MENTORS

LESSON 1. CYBER SECURITY

Lesson Objectives

At the end of this lesson, students will be able to:

1. Define what cyber security is.
2. Use listening texts as sources for language input.
3. Explore different ways cyber criminals can threaten security and privacy.
4. Determine the appropriate security measures for different computer security scenarios.
5. Use linking words of contrast to talk about cyber security.
6. Discuss different types of cyber threats.
7. Define idiomatic expressions related to crimes.

Mind Map
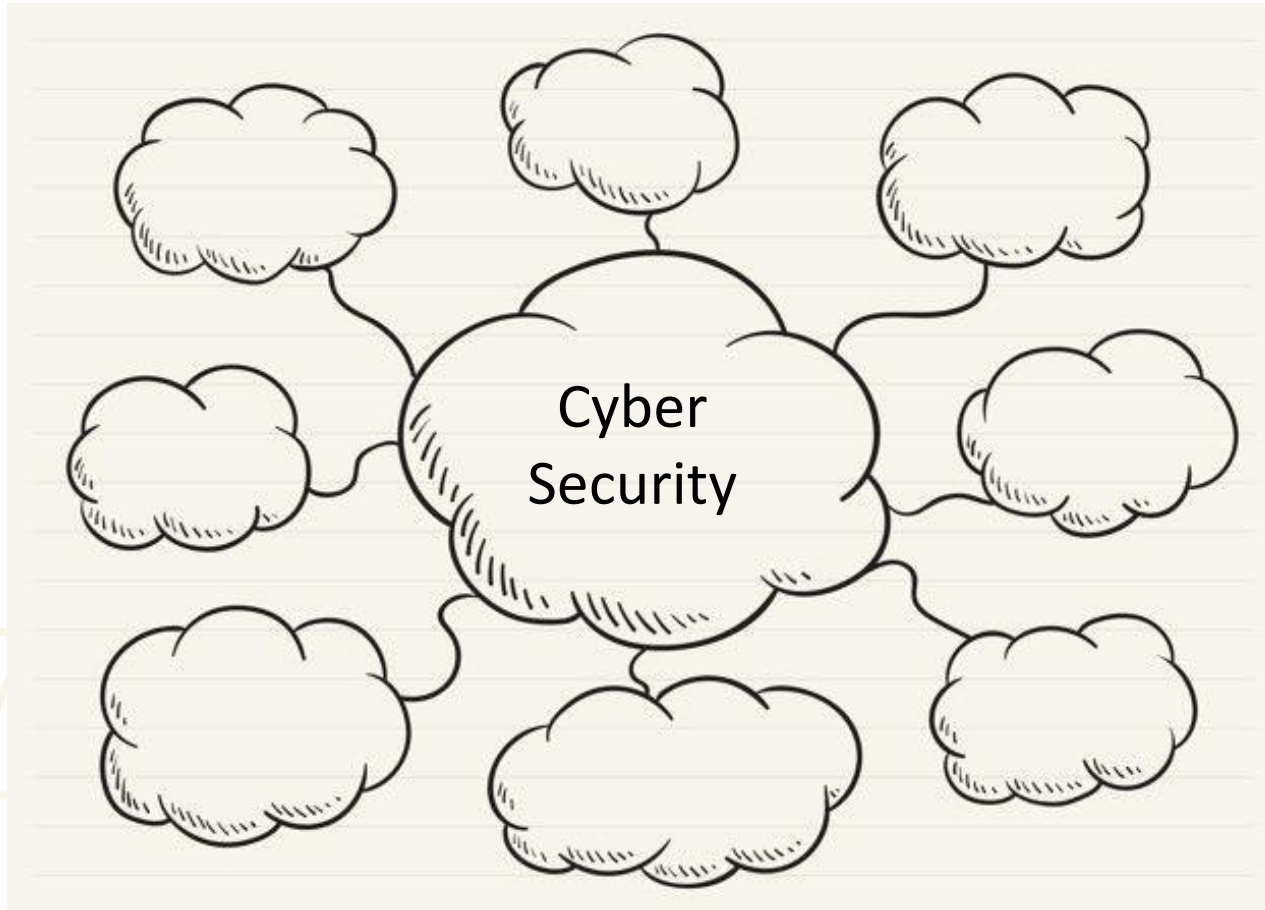
What words are associated with Cyber Security?

