1. Encryption Best Practices Guide Template

This template can be printed or distributed digitally for students to fill out during the lesson.

Encryption Best Practices Guide

Name: _____

Date: _____

Section 1: What is Encryption?

- Definition:

  _____

  _____

- Importance:

  _____

  _____

- Real-World Examples:
  - Example 1:

    _____

  - Example 2:

    _____

  _____

Section 2: Types of Encryption

- Caesar Cipher:

    - How it Works:

    _____

    - Advantages:

    _____

    - Disadvantages:

    _____

- Atbash Cipher:

    - How it Works:

    _____

    - Advantages:

    _____

    - Disadvantages:

    _____

- Vigenère Cipher:

    - How it Works:

    _____

    - Advantages:

    _____

    - Disadvantages:

    _____

- Substitution Cipher:

    - How it Works:

    _____

- ○ Advantages:

  _____

- ○ Disadvantages:

  _____

_____

Section 3: Modern Encryption Methods

- ● AES (Advanced Encryption Standard):

  - ○ Explanation:

    _____

  - ○ Uses:

    _____

- ● RSA (Rivest-Shamir-Adleman):

  - ○ Explanation:

    _____

  - ○ Uses:

    _____

_____

Section 4: Best Practices for Encryption

- ● Practical Advice:

  - ○ _____

  - ○ _____

  - ○ _____

  - ○ _____

Section 5: Case Study

- Example:
  - Event: _____
  - What Happened:

    _____

  - How Encryption Was Used (or Misused):

    _____

  - Lessons Learned:

    _____

2. Handouts on Encryption Methods

- Caesar Cipher: Description, strengths, and weaknesses.

- Atbash Cipher: Description, strengths, and weaknesses.

- Vigenère Cipher: Description, strengths, and weaknesses.

- Substitution Cipher: Description, strengths, and weaknesses.

- Modern Encryption Methods: Overview of AES and RSA.

3. Research Resources

- Websites:
    - Khan Academy: Search for encryption lessons to understand concepts.
    - HowStuffWorks: Articles on encryption methods and their applications.
    - Common Sense Education: Resources on online safety and encryption.

4. Discussion Prompts

- Prepare a list of discussion questions to facilitate group discussions:
    - "What encryption method do you think is the most effective for personal data protection?"
    - "How can businesses implement encryption to safeguard sensitive information?"