

L1: Network Security: The Attacks P1

This is a lesson for Year 10 students aimed at covering Network Security Attacks. This lesson aims to cover the main topics from 1.4.1 from the OCR specification.

<https://www.ocr.org.uk/Images/558027-specification-gcse-computer-science-j277.pdf>

Aims:

- Give students an idea of the types of Network Attacks including Malware, Social Engineering, Brute-Force Attacks, The concept of SQL Injection.

Time	Activity	How will learners be assessed?
9:45	Malware, Viruses, Worms, Trojan Horses <ul style="list-style-type: none">- Teacher will give a short presentation covering Malware, Viruses, Worms, Trojan Horses- Students will then complete a matching up activity	They will have to write the main features of each Then have to apply that knowledge to work out from scenarios what they are.
10:00	Social Engineering & Phishing <ul style="list-style-type: none">- Teacher will give a short presentation on Social Engineering- Students will then have 5mins to try and create an email to convince people to click on a link using the common signs of social engineering.	To create the email they would have to know the common signs of phishing emails
10:10	Brute Force, SQL Injection <ul style="list-style-type: none">- Teacher will give a short presentation on Brute Force and SQL Injection.- Students will then have 10mins to complete a Brute Force & SQL Injection Exercise in pairs where they will attempt to break into a website created by the teacher:- https://stormy-oasis-27277.herokuapp.com	Students will have to use what they've learnt to break into the website.
10:30	END Lesson Homework: Students will each be given a different piece of Malware and they'll have to research and create a poster on it.	

Resources Needed:

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L2: Network Security: More Attacks and The Defences

This is a Year 10 students aimed at finishing off Network Threads and covering network defences. This lesson aims to cover the main topics from 1.4.2 from the OCR specification.

Aims:

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Time	Activity	How will learners be assessed?
9:45	Intro Kahoot - Will contains a variety of questions covering the topics from the previous lesson	
9:55	User Access Levels & Passwords - Teacher will give a short presentation covering the main topics.	
10:05	DoS & DDoS - Teacher will deliver a presentation explaining DDoS & Data Interception - Students will then have 5mins to research a recent DoS attack and then we will feedback to the group and everyone explain one that they found.	
10:20	Encryption + Caesar Cipher - Teacher will deliver a short presentation on Encryption and Caesar Ciphers.	
10:30	END LESSON For Homework students will have to translate Ceasar Ciphers	

Resources Needed:

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L3: Network Security: Physical Security & Penetration Testing

IN PROGRESS

This will depend a little but over this weekend I will build more of the website shown earlier and the idea is that I'll give them lots of bugs and issues and they will try and solve them all.