The dictionary definition of cybersecurity is any and all measures taken to protect a computer or computer system from unauthorized access or attack. Cybersecurity has always existed, but in the last ten years, **paralleled** with the **revolutionary** transition of corporations going completely digital, this idea of cybersecurity has become more of a priority for companies, governments, and citizens. The reason why the importance of this issue has **progressively** increased is because companies like Amazon, Google, and Uber, continue to grow their massive "data banks," storing valuable information about the consumer, including names of consumers, email addresses, Social Security numbers, **credit scores**, and valuable information about the company itself, including **classified** details and financial information.

Note: Discuss underlined words.

> Ponder This!

Why is it important for big corporations to protect valuable data about their customers?

Vocabulary Building

Match the words to form collocations and use them in a sentence.

1	
2	
3	
4	
5	
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7	
8	
9	
10	

security
data
payment card
identity
cyber
fraudulent
unauthorized
electronic
security
alert

A. heist
B. theft
C. authorities
D. access
E. framework
F. activity
G. breach
H. systems
I. criminals
J. attack
K. threat

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How do you pick up a malicious online virus, the kind of malware that snoops on your data and taps your bank account? Often, it's through simple things you do each day without thinking twice. James Lyne reminds us that it's not only the NSA that's watching us, but ever-more-sophisticated cyber criminals, who exploit both weak code and trusting human nature.

Pre-Listening

What do you know about these words and phrases?

malware	cybercriminals	malicious code	notoriety
Distributed Denial of Service	crime packs	savvy	Trojan virus

🎧 **Everyday cybercrime — and what you can do about it**
https://www.ted.com/talks/james_lyne_everyday_cybercrime_and_what_you_can_do_about_it/transcript?language=eo

Comprehension Check

1. Do viruses only infect home PCs?
2. How many viruses will we see today?
3. How many websites will be infected today?
4. True or false, viruses only come from porn websites?
5. It costs as little as $10 per hour to hire cybercriminals?
6. Do cybercriminals provide technical support?
7. How do you become infected with a virus?
8. Do people pay cybercriminals to run viruses on their computer?
9. And herein is the _____ lesson of social media and mobile devices for all of us right now. Our friends, our families, and our _____ can break our _____ even when we do the right things.
10. What percentage of people have been to Starbucks?

Free Response

1. **What do you think are the terrifying things about cyber criminals?**
2. **Why do you think it is difficult to fight and arrest cyber criminals?**
3. **Why is the Internet a fantastic resource for business, for political expression, for art and for learning.**
4. **What laws can be implemented to catch cyber criminals?**

Discussion Points

The threats countered by cyber-security are three-fold:

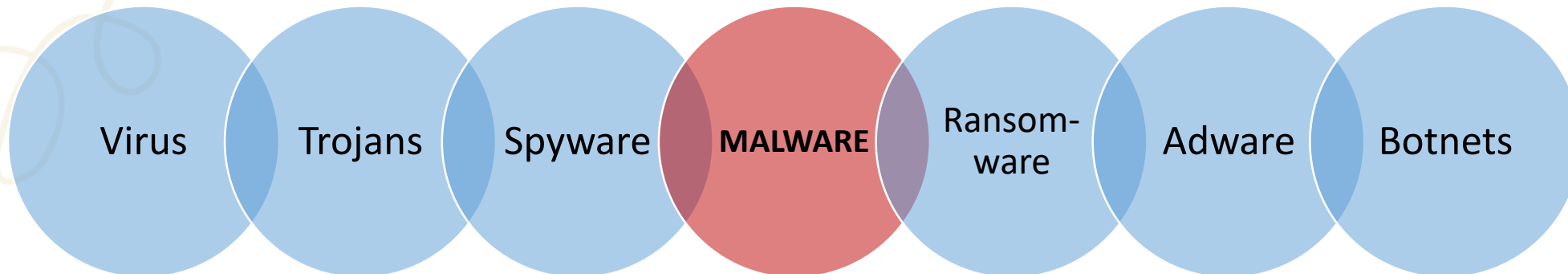| Cybercrime	Cyber-attack	Cyber terrorism
• includes single actors or groups targeting systems for financial gain or to cause disruption.	• often involves politically motivated information gathering.	• is intended to undermine electronic systems to cause panic or fear.

So, how do malicious actors gain control of computer systems? Here are some common methods used to threaten cyber-security:

Virus — Trojans — Spyware — **MALWARE** — Ransom-ware — Adware — Botnets

Source: https://www.kaspersky.com/resource-center/definitions/what-is-cyber-security

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Computer Security Self-Test: Questions and Scenarios

What will you do in the following scenarios?

Scenario 1

You receive an email from your bank telling you there is a problem with your account. The email provides instructions and a link so you can log in to your account and fix the problem. What should you do?

Scenario 2

The mouse on your computer screen starts to move around on its own and click on things on your desktop. What do you do?

