Global Issues: Cyber Security and Privacy

By Carlo Fusco
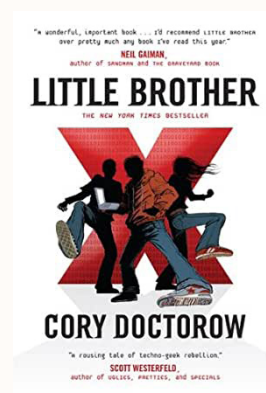
GRADE LEVEL: Secondary (11-12)

THEME: Global Issues
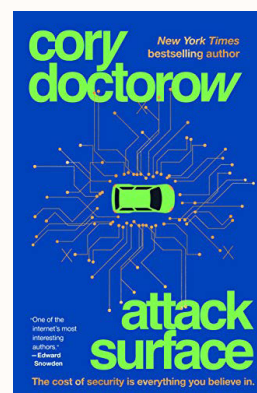
SUB-THEMES: Cyber Security and Privacy

LEARNING FOCUS

Today's students live in an increasingly connected world. They access the totality of the world's information from the palm of their hand. This digital landscape with all its societal benefits also has a dark side. As we access and interact with global information, we leave a trail of breadcrumbs behind that can be exploited by nefarious individuals and groups. The goal of this lesson is to acknowledge that the Internet is an important and useful tool, but we must also put in place some personal safety protocols to keep us safe.
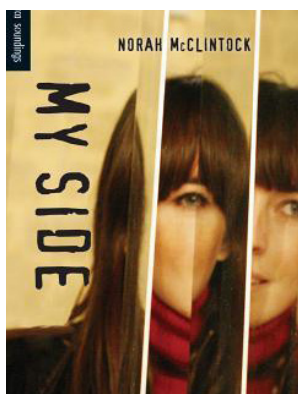
FEATURED BOOKS

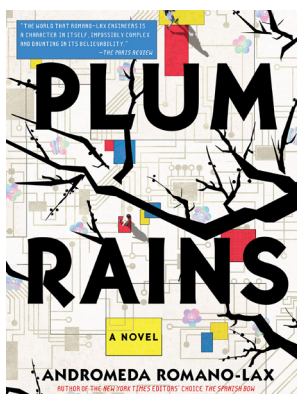*Little Brother* by Cory Doctorow (Tor Books, 2008)

Attack Surface by Cory Doctorow (Tor Books, 2020)

Agency by William Gibson (Berkley Books, 2020)

My Side by Norah McClintock (Orca Book Publishers, 2013)

Plum Rains by Andromeda Romano-Lax (Soho Press, 2018)

Rush by Eve Silver (HarperCollins, 2013)

LEARNING EXPERIENCE

MINDS ON PROVOCATION

While schools, hospitals and governments have a legal obligation to protect the private information of individuals, it is sometimes the individual who is the source of sensitive information about themselves.

To get students thinking about keeping their personal information safe, try these resources:

- Video: McGill music student awarded $350,000 after girlfriend stalls career
- CBC article: Quebec clarinetist awarded $350K after ex-girlfriend sabotages career opportunity
- Humorous video by AVG Technologies about social media and future employment: Attention young professionals! What's in your digital baggage?
- Podcast: Darknet Diaries episode 84, "Jet-setters," in which a former Australian Prime Minister leaks personal information
- Interactive website: Be Internet Awesome

After encouraging students to think about how they use the Internet, take time to help them focus on the topic. Many students will have misconceptions and bias from a variety of sources. A teacher-led classroom discussion is a great way to get the ideas out into the open and to address the misconceptions. As a whole class or in small groups, student thoughts and ideas can be recorded in a variety of formats such as: Mind map (free tools), Wordle (free tools), Jamboard, etc.

In a whole class discussion, teachers can generate a Pro/Con table for a variety of Internet services and practices. For example:

- Posting pictures on social media
- Sharing your password
- Using the same password on all sites
- Impact on employment
- Joining a questionable group

READ, PLAN, AND PRACTICE

Students are to select a book appropriate for their reading level and interest.

While reading the book, students are to record the following information in table format or other thought-organizing tools (free tools):

• Identify cyber security and privacy concerns as they are represented in the book.
• How did the previously identified concerns impact the character(s)?
• Suggest real world practices to reduce/eliminate the cause of these concerns.
• How did the characters deal with the impact of these concerns during everyday events?

Extension: Cyber Security and Information Security are rapidly growing fields of employment. Students can use a variety of career search and/or career coach online tools to further explore a potential career path. The roles and responsibilities for these careers can also lead to further research into personal cyber security practices.

MAKE, TINKER, AND MODIFY

Provide an opportunity for students to be creative in the expression of their learning. The learning should reflect what knowledge they gained about cyber security and privacy, the impact of good/bad cyber security practices and steps to reduce/eliminate the impact of bad practices.

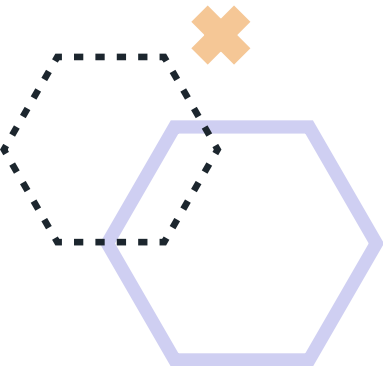Sample creative expressions of learning that go beyond the essay or poster:

• Artwork
