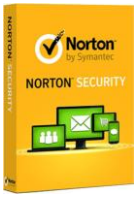
Computing - Knowledge Organiser

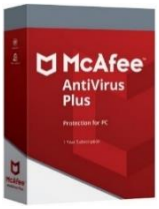
Year 7- HT3 – Internet Safety, Cyber-Security and Encryption

Keywords:	
Antivirus software	A software program that scans the computer for known malware and prevents it from harming the device.
Firewall	hardware or software that monitors communications coming in from and going out to the internet. Looks for and blocks unauthorised communications from malware, preventing the malware from completing its task.
Encryption	converts information or data into a code preventing unauthorised users from understanding the information. Original message- Plain text, Encrypted message- Ciphertext. An encryption algorithm uses ciphers.
Spam	Unwanted emails that are sent to large number of recipients, usually advertising a product or service. Spam emails can also be used to spread malware or for phishing.
Phishing	Try to gain information through deception over email or text. Sender may pretend to be a reputable company or your bank.
Malware	Various programs that try to do something unwanted to your computer. Examples are **Virus, Trojan, Spyware, Worm**
Virus	Harms your computer by deleting or altering files and stopping programs from running.
Trojan	Begins by pretending to be a trusted file, however, gives unauthorised access (using a computer without permission) to your computer when you run it.
Spyware	Collects information from your computer and passes it on to a third party.
Worm	A virus that replicates itself. Worms may multiply many times and take up all the memory on your computer.
Digital footprint	Everything online is monitored; data is saved about you even if you delete it.
Cyber bullying	When technology is used to bully someone
Brute force attack	Trying every possible combination of letters, numbers, and symbols to 'guess' your password and eventually able to login to your account- can be done via a computer program/software.
Shoulder surfing	Someone looks over your 'shoulder' as you enter your password on a computing device.
Password policy	A set of rules for passwords, that everyone in an organisation must follow. *E.g., 'Your password will expire today- you must change your password now.'*

<u>Tips to stay safe online:</u>

1. Use **strong passwords**- a good password includes 3 random words, upper and lower case, numbers and special characters. Have different passwords for different accounts and applications and use two-factor authentication. Always keep a different password for your email- your password can be reset through your email!
2. **Install and run antivirus software** on your computer/devices.
3. **Check/update software regularly and firewall settings (if needed).**
4. **Encrypt your USB/pen drive/flash drive.**
5. **Be aware of security risks** such as spam, phishing, malware.
6. **Follow/apply on-line etiquettes.**





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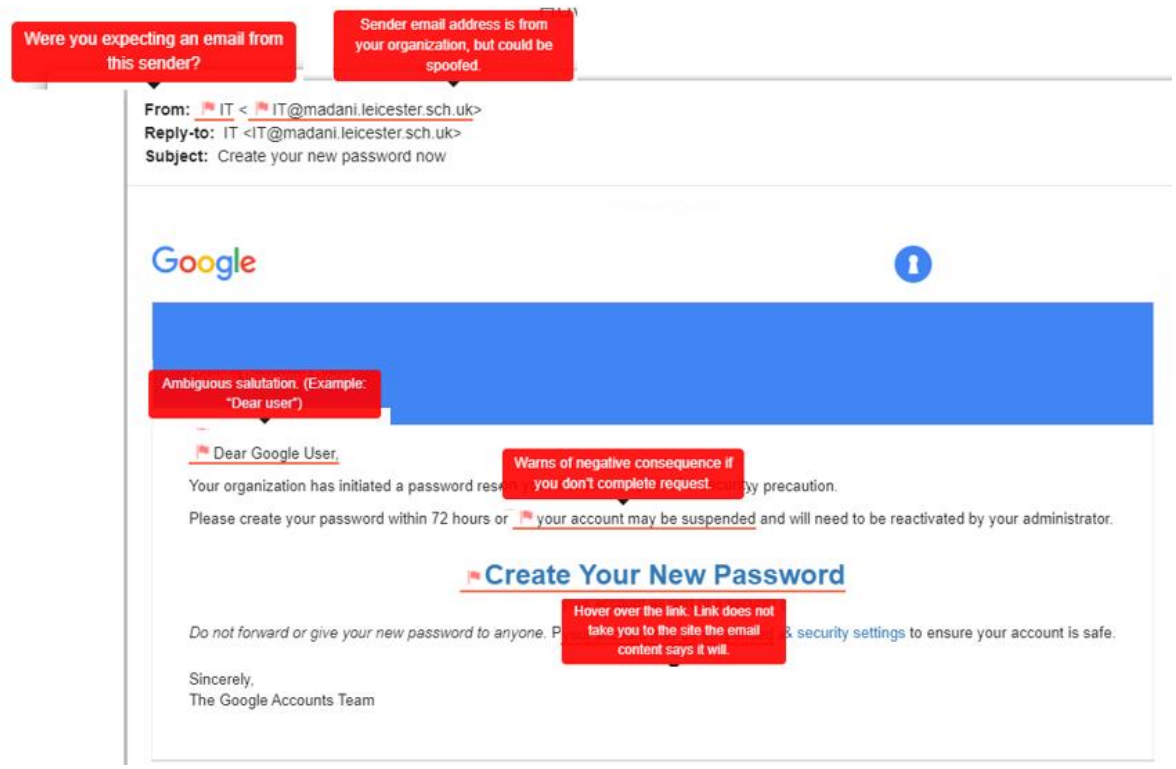
How to identify a phishing e-mail:



General etiquettes and considerations when on-line:

- ✓ Be careful when sharing personal information and only use websites you trust.
- ✓ Always be respectful and polite
- ✓ Remember that nothing is private online
- ✓ Use correct grammar and punctuation
- ✓ Be accurate and factual

Everything you do online is monitored in some way, this could be in school, on social media or when gaming. The things you upload will remain forever, even if you delete them later, you don't know who has saved your uploads.

Cyber bullying can involve:

- Sending offensive texts or emails
- Posting lies or insults on social networking sites
- Sharing embarrassing videos or photos online

If you are being bullied online, follow these steps:

Don't retaliate- the bully usually wants a reaction.

Save the evidence for proof of what has happened.

Talk to an adult you trust, like a parent or teacher.

Report, block and mute the bully.

No one deserves to be bullied

References (Licence- free to share and use):

Online dangers - Online safety - KS3 Computer Science Revision - BBC Bitesize

AVG-ResellerLogo.jpg (2500×1377) (electrorincon.com) norton-security-box-image-from-nortondotcom.png (406×591) (exactdn.com)McAfee Total Protection 2021 | Beyond Antivirus