

# CYBER CITY

Student Work Booklet

Week 2, Protecting Data

[cybercity.education](http://cybercity.education)

iSTEM Stage 5 Specialised Topic – Cyber Security  
Student Work Booklet – Week 2

## Topic: Goals and Framework

### Activity: Student Questionnaire

What are the goals of information security?

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What is the importance of maintaining these goals, such as Protecting data/information and managing risk?

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Define the CIA components

Component	Definition	Example
C		
I		
A		

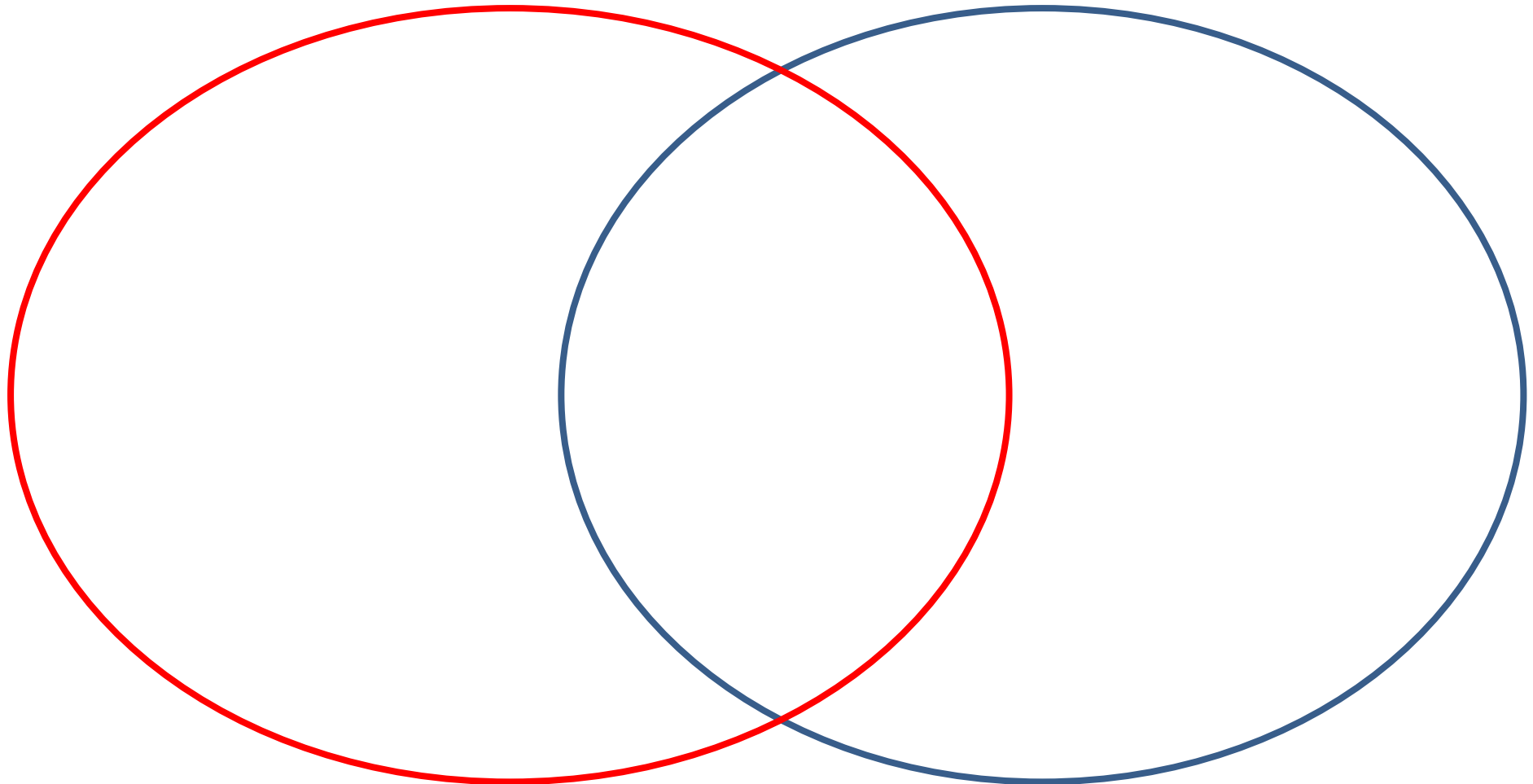
Summary of Classwork: 'How can data can be protected?'

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How is data protected in a **Virtual space**? How is data protected in a **Physical** space? Both?



## Topic: Access Controls

### Activity: Student Questionnaire

What is Identification?

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What is Authentication?

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What is Authorisation?

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Address how each of these access controls can be used in an organisation, and provide modern examples (through individual research) of organisations and/or their products that have incorporated these techniques.

Organisation	Product/Program	Technique and Example

What are the advantages and disadvantages of restricting access to others regarding viewing of data?

Advantages +	Disadvantages -

## Topic: Encryption

### Activity: Student Questionnaire

What is encryption?

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What is Encryption's roles within cyber security for:

a. When providing confidentiality

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b. Guarding stored data on devices

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c. Protecting transactions

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d. Securing network communications

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Is there any other roles encryption possesses in relation to cyber security?

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## Teach Provides Scenario

Write/type the scenario here:

1. How does encryption keep the data safe?

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2. What data is being protected?

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3. Why is the data valuable to other parties that aren't the owners?

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4. Are other parties involved? If yes, who?

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## Research Activity

Research an organisation and the type of data they store and what type of encryption would be most appropriate for the organisation's data.

The organisation chosen: \_\_\_\_\_

Who are they?

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Type of Data they store:

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Most appropriate encryption and reasoning:

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List the advantages and disadvantages table of different encryption methods

1. AES

Advantages +	Disadvantages -

## 2. Triple DES

Advantages +	Disadvantages -

## 3. Teacher Chosen encryption method:

Advantages +	Disadvantages -



# CYBER CITY

Summary of Week 2 – Create your own drawings, symbols, diagrams, visual notes etc.

