

CYBER SECURITY

WITH THE ICSS



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Talking points

KNOWLEDGE & COMPREHENSION

1. What is cyber security?
2. Why is online false information a growing and important issue?
3. What are some of the factors that would make a piece of information or a source of information trustworthy or untrustworthy?
4. What can be some negative outcomes of over-sharing personal data online?
5. What is the boundary between sharing and over-sharing personal information?

APPLICATION

6. On social media or via a search engine, find a recently published piece of information (e.g., an article, a social media post or a YouTube video). Try out the 'STOP, THINK, CHECK' technique in the article. What did you learn?
7. Undertake a 'threat modelling' exercise on your own personal data

following the questions in the article. In what way does it make you rethink your data sharing choices?

ANALYSIS

8. Why does cyber security need to be interdisciplinary? What disciplines are relevant and why? Name a number of disciplines and find one concrete example for each discipline.
9. What are the different roles of humans and AI algorithms, and how can they work together to identify online false information?

EVALUATION

10. Do you think online false information is likely to be a bigger or smaller issue ten years from now? Why?
11. Can you think of any examples in the news about data breaches? If not, see if you can find one using a trustworthy source online. What has been the impact of these data breaches? How might they have been avoided?



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Activities

ONLINE FALSE INFORMATION

1. ACTIVITY:

With your classmates, play a game of Broken Telephone: one person whispers a certain sentence in the ear of their neighbour, who whispers what they hear in the ear of their neighbour, and so on. The last person says aloud what they heard.

Question:

How much did the statement change? This indicates how information, even if true at first, can be distorted as it is passed on by multiple people, each of whom may not fully understand it or know how to properly convey it. Though nobody (hopefully!) deliberately changed the message, it nonetheless changed its meaning. This indicates why misinformation happens so ubiquitously on the internet.

2. ACTIVITY:

Many important topics are frequently vulnerable to mis- and disinformation. Examples include climate change and COVID-19. In small groups, choose one of these topics or one of your own, and think of when you have heard about differing opinions on the subject. Discuss the topic in your group, and how a piece of misinformation can be changed to disinformation when the intent of the information creator becomes malicious.

Question:

Reading over the article, what would you need to do to determine which opinions best tally with scientific facts? Use the internet and other sources to carry out this process.

3. ACTIVITY:

Visit this website: www.whichfaceisreal.com

Play the game by choosing which of the pair of faces you think is a real photograph. The other is a fake image.

Question:

How good were you at telling which faces were real? What clues were you looking for? Read this page to see which clues the developers have identified:

www.whichfaceisreal.com/learn.html

Did they match up with your own thoughts?

How do you think humans paired with AI could get as close to perfect accuracy as possible on determining which face is real or fake?

PERSONAL DATA SHARING

ACTIVITY:

Think about an app, a social media platform, or a game that you use regularly. If you do not use any of these things, pick one you have heard of. Look up what personal data the application requires to use it correctly. This may include:

- Name, date of birth, nationality, gender, etc.
- Location
- Access to your phone's camera and/or files

Questions:

For each of these pieces of data, answer the following:

- Can I see why the application needs this data to function properly?
- Does it improve my life to share this data so I can use this application?
- What are the risks of this particular application having this data?
- What are the risks if this data was stolen or sold?