Previous Link:
Developing for the web

Year 9 Term 1: Cyber Security

MAXIMISE YOUR POTENTIAL

Future Link:
GCSE Computer Science

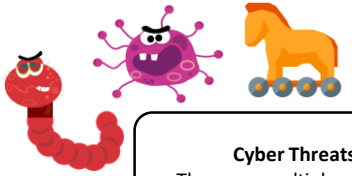
Year 9 IT Maximise 1

Your learning journey…

You and your Data:
There are several key differences between data and information. All of which contain details of how data privacy and legislation introduced over the years protects our data.

Social Engineering

Human errors poses the biggest security risks to data. Understand the strategies that can be implemented to minimise the risk of a data being compromised through human error.



Script Kiddies:
Hacking has a specific meaning in relation to cyber-security and from this there are key strategies used to negate these forms of cyber-attacks.

Cyber Threats:
There are multiple common malware threats that can cause problems for computer systems and that can further impact society.

Prevention:
There are various methods that you can use to protect you and your data from any malicious attacks.

Assessment Point:
Create an article that shows the threats and preventions regarding data and data privacy. Making use of previous skills such as formatting etc.

Misconceptions: Some people believe all of their data is safe and willingly sign up for new accounts on the internet. You must check for a padlock icon and https at the beginning of website URLS.
Make sure to turn on 2 factor authentication where possible which will add an extra level of security to your online accounts and help to stop any data breaches.

Talk like a computer scientist

Data Protection Act	UK legal Act regarding the handling of sensitive information such as personal details
Computer Misuse Act	UK legal Act preventing the use of computers for crime or malicious purposes
Malware	Software installed without consent
Authentication	Can confirm the identity of a user before they're allowed to access certain pieces of data or features of the program.
Anti-Virus	Software designed to find and stop viruses
Patch	An update designed to make something better or more secure
Trojan Horse	Malware disguised as something safe.
Ransomware	Telling the user their computer is infected to scare them into buying a solution
Privacy	Keeping things secret from others
Cybercriminal	An online criminal
Scam	A con scheme designed to steal money or information from people
Piracy	Unauthorised copying of computer software/media
Social Network	Online service that allows easier communication between people, such as Facebook
Hacking	The use of computers to access data without authorisation
Encryption	The purpose of scrambling data so it can be sent securely over networks
Virus	Attach themselves to certain files and spread across a system
Worm	Self replicating virus
Trojan	Malware disguised as something safe.
Social engineering	A way of gaining sensitive info by influencing people usually over the phone or phishing emails
Phishing	When emails or texts are sent pretending to be from a bank or retailer asking you for sensitive info
Anti-malware	Software designed to find and stop malware
Firewall	Blocks unauthorised access by examining all data entering and leaving the network

Becoming an expert on Cyber Security

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Watch or Listen to these to further your learning

1. Watch a movie featurette about Hidden Figures (Women using computer science for space travel)
https://bit.ly/3bQx389

2. Watch this video about Ada Lovelace the first woman in computer science -
https://bit.ly/3yfgTNh

3.Watch this video about the top cyber attacks of all time-
https://bit.ly/3NHnu8M

5. Learn about possible careers in cyber security -
https://bit.ly/3lf6Fkt

Maximise your potential with keyword games
https://bit.ly/3nFK9Ig

Use these websites to improve your skills and further your understanding

1. Check out what industry leader IBM says about Cybersecurity here:
https://ibm.co/3Ar0Vm8

2. See how secure your password is using this website:
https://bit.ly/3IboSiW

3. Try your code breaking skills using this website
https://bit.ly/3OFUQqf

Further your knowledge with these articles

1. Catch up with the latest Cyber Security News on this website
- https://bit.ly/2MVUDhT

2. Read a variety of cyber security articles which can be found here:
https://bit.ly/3NLb8N4

AM I READY TO MOVE ON? TEN KEY QUESTIONS.

(Tip: You could use these questions to help with your mind map!)

(1) What is the difference between data and information?
(2) What is the Data Protection Act?
(3) What is the Computer Misuse Act?
(4) Name three different malware threats?
(5) What strategies can you use to prevent malware attacks?
(6) What does the term Phishing mean?
(7)what does a Trojan Horse mean in relation to malware
(8) What does a firewall do and how does it protect your data?
(9) What does encryption involve?
(10) What does authentication mean?

Hidden Figures is about the story of a team of female African-American mathematicians who served a vital role in NASA during the early years of the U.S. space program.

Inception is the story of a computer scientist who essentially won World War 2 for the allies by breaking the Nazi code.

Snowden is a great movie about an ex-CIA operative who released classified documents as part of an inside attack.

Show what you know

CREATE FOUR REVISION FLASH CARDS WITH THE FOLLOWING TITLES :
(1) Types of Computer (2) Input/Output Devices
(2) (3) Internal Components (4) Types of Software

Key Quote

"No matter who you are, everyday of your life you're just sitting in a database waiting to be looked at" - Edward Snowden