



Year 11 Computing - Unit: Boolean Logic & Networks – Spring Term 2 – KNOWLEDGE OVERVIEW

Subject: Computing				
Year group: 11		Unit: Networks	Date (from and to): 22.02.2021 – 26.03.2021	
Wk.	Big question / concept: What is a Network?	Learning intentions: Learners must be able to:	Resources	
			Offline:	Online including links on how to access these:
1, 2 & 3	How do computers make decisions?	<ul style="list-style-type: none"> • why data is represented in computer systems in binary form • simple logic diagrams using the operations AND, OR and NOT • truth tables • combining Boolean operators using AND, OR and NOT to two levels • applying logical operators in appropriate truth tables to solve problems • applying computing-related mathematics: <ul style="list-style-type: none"> ○ + ○ - ○ / ○ * ○ Exponentiation (^) ○ MOD ○ DIV 	Printed work sheets and workbooks available on request. Revision Guide Pages: 64-65 Workbook Pages: 74-75	<p>Simple Logic https://www.youtube.com/watch?v=jN9WtjyXf4&list=PLCiOXwirraUAEhj4TUjMxYm4593B2dUPF&index=81</p> <p>Truth Tables https://www.youtube.com/watch?v=U7dbx9fllc&list=PLCiOXwirraUAEhj4TUjMxYm4593B2dUPF&index=82</p> <p>Combining Boolean Operators https://www.youtube.com/watch?v=Vc2dM6cHxQk&list=PLCiOXwirraUAEhj4TUjMxYm4593B2dUPF&index=83</p> <p>Applying Logical Operators in Truth Tables to Solve Problems https://www.youtube.com/watch?v=vPG5c-RJtog&list=PLCiOXwirraUAEhj4TUjMxYm4593B2dUPF&index=84</p>
4	Assessment	<ul style="list-style-type: none"> • Complete the assessment and work on feedback 	Printed assessment documents	Use of previous online resources to revise

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5	<ul style="list-style-type: none"> • IP addressing and MAC addressing • Standards 	<ul style="list-style-type: none"> • IP addressing and the format of an IP address (IPv4 and IPv6) • A MAC address is assigned to devices; its use within a network 	<p>Revision guide pages 17-20</p> <p>Revision guide Pages 17-24</p>	<p>https://www.youtube.com/watch?v=mor7mvu4YHI&list=PLCiOXwrraUBnOLZCixrLTSulfgvYeWj-&index=9</p>
6 & 7	<ul style="list-style-type: none"> • Common protocols including: <ul style="list-style-type: none"> ○ TCP/IP (Transmission Control Protocol/Internet Protocol) ○ HTTP (Hyper Text Transfer Protocol) ○ HTTPS (Hyper Text Transfer Protocol Secure) ○ FTP (File Transfer Protocol) ○ POP (Post Office Protocol) ○ IMAP (Internet Message Access Protocol) ○ SMTP (Simple Mail Transfer Protocol) • The concept of layers 	<ul style="list-style-type: none"> • The principle of a standard to provide rules for areas of computing • Standards allows hardware/software to interact across different manufacturers/producers • The principle of a (communication) protocol as a set of rules for transferring data • That different types of protocols are used for different purposes • The basic principles of each protocol i.e. its purpose and key features • How layers are used in protocols, and the benefits of using layers; for a teaching example, please refer to the 4-layer TCP/IP model 	<p>Revision guide pages 17-20</p> <p>Revision guide Pages 17-24</p>	<p><u>Protocols</u> https://www.youtube.com/watch?v=ncGIs1Wnxn8&list=PLCiOXwrraUBnOLZCixrLTSulfgvYeWj-&index=11</p> <p><u>Standards</u> https://www.youtube.com/watch?v=_xwKBxDs7aY&list=PLCiOXwrraUBnOLZCixrLTSulfgvYeWj-&index=10</p> <p><u>Layers</u> https://www.youtube.com/watch?v=S6Kwx5ZJpxq&list=PLCiOXwrraUBnOLZCixrLTSulfgvYeWj-&index=12</p>