







4	<p>Logic problems</p> <p>Assembly language programming I</p> <p>Assembly language programming II</p>	<ul style="list-style-type: none"> <li>• Construct truth tables for a three-input logic circuit</li> <li>• Write a Boolean expression to describe a logical circuit</li> <li>• Describe how combinations of logic gates can perform mathematical operations</li> <li>• Determine that assembly language has a 1:1 relationship with machine code</li> <li>• Explain the basic commands in the LMC's assembly code: INP, OUT, STA, LDA, ADD, SUB, and BRP</li> <li>• Design and write your own program in assembly language</li> </ul>	<p>Work packs can be made available if needed.</p>	<p>Resources to be made available on teams. Pupils to join live lessons and complete work via teams.</p>
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5	<p><b>Summative Assessment Computer Systems</b></p> <p><b>1 What are networks?</b></p> <p>2 Basic networks</p> <p>3 Real-world networks</p>	<ul style="list-style-type: none"> <li>• Define what networks are</li> <li>• Describe the hardware components required to build networks of devices</li> <li>• Analyse the benefits and problems associated with networks</li>   <li>• Explain how devices can be connected to a network either through a wired or wireless connection</li> <li>• Define MAC addresses and their use in networks</li> <li>• Analyse specific examples including Ethernet and Wi-Fi</li> <li>• Explain the importance of connectivity in modern computing systems</li>   <li>• List and describe the different types of networks depending on node distribution, including personal, local, and wide area networks</li>   <li>● List, describe, and compare the different types of networks depending on topology, such as ring, star, and bus</li> </ul>	<p>Work packs can be made available if needed.</p>	<p>Resources to be made available on teams. Pupils to join live lessons and complete work via teams.</p>
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6	<p>4 Networks and servers</p> <p>5 Internet and WWW</p> <p>6 Network protocols</p>	<ul style="list-style-type: none"> <li>• List, describe, and compare the different types of communication models encountered in networks, such as server–client and peer-to-peer</li> <li>• Define and describe the internet</li> <li>• Define the WWW and describe its main components</li> <li>• Define and explain the concept of a networking protocol</li> <li>• List and explain standard internet protocols in the application layer, such as HTTP, HTTPS, FTP, DNS, SMTP, POP, and IMAP</li> </ul>	<p>Work packs can be made available if needed.</p>	<p>Resources to be made available on teams. Pupils to join live lessons and complete work via teams.</p>
7	<p>7 The IP suite and packet switching</p>	<ul style="list-style-type: none"> <li>• Explain and describe the advantages and disadvantages of circuit switching and packet switching</li> <li>• List and explain the four different layers associated with the Internet Protocol: link, network/internet, transport, and application</li> <li>• Explain the Internet Protocol in the internet layer</li> </ul>	<p>Work packs can be made available if needed.</p>	<p>Resources to be made available on teams. Pupils to join live lessons and complete work via teams.</p>

	<p>8 Network speed and performance</p> <p>9-Summative Assessment</p>	<ul style="list-style-type: none"><li>• List and explain standard internet protocols in the transport layer, such as TCP and UDP</li><li>• Describe how network data speeds are measured, and the factors affecting network performance</li><li>• Define what virtual networks are, and how they are used to maintain network performance</li><li>• Explain why networks are a target for criminals, and what some of the tools available to defend against attacks are</li></ul>		
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