Scenario 3

A friend sends an electronic Hallmark greeting card (e-card) to your work email. You need to click on the attachment to see the card. What should you do?

Computer Security Self-Test: Questions and Scenarios

What will you do in the following scenarios?

Scenario 4

You receive the following email from the Help Desk:

Dear UCSC Email User,

Beginning next week, we will be deleting all inactive email accounts in order to create space for more users. You are required to send the following information in order to continue using your email account. If we do not receive this information from you by the end of the week, your email account will be closed.

*Name (first and last):

*Email Login:

*Password:

*Date of birth:

*Alternate email:

Please contact the Webmail Team with any questions. Thank you for your immediate attention.

What should you do?

Cyber Security Tips

Use these verbs to complete the sentence and discuss them with your partner.

Use	Keep	Learn	Protect	Don't	Review	Backup

1. _____ Your Software Up to Date
2. _____ Anti-Virus Protection & Firewall
3. _____ Strong Passwords & Use a Password Management Tool
4. _____ Two-Factor or Multi-Factor Authentication
5. _____ about Phishing Scams – be very suspicious of emails, phone calls, and flyers
6. _____ Your Sensitive Personal Identifiable Information (PII)
7. _____ Your Mobile Devices Securely
8. _____ Your Data Regularly
9. _____ Use Public Wi-Fi
10. _____ Your Online Accounts & Credit Reports Regularly for Changes

Source: https://cipher.com/blog/10-personal-cyber-security-tips-cyberaware/

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A - _____

A man was jailed last week for copying thousand of credit cards. Montford was the leader of a gang of criminals who added a special hidden machine to cash machines at petrol station. The tiny machine copied cards that people put into the machines. The gang then made copies of cards and used to buy things in shops and on the internet. They also put the cards into cash machines and took money from people's bank accounts. Montford had copied 35000 cards and had stolen over $720000.

B - _____

<< I love you>> was an email message that people were delighted to received. It was sent to thousands of people on the morning of 4 May 2000. But it contained a virus! When they opened the email, the virus went to everyone in their address book. It quickly spread around the world, and caused terrible damage to hundreds of computer systems. Most large organizations, including the British government, had to close their email systems to get rid of it. A Filipino computer programmer had written the virus. The police arrested him, but at that time it wasn't a crime to write computer viruses, so they had to let him go.

C - _____

Sam Jenkins was astonished when she discovered that her bank account was empty. Just two weeks before there had been $15000 in it. The bank told her that she had moved the money herself to a new account with another bank. A month before, Sam had received an email which asked her to give personal information such as bank account, details, passwords, and PIN numbers. She thought the email was from her bank, but it wasn't. The person who sent it used the information to steal Sam's identity and open a new bank account. They then moved Sam's money into the new account, took the money out, and closed the account. Sam still doesn't know who sent the fake email.

Comprehension Check

A. Match the phrases with the reading text on the previous page.

1 – A computer virus   2- Spam   **3- Identity theft**   4- credit card fraud

B. Match two sentences below with each text.

1. The identity of the criminal is still a mystery. _____
2. He tries to steal money from thousands of people. _____
3. He/she stole a lot of money from one person. _____
4. He damaged computers in many countries. _____
5. He worked with another criminal._____
6. He didn't actually commit a crime.

C. Complete the following nouns from the text.

1. _____ machine
2. _____ word
3. _____ account
4. _____ programmer
5. _____ information

TALKING POINTS

1. Should people who create computer viruses go to prison? Why or Why not?
2. Which of the crimes in the text is the worst? Give reasons.

Linking words of contrast

We use words and phrases like **though**, **although** and **even though** to link two clauses together. We call them **linking words of contrast**. We use **despite** and **in spite of** in front of nouns and gerunds.

Where to use them
Although, **even though** and **though** go in front of a clause. They can go at the beginning or middle of a sentence.

> **Although** Endang turned the computer off, she forgot to log out from her email.
> She forgot to log out from her email, **although** she turned off the computer.
> **Though** you need to use Wi-Fi, avoid logging on to your personal online banking websites.

