

FACTFILE: GCSE DIGITAL TECHNOLOGY



Unit 1

MORAL & ETHICAL CONSIDERATIONS



Introduction

Learning Outcomes

Students should be able to:

- Describe the ethical impact of technology on society, referring the following:
 - Internet misuse
 - Access to personal information
 - Social media misuse
 - The implications of global positioning system and tracking
 - Concerns about the security of personal data



There are many benefits to the increased use of ICT in our lives, however its use has also brought many problems as well.

Internet Misuse

The use of the internet introduces a lot of **moral** dilemmas for people on daily basis. Think about the following situation and think about whether it is right or wrong:

- Copying work from a website and using it as your own
- Copying a CD you have bought for a friend
- Spreading malicious rumours about someone online
- Using someone else's password
- Taking and distributing a picture of someone with the purpose of embarrassing them

Using the internet is fine but you need to think about how you use it. You need to think about the **ethical** implications. This is your sense of what is right and what is wrong.

The internet is an excellent source of information on almost anything you want to find out about. The problem is that it is all too easy for someone to copy work from the internet and use it as their own. It is also very easy to illegally download software, movies and songs. This obviously breaks **copyright** law such as the Copyright, Design & Patents Act.

Educators also have a big issue with **plagiarism** in schools and universities as students can easily copy work from the internet and try to pass it off as their own.

Hackers can misuse the internet to gain unauthorised access to personal and/or private data.

Another problem with internet misuse is the spread of **viruses**. Viruses don't happen accidentally. They are pieces of software written with the intent to cause malicious damage a computer system. They are easily spread via the internet as downloads.

Access to personal information

Phishing: This is an attempt to gain access to personal data and is often done via email. The sender will claim to be from an official organisation such a bank looking to confirm your bank details.

Identity Theft: This has become an alarmingly increasing problem in society today. People tend to post a lot of personal information about themselves

on various different social media platforms. This makes it very easy for someone else to effectively steal their information in order to use them to create a bank account, get a credit card etc.

Social Media Misuse

Cyberbullying is a huge problem with young people using social media. Bullies can post nasty comments or messages about their victim. Even worse is that they can hide behind a **fake profile** or even post anonymously on some platforms. There is also a **privacy issue** when social media users give away too much personal information about themselves such their address, date of birth etc and leave it accessible to everyone.

Impact of GPS and tracking

GPS stands for Global Positioning System. It was invented by the US military to allow soldiers to know where exactly they were in the world. GPS uses a process called 'Triangulation' to work out the location. Satellites are used to help pinpoint the location. It works best outdoors but does give an accurate location. It may not be accurate if the pre-installed map on the device is not up to date.

How does GPS work?

- Satellites transmit signals to earth
- The GPS device receives these signals
- The device calculates its location based on the information from at least 3 satellites (Triangulation)
- Then the location is shown on a map that is pre-installed in the GPS device

Uses of GPS

Sat Nav systems found in cars use satellites to pinpoint the location of the car to within a couple of metres. GPS is also used to help ships navigate the sea, to 'tag' criminals so the police can monitor their whereabouts and even for recreational purposes by the likes of hikers and mountaineers to identify their location.

Concerns about the use of personal data

We all willingly give up our personal data on a daily basis on the internet. This is done every time you fill in an online form, register your details on

a website etc. Through social media sites such as Facebook and online collaboration sites such as Google, we are putting our own personal data at risk.

Concerns have been raised about how this data is being used. It is up to the user to check their privacy settings to try to control the privacy of their data effectively. Often these privacy settings can be confusing and therefore make it difficult for the user to know what to choose. Any example of this is that by default, a Facebook user profile will automatically be public when the user turns 18.

The sharing of our personal data with third party websites and applications is also a huge concern. This data could be used for data mining which

is when organisations turn raw data into useful information. Mobile technology users are exposed to continuous streams of adverts online based on previous online searches. Users have rights under the Data Protection Act. They should be aware of their rights and employ measures to protect their data.

Bibliography

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