



## Year 11 Computing - Unit: Networks – Spring Term 1 – KNOWLEDGE OVERVIEW

Subject: Computing				
Year group: 11		Unit: Networks	Date (from and to): 2.11.2020 – 07.12.2020	
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	<ul style="list-style-type: none"> <li>Modes of connection:               <ul style="list-style-type: none"> <li>Wired                   <ul style="list-style-type: none"> <li>Ethernet</li> </ul> </li> <li>Wireless                   <ul style="list-style-type: none"> <li>Wi-Fi</li> <li>Bluetooth</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Compare benefits and drawbacks of wired versus wireless connection</li> <li>Recommend one or more connections for a given scenario</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Revision Guides</li> <li>Revision Workbooks</li> <li>USB resources</li> <li>Downloaded YouTube videos</li> </ul>	TEAMS: Assignments and files sections. <ul style="list-style-type: none"> <li>PowerPoints</li> <li>Lesson workbooks</li> <li>Videos(YouTube)</li> <li>Live Teaching</li> <li>Pre-recorded lessons</li> <li><a href="https://www.youtube.com/watch?v=CCfCmt03474&amp;list=PLCiOXwirraUBnOLZCixrLTSulfgyYeWj-&amp;index=7">https://www.youtube.com/watch?v=CCfCmt03474&amp;list=PLCiOXwirraUBnOLZCixrLTSulfgyYeWj-&amp;index=7</a></li> </ul>
3	<ul style="list-style-type: none"> <li>Encryption</li> </ul>	<ul style="list-style-type: none"> <li>The principle of encryption to secure data across network connections</li> </ul>	Revision guide pages 8-10  Revision guide Pages 11-13	<a href="https://www.youtube.com/watch?v=pe6Wbfl9qt4&amp;list=PLCiOXwirraUBnOLZCixrLTSulfgyYeWj-&amp;index=8">https://www.youtube.com/watch?v=pe6Wbfl9qt4&amp;list=PLCiOXwirraUBnOLZCixrLTSulfgyYeWj-&amp;index=8</a>
4	<ul style="list-style-type: none"> <li>IP addressing and MAC addressing</li> <li>Standards</li> </ul>	<ul style="list-style-type: none"> <li>IP addressing and the format of an IP address (IPv4 and IPv6)</li> <li>A MAC address is assigned to devices; its use within a network</li> </ul>	Revision guide pages 17-20  Revision guide Pages 17-24	<a href="https://www.youtube.com/watch?v=mor7mvu4YHI&amp;list=PLCiOXwirraUBnOLZCixrLTSulfgyYeWj-&amp;index=9">https://www.youtube.com/watch?v=mor7mvu4YHI&amp;list=PLCiOXwirraUBnOLZCixrLTSulfgyYeWj-&amp;index=9</a>

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5 & 6	<ul style="list-style-type: none"> <li>• Common protocols including:             <ul style="list-style-type: none"> <li>○ TCP/IP (Transmission Control Protocol/Internet Protocol)</li> <li>○ HTTP (Hyper Text Transfer Protocol)</li> <li>○ HTTPS (Hyper Text Transfer Protocol Secure)</li> <li>○ FTP (File Transfer Protocol)</li> <li>○ POP (Post Office Protocol)</li> <li>○ IMAP (Internet Message Access Protocol)</li> <li>○ SMTP (Simple Mail Transfer Protocol)</li> </ul> </li> <li>• The concept of layers</li> </ul>	<ul style="list-style-type: none"> <li>• The principle of a standard to provide rules for areas of computing</li> <li>• Standards allows hardware/software to interact across different manufacturers/producers</li> <li>• The principle of a (communication) protocol as a set of rules for transferring data</li> <li>• That different types of protocols are used for different purposes</li> <li>• The basic principles of each protocol i.e. its purpose and key features</li> <li>• 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</li> </ul>	<p>Revision guide pages 17-20</p> <p>Revision guide Pages 17-24</p>	<p><u>Protocols</u>  <a href="https://www.youtube.com/watch?v=ncGIs1Wnxn8&amp;list=PLCiOXwrraUBnOLZCixrLTSulfgvYeWj-&amp;index=11">https://www.youtube.com/watch?v=ncGIs1Wnxn8&amp;list=PLCiOXwrraUBnOLZCixrLTSulfgvYeWj-&amp;index=11</a></p> <p><u>Standards</u>  <a href="https://www.youtube.com/watch?v=xwKBxDs7aY&amp;list=PLCiOXwrraUBnOLZCixrLTSulfgvYeWj-&amp;index=10">https://www.youtube.com/watch?v=xwKBxDs7aY&amp;list=PLCiOXwrraUBnOLZCixrLTSulfgvYeWj-&amp;index=10</a></p> <p><u>Layers</u>  <a href="https://www.youtube.com/watch?v=S6Kwx5ZJpxg&amp;list=PLCiOXwrraUBnOLZCixrLTSulfgvYeWj-&amp;index=12">https://www.youtube.com/watch?v=S6Kwx5ZJpxg&amp;list=PLCiOXwrraUBnOLZCixrLTSulfgvYeWj-&amp;index=12</a></p>
7	<b>Contingency</b>			