Despite and **in spite of** go in front of nouns or gerunds. They can also go at the beginning or middle of sentences.
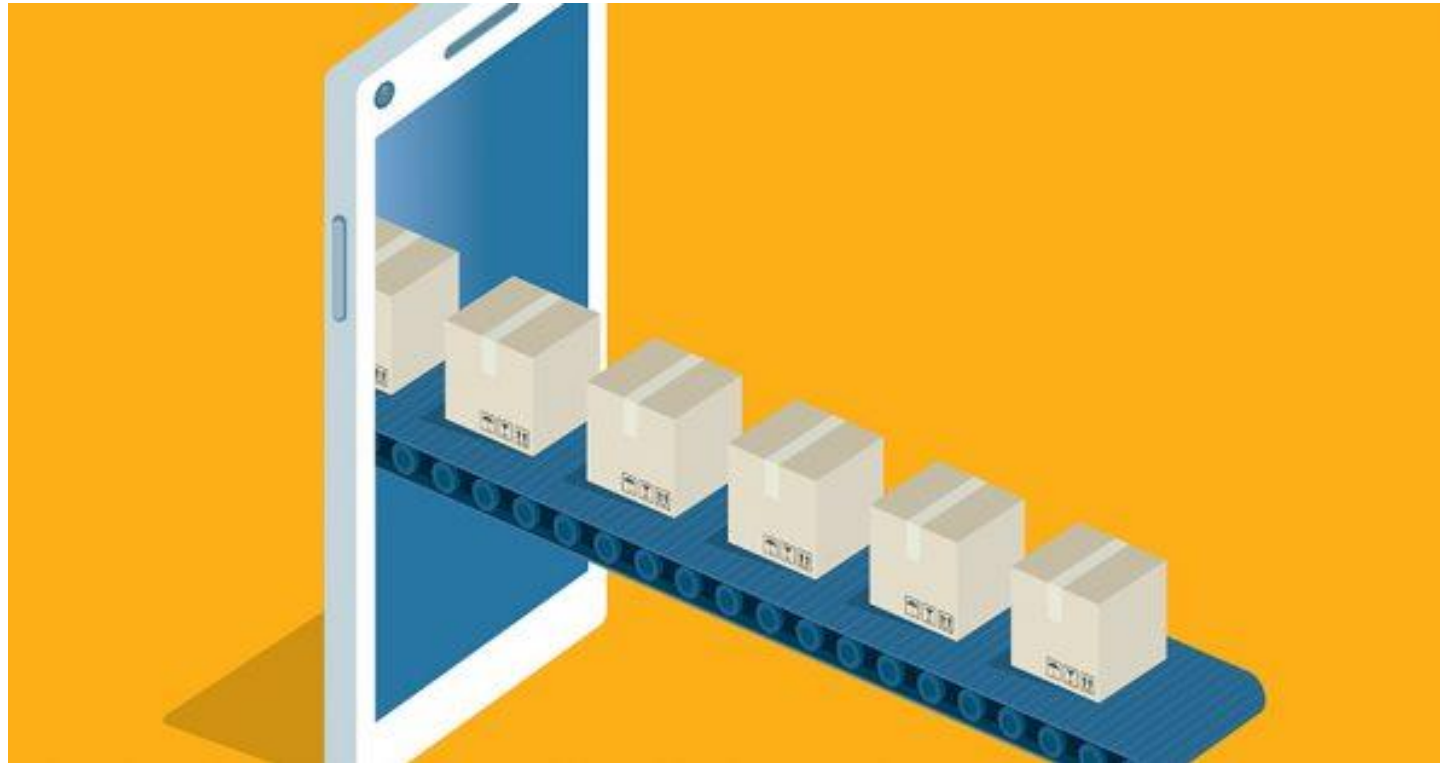
> **Despite** laws against cyber crime, people continuously become victims of cyber attacks.
> People continuously become victim of cyber attacks, **despite** laws against cyber crime.
> **In spite** of installing security formats, my computer still gets a virus.

Using linking words of contrast talk about the following point.

How much privacy is being traded off convenience?

Idiomatic Expressions

Read the sentences and explain the meaning of the idioms.

to cover one's tracks

- "The thief covered his tracks well. He deactivated all the security cameras and didn't leave a single fingerprint."

to get caught red handed

- "When I was 13, I got caught red handed spray painting graffiti on the local elementary school."

to have a run-in with the law

- "Looking at his life now you'd never guess that he had a run-in with the law when he was in his twenties."

to keep one's nose clean

- "Jason's on parole, so he absolutely has to keep his nose clean."

white-collar crime

- "Many people find it unfair that white-collar crime isn't punished more severely."

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1. What do you know about hacking?
2. Have you heard of any big hacking cases?
3. Do you think hackers add to new technology developments?
4. Who do you think is ahead of the game, the hackers or the software companies?
5. Do you always download security updates to protect your computer from hackers?
6. Do you think your computer and the internet are becoming less or more secure?
7. What are good habits to use to keep yourself safe online?
8. Do you feel people are truly aware of the dangers of cybercrime?
9. What antivirus software do you use?
10. Can you describe an experience where you couldn't use your computer because of a virus? What was the outcome?

The End