

Careers in cybersecurity



Length:
30-40 minutes

About this lesson

Students will take part in a class discussion about the potential consequences of cyber attacks and the importance of cybersecurity in their everyday lives. They will then examine several different career paths within the field of cybersecurity.

Objectives

By the end of this lesson, students will

- Define cybersecurity and its importance in protecting computer systems
- Describe different types of cyber threats and their real-life impact
- Examine several different careers in cybersecurity and identify core tasks and responsibilities in these careers that help keep us safe

Inquiry prompts

- What is cybersecurity and how is it relevant to my life?
- What are some career options in cybersecurity?

Before you begin

1. Ensure that you are able to play the [Computer science and your future success](#) video. This video is also available in [French](#).
2. Ensure students have completed at least phase 1 of the **Matchmaker** assessment.
3. Ensure that you are able to log into your student demo account and can access **Explore Options**.
4. Ensure that students are able to log into their accounts and access **Explore Options**.
5. Decide whether to take discussion/brainstorming notes with your class via a slide deck and project for students to view, or on a whiteboard in the physical classroom.

Teaching strategies

- 1 Show students the [Computer science and your future success](#) video. This video is also available in [French](#). When the video is over, ask students to give examples of two skills that are relevant within computer science.
- 2 As a class, define cybersecurity. Why is it important? What threats do computer systems and networks potentially face? Take notes where students can see them (on a whiteboard or using a projector.)
 - Example definitions: A person's online protection, defense from threats to computers, servers, and mobile devices
 - Example threats: Information theft, damage, malware
- 3 Next, create a class list of best practices for online safety.
 - Example practices: strong passwords, regularly update software, learn how to identify suspicious emails

Xello entry point

Students must complete at least the first phase of **Matchmaker** prior to beginning this activity.

Materials required

- [Computer science and your future success](#) video. This video is also available in [French](#).
- Computers or tablets with Internet access
- Whiteboard and whiteboard markers (optional)

Artifacts

Students:

- Save at least two careers related to cybersecurity in **Explore Options**

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- 4 Now have students log in to their accounts. In your student demo account, click on **Careers** under **Explore Options** and direct students to do the same. Model using the search bar to search for careers.
- 5 Next, assign students a cybersecurity focused career from the list below. You can either place students into groups and assign each group a career, or assign careers to students individually.
 - Careers: Information security engineer, ethical hacker, information security analyst, computer network specialist
- 6 Tell students that they will now have 15 minutes to explore computer-science related careers, focusing on those that deal with cybersecurity. For each career profile they click on, students should read through the entire profile.
- 7 Once students are finished exploring, display the list of careers for the class, either on a whiteboard or using a projector. Under each career, take notes as students discuss the following about their careers: Why is it important to learn about cybersecurity?
 - What responsibilities come with this career?
 - How do the core tasks associated with this career keep people safe, both online and offline?
 - What is one thing you learned about this career that is important to your online behavior today?
- 8 Once students have finished sharing about the careers they explored, pose the following questions to the class. Have them answer them in a class discussion, or reflect on them individually.
 - Had you previously considered a career in cybersecurity? Did this activity inspire you to view it as a potential career path? Why or why not?
 - If a person wanted to pursue a career in cybersecurity, what types of skills would they need? Do you think this might change in the future? Why or why not?