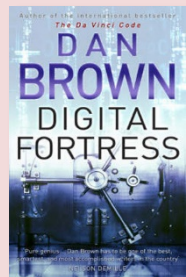


The English Martyrs Catholic School and Sixth Form College

<u>Y11 Comp Sci</u>	<u>Module 1</u>	<u>Module 2</u>	<u>Module 3</u>
<u>Topic Theme and Intent</u>	Gain an understanding of computer architecture and how the various different components work together to accomplish tasks. Further to this, develop knowledge of different number systems and data representation .	Gain an understanding of how computers can communicate in a network understand the benefits and drawbacks of different network topologies, threats to networks and how to defend against them.	Gain an understanding of different legal and ethical issues that arises as a result of computer usage and the laws that apply to the use of computers. Understand the impact of legislation on different categories of computer user.
<u>Knowledge</u>	<ul style="list-style-type: none"> Key components of a computer system and how they work together focused on the Von Neumann processor architecture. Representation of data in the binary number system. 	<ul style="list-style-type: none"> Network topologies including their structure and the benefits and drawbacks of each method. Different threats to computer systems and how these can be combatted to ensure data is not compromised. 	<ul style="list-style-type: none"> Define key aspects of legislation that govern the use of computers including the computer misuse act, GDPR and copyright. Awareness of the deeper impact an increased use of ICT can cause.
<u>Skills</u>	Processor architecture and how registers work together. Convert between different number bases including binary, denary and hexadecimal and carry out binary addition.	Analyse potential threats to a network for any given scenario and explain the most suitable security methods that can be put in place to ensure that data is kept secure.	Discuss wide range of issues arising from computer issues including environmental, workplace related, censorship, data tracking and how acts of legislation can be implemented.
<u>Literacy Links</u>	<p>Reading – Read exam-based questions and information in scenarios.</p> <p>Writing – Response to exam-based questions and binary data manipulation.</p> <p>Oracy – Discussion of key terms and class discussion in pairs or small teams.</p>	<p>Reading – Read text to analyse key threats to a network in given scenario.</p> <p>Writing – Description of benefits and drawbacks in response to threats.</p> <p>Oracy – Class discussion on moral issues around network threats and hacking.</p>	<p>Reading – Extended response questions understanding concepts and context.</p> <p>Writing – Extended response to questions using subject specific terminology.</p> <p>Oracy – Class discussion and presenting an argument on a topic.</p>
<u>Essential Vocabulary</u>	Binary, Denary, Input, Hexadecimal, Output, Processor, Representation	Attack, Defence, Network, Thread, Secure, Topology	Censorship, Environmental, Ethical, Legislation, Misuse, Tracking

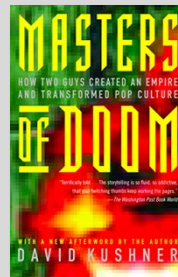
Disciplinary Reading

Digital Fortress



Reading for Pleasure

Masters of Doom



Code: The Hidden Language

