

# Understanding Cyber Threats

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## Textbook

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# Understanding Cyber Threats



## How Can Networks Be Attacked?

Networks connect computers and devices so they can share information. But just like someone can break into a house, they can also break into a network. These break-ins are called **cyberattacks**. Hackers use cyberattacks to steal data, cause damage, or lock users out of their systems. These attacks threaten the safety and privacy of everyone who uses the network.

## Types of Cyberattacks

There are many ways a network can be attacked. Some common ones include:

- **Malware:** Short for "malicious software," this includes viruses, worms, and spyware that can steal or destroy data.
- **Hacks:** When someone breaks into a system to steal information or take control.
- **Phishing:** Fake emails or websites that trick users into giving away personal information.

- **Ransomware:** A special kind of malware that locks users out of their files or devices until they pay money (a ransom) to the attacker.

## What is Ransomware?

**Ransomware** is like a digital hostage situation. It takes control of a computer system and demands payment to unlock it. Imagine turning on your computer and seeing a message that says, "Pay \$200 or your files will be deleted." These attacks are scary and can happen to anyone—from schools to hospitals to businesses.

## Social Engineering

**The Human Side of Hacking** Not all attacks use code. Some use people's trust against them. **Social engineering** is when hackers trick people into giving away information, like passwords or account numbers. For example:

- A fake tech support person might call and ask for your password.
- An email might pretend to be from your school, asking you to click a harmful link. These attacks work by fooling people, not computers—so being smart and alert is key.

## Critical Thinking Questions

1. Why do you think attackers use social engineering instead of just writing code or malware?
2. If your school's computers were hit with ransomware, what do you think would be the safest way to respond?

## Questions (5)

### 1. What is the goal of most cyberattacks?

MULTIPLE CHOICE

Choose the correct answer:

- A. To teach users about technology
- B. To make computers faster
- C. To steal or damage information
- D. To clean up old files

### 2. Which of these is an example of malware?

MULTIPLE CHOICE

Choose the correct answer:

- A. Word processor
- B. Virus
- C. Social media app
- D. Search engine

**3. What does ransomware do?**

**Choose the correct answer:**

- A. Locks files until money is paid
- B. Delete emails
- C. Speeds up computers
- D. Send fun games to friends

**4. What is social engineering?**

**Choose the correct answer:**

- A. A kind of robot
- B. A way to build websites
- C. A trick to fool people into giving away personal info
- D. A tool for designing cities

**5. Which of these is NOT a cyberattack?**

**Choose the correct answer:**

- A. Phishing
- B. Typing on a keyboard
- C. Hacking
- D. Ransomware

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## Answer Keys & Solutions

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### Questions

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#### 1. What is the goal of most cyberattacks?

MULTIPLE CHOICE

**Correct Answer:**

- A. To teach users about technology ✗ Incorrect
- B. To make computers faster ✗ Incorrect
- C. To steal or damage information ✓ Correct
- D. To clean up old files ✗ Incorrect

#### 2. Which of these is an example of malware?

MULTIPLE CHOICE

**Correct Answer:**

- A. Word processor ✗ Incorrect
- B. Virus ✓ Correct
- C. Social media app ✗ Incorrect
- D. Search engine ✗ Incorrect

#### 3. What does ransomware do?

MULTIPLE CHOICE

**Correct Answer:**

- A. Locks files until money is paid ✓ Correct
- B. Delete emails ✗ Incorrect
- C. Speeds up computers ✗ Incorrect
- D. Send fun games to friends ✗ Incorrect

MULTIPLE CHOICE

#### 4. What is social engineering?

**Correct Answer:**

- |  |             |
|--|-------------|
| A. A kind of robot                                       | ✗ Incorrect |
| B. A way to build websites                               | ✗ Incorrect |
| C. A trick to fool people into giving away personal info | ✓ Correct   |
| D. A tool for designing cities                           | ✗ Incorrect |

#### 5. Which of these is NOT a cyberattack?

MULTIPLE CHOICE

**Correct Answer:**

- |                         |             |
|-------------------------|-------------|
| A. Phishing             | ✗ Incorrect |
| B. Typing on a keyboard | ✓ Correct   |
| C. Hacking              | ✗ Incorrect |
| D. Ransomware           | ✗ Incorrect |