Topic 1 – Personal Digital Devices

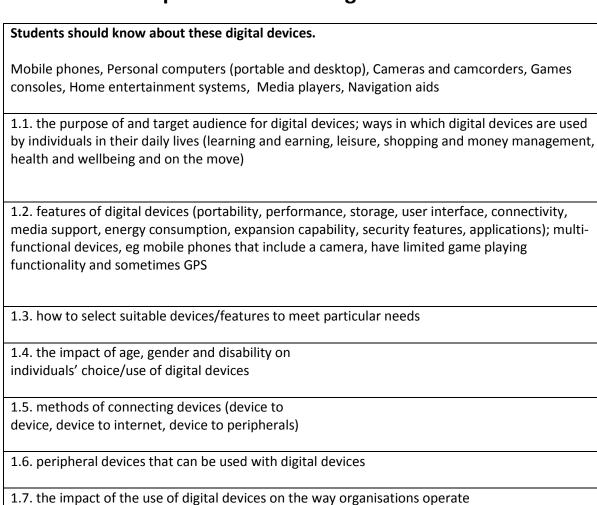| |
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| **Students should know about these digital devices.**

Mobile phones, Personal computers (portable and desktop), Cameras and camcorders, Games consoles, Home entertainment systems, Media players, Navigation aids |
| 1.1. the purpose of and target audience for digital devices; ways in which digital devices are used by individuals in their daily lives (learning and earning, leisure, shopping and money management, health and wellbeing and on the move) |
| 1.2. features of digital devices (portability, performance, storage, user interface, connectivity, media support, energy consumption, expansion capability, security features, applications); multi-functional devices, eg mobile phones that include a camera, have limited game playing functionality and sometimes GPS |
| 1.3. how to select suitable devices/features to meet particular needs |
| 1.4. the impact of age, gender and disability on individuals' choice/use of digital devices |
| 1.5. methods of connecting devices (device to device, device to internet, device to peripherals) |
| 1.6. peripheral devices that can be used with digital devices |
| 1.7. the impact of the use of digital devices on the way organisations operate |
| 1.8. health and safety risks associated with digital devices and how to reduce or contain them; responsible use of digital devices. |

Topic 2 - Connectivity

The following topics relate to the types of digital communications and the impact of the method of communication on the speed and other features of a network.
Students need to know about:
2.1. factors influencing the choice of digital communication in a network
2.2. equipment needed to create a home network; benefits and drawbacks of wired versus wireless connections
2.3. how different technologies can be used together, eg transferring a picture from a phone via Bluetooth, then uploading to web via WiFi and ADSL
2.4. factors affecting speed and volume of data transfer
2.5. the significance of bandwidth and latency, and their impact on the 'user experience'
2.6. commonly used communication networks (Ethernet, wireless Ethernet, GSM)
2.7 commonly used communication protocols (VoIP, POP, IMAP, SMTP, HTTP/S)
2.8. security risks to data and how to reduce or contain them (firewalls, encryption, authentication, digital certificates, physical access controls).

Topic 3 – Operating Online

These topics relate to the ways in which individuals can safely use online systems and the responsibility of organisations to ensure that this is the case. **Students need to know about:**
3.1. the widespread use of the internet
3.2 the use of usernames, passwords and other security measures (challenge responses, security questions) when accessing online systems
3.3 control of access to and management of personal spaces; opportunities for individuals to personalise own spaces; responsible use
3.4 threats to and methods of preventing misuse of personal information
3.5 the impact of relevant legislation.

Topic 4 – Online Goods and Services

These topics relate the use of online services by individuals and the impact of this on organisations and society.
Students need to learn about:
4.1. advantages and disadvantages of shopping online rather than in the high street
4.2. the impact on lifestyles and behaviour of the availability of goods and services online
4.3. how and why organisations operate online; impact of the internet on the ways that organisations do business
4.4. the value of transactional data (what is collected, how it is collected, eg cookies, transaction tracking, and what it is used for)
4.5. targeted marketing and personalisation techniques
4.6. payment systems
4.7. consumer protection.
The availability of software that can be used online or downloaded for personal use may impact on developments in the future. **Students need to learn about:**
4.8. the advantages and disadvantages of hosted applications software versus locally installed software
4.9. how commercial software producers can respond to the challenge of software as a service
4.10. the advantages and disadvantages of online data storage versus local storage
4.11. the advantages and disadvantages of free/open source versus proprietary software
4.12. effective use of search engines

Topic 5 – Online Communities

For the specified types of online communities students need to learn about:
5.1. the features, functions and target audience of different forms of online communities
5.2. ways in which ICT is changing the way knowledge is created
5.3. the impact of the internet on employment and working practices; collaborative working
5.4. the impact of the internet on ways of socialising
5.5. responsible use and acceptable behaviour
5.6. ways in which ICT is used to communicate and collaborate on a global scale.

Topic 6 – Issues

Students need to learn about:
6.1. security issues that arise when information is transmitted and stored digitally
6.2. privacy issues associated with the use of ICT
6.3. ways in which ICT can be used to monitor individuals' movements and communications
6.4. health and safety issues that arise from individuals' use of ICT
6.5. the impact on society of the widespread use of networks and the ability of individuals to access networks anywhere
6.6. legislation relating to the use of ICT, including copyright and data protection
6.7. the causes and implications of unequal access to ICT (locally, globally)
6.8. safe and responsible practice when using ICT
6.9. sustainability issues and ways of minimising/mitigating the environmental impact of ICT.