

15 September

Computers:

Digital Technology:

- 4c: Describe what malware is and explain how to protect your digital devices and information from them
 - Malware is any piece of software that is intended to do damage or otherwise compromise computer systems.
 - It can damage your computer or other computers
 - It includes viruses, worms, unwanted ads, rootkits
 - virus / worm – replicates itself
 - adware – insidious everywhere
 - rootkit – undetected by process manager
 - DOS attacks
 - “Social Engineering”
 - How do you get it?
 - Downloading stuff from the Internet (either via browsers or email clients, ftp, etc.)
 - running untrusted software
 - How do you prevent it?
 - Don't download anything!
 - Don't click on unknown or unexpected links (ie: YouTube content)
 - Don't share files (USB drives, etc.)
 - Always check the actual URL a software source references
 - Anti-Virus programs (keep these current)
 - Use Firewalls
 - Manage users
 - Report it (report suspected scams to the legitimate company, report social engineering to your superiors)
- Describe how digital devices are connected to the Internet
 - Client / Server architecture
 - what sorts of things connect to the Internet (The Internet of Things)
 - everything that is connected to the Internet has a (probably dynamic) IP address
 - these are unique w/in a network (local network, ISP network, governing bodies, etc.)
 - you send/receive “packets” of information (over HTTP in the case of web browsers)
 - these packets are routed via “routers” (w/ the IP address acting as the sender & receiver address)
 - DNS maps text names (ie: URLs) to IP addresses (DNS is usually cached to speed things up)
 - ifconfig
 - 127.0.0.1

Computer Programming: