Unifying Elements

Philosophical implications in Cyber Security

Critically engage, evaluate, and reflect on the implications cyberspace has for privacy, security and freedom and their associated concepts.

Collaboratively create, inquire, and reflect upon philosophical questions that arise when exploring cyberspace and cyber security.

Recognise the interdisciplinary and complex nature of cyberspace and the personal, local, national, and global role it has in our lives.

Cyberpsychology (Internet or Web Psychology) and Social Engineering

Investigate how the discipline of cyberpsychology explains human behaviour in relation to cyber security.

Explore how computers and Internet technology impact the way people think and behave at both an individual and a group level.

Examine how society has changed after a cyber security event.

Careers in Cyber Security

Investigate career opportunities in cyber security.

Identify qualities, skills, and qualifications that are suitable for a career in cyber security.

Evaluate if a career in cyber security is of interest to you.

Examine the portrayal of people in cyber security in popular culture.

Cyberwise

Strand 1: Exploring Cyberspace

Making Sense of Cyberspace

Consider the variety of uses of cyberspace for different stakeholders e.g., individuals, communities, businesses, and governments etc.

Discuss the core functions of cyber security and appreciate its importance in society.

Understand the concept of cyber hygiene and the key steps for good cyber hygiene.

Data is the new oil

Consider what data is, and what makes data politically, economically, and personally valuable.

Investigate the ways data is legally collected.

Reflect on the concept of privacy and the value they place on their own privacy.

Access and amend privacy settings appropriately on a variety of relevant digital media platforms and software apps.

Cyber Events

Describe types of cyber events.

Explore examples of political, economic, social, and personal cybercrime.

Investigate how cyber security breaches occur for individuals, institutions, and businesses.

Strand 2: Cybersecurity Solutions

Who goes my way?

Explore the historical role of passwords and encryption to secure valuable information.

Develop an understanding of the properties of codes and how they are different to ciphers.

Identify the factors needed to make a successful encryption.

Describe the features of strong passwords or passphrases and identify different strategies or tools for their safety and maintenance.

Demonstrate how to improve personal online account security.

Building Security

Describe and evaluate different ways to back-up data.

Outline the role of the Firewall in cyber security and know how to implement and maintain a firewall.

Explain how to improve their home router security against malicious cyber activity by taking some simple steps.

Evaluate the benefits and risks of using public WIFI systems and consider cyber security methods that could be used to protect their data, such as a VPN.

Spotting Cyber Attacks

Investigate the impact of different types of malware used to attack individuals, businesses, organisations, and governments.

Discern between fake profiles and messages and authentic online communications.

Know how to authenticate data before sharing and how to block and report unwanted communication.

Explore current methods used by cybercriminals to access sensitive data such as PINS and passwords.

Strand 3: Cybersecurity in a Global Village

Communication and Crisis Management

Describe some of the high-profile cyber security crises in modern times in Ireland and the role of government in the response.

Evaluate the risks to cyber security during a crisis.

Explain how individuals can plan for and respond to a cyber security attack.

Outline how an organisation can plan for and respond to a cyber-attack at local level, corporate level, through policies, response plans, communication plans and simulation exercises.

List examples of how the Irish Government communicates cyber security threats during a crisis.

Regulation and Legislation

Understand the principles of cyber security legislation.

Compare voluntary versus mandatory regulation, and ethical versus government regulation.

Describe the positive and negative implications of regulation around cyber security.

Review examples of national, European, and international cyber security legislation.

Reporting breaches of Cyber Security

Recognise when something is a threat and should be reported.

Identify who or what organisation you should contact and how to contact them.

Know how to report online crime or threats in a range of contexts.

For the full specification and associated resources see https://cyberwise.ie