

# Security Technology

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## Textbook

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# Security Technology



## What Threatens Digital and Physical Safety?

When we think about safety, we often picture locked doors or security cameras. But in the digital world, there are other threats—ones that can put people, property, and data at risk. **Malicious actions**, like hacking or spreading computer viruses, can mess with important systems. Imagine someone turning off a hospital's computers or unlocking a smart door lock from far away! These actions can affect real people and places, not just computers.

## How Do Security Technologies Help?

To stay safe, people and organizations use **security technologies**. These tools protect devices and information. Some examples include:

- **Firewalls**, which block unwanted internet traffic,

- **Antivirus software**, which detects and removes harmful files,
- **Security cameras and badge readers**, which limit who can enter a building. Knowing how to use these tools properly—like keeping software updated or not sharing access cards—is just as important as having them.

## Why Do We Need Encryption?

**Encryption** is a way to scramble information so only the right person can read it. It's like writing a secret message in code. If someone tries to steal your message, they won't be able to understand it. We use encryption every day without even realizing it—when we shop online, send messages, or use apps. It protects passwords, credit cards, and personal information from being stolen.

## Learning to Think Like a Detective

Good digital safety also means learning to make smart guesses, or **inferences**. For example, if a website asks for too much personal information, you might guess it's not safe. Or, if a text message comes from someone you don't know and includes a strange link, you might predict it's a scam. Making inferences means looking at clues, thinking carefully, and deciding what's probably true—even if it's not said directly.

## Critical Thinking Questions

1. What clues could help you infer that a website or email is part of a scam?
2. Why do you think encryption is especially important for devices like phones or smartwatches?

## Questions (5)

### 1. What is one example of a malicious action that could threaten physical safety?

MULTIPLE CHOICE

Choose the correct answer:

- A. Restarting your phone
- B. Installing a new app
- C. Hacking a smart door lock
- D. Using a search engine

### 2. What does antivirus software do?

MULTIPLE CHOICE

Choose the correct answer:

- A. It speeds up your computer
- B. It removes photos you don't want
- C. It detects and removes harmful files
- D. It makes video games work better

### 3. Why is encryption important?

MULTIPLE CHOICE

Choose the correct answer:

- A. It lets you play games online
- B. It keeps your computer fast
- C. It turns off ads
- D. It scrambles data so only the right people can read it

### 4. Which of these is a security technology that protects buildings?

MULTIPLE CHOICE

Choose the correct answer:

- A. Firewall
- B. Badge reader
- C. Emoji keyboard
- D. Drawing app

### 5. What does it mean to make an inference?

MULTIPLE CHOICE

Choose the correct answer:

- A. To make a smart guess using clues
- B. To ask for help
- C. To find a website
- D. To read out loud

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## Answer Keys & Solutions

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### Questions

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#### 1. What is one example of a malicious action that could threaten physical safety?

MULTIPLE CHOICE

**Correct Answer:**

- |                              |             |
|------------------------------|-------------|
| A. Restarting your phone     | ✗ Incorrect |
| B. Installing a new app      | ✗ Incorrect |
| C. Hacking a smart door lock | ✓ Correct   |
| D. Using a search engine     | ✗ Incorrect |

#### 2. What does antivirus software do?

MULTIPLE CHOICE

**Correct Answer:**

- |   |             |
|---|-------------|
| A. It speeds up your computer           | ✗ Incorrect |
| B. It removes photos you don't want     | ✗ Incorrect |
| C. It detects and removes harmful files | ✓ Correct   |
| D. It makes video games work better     | ✗ Incorrect |

#### 3. Why is encryption important?

MULTIPLE CHOICE

**Correct Answer:**

- |   |             |
|---|-------------|
| A. It lets you play games online                          | ✗ Incorrect |
| B. It keeps your computer fast                            | ✗ Incorrect |
| C. It turns off ads                                       | ✗ Incorrect |
| D. It scrambles data so only the right people can read it | ✓ Correct   |

#### 4. Which of these is a security technology that protects buildings?

MULTIPLE CHOICE

**Correct Answer:**

- |                   |             |
|-------------------|-------------|
| A. Firewall       | ✗ Incorrect |
| B. Badge reader   | ✓ Correct   |
| C. Emoji keyboard | ✗ Incorrect |
| D. Drawing app    | ✗ Incorrect |

#### 5. What does it mean to make an inference?

MULTIPLE CHOICE

**Correct Answer:**

- |                                      |             |
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| A. To make a smart guess using clues | ✓ Correct   |
| B. To ask for help                   | ✗ Incorrect |
| C. To find a website                 | ✗ Incorrect |
| D. To read out loud                  | ✗ Incorrect |