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| **1.2a Digital devices and means of interaction and connection** |
| * Learners should understand:   + that the Internet is a global communications network which uses interconnected computers   + the infrastructure of the Internet includes clients, servers and routers   + what an Internet Service Provider (ISP) is and the role it plays   + how a search engine works   + that the World Wide Web (WWW) is A collection of information held on the Internet   + how a web server works   + the role and structure of URL’s (Uniform Resource Locator)   + how internet browsers request and display websites. * Learners should be aware of the following connection methods for internet enabled devices, and the advantages and disadvantages associated with each: broadband, satellite, fibre, mobile communication – 4G/5G, Wi-Fi – 802.11, Bluetooth and Geographical Information Systems (GIS). |

Specification points:

Skills audit:

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| **Criteria** |  |  |  |
| Understand the difference between the world wide web (WWW) and the internet. |  |  |  |
| Understand the differences between an IP, URL (including the five different parts of the URL) and MAC address |  |  |  |
| Explain how DNS (Domain Name System) works. |  |  |  |
| Identify the pros and cons associated with cloud computing. |  |  |  |
| Understand the role of the ISP and the service they provide. |  |  |  |
| Understand how a search engine works |  |  |  |
| Identify a different modes of connection and their pros and cons |  |  |  |

Teacher feedback:

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Student response:

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**Exam-style questions**

1. Many fast broadband connections use fibre optic cable instead of copper.
2. Identify **two** reasons why fibre optic cable is the preferred choice.

1…………………………………………………………………………………………………………………..

2…………………………………………………………………………………………………………………..

**[1]**

1. Explain two reason why is using cloud computing useful to some businesses ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

**[2]**

1. You want to check out the latest team news for your favourite football club http://www.dcfc.com. When you type the address into a browser, the page loads.

Describe the relationship between the website URL (https:// www.dcfc.com), the IP address and the webserver.

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**[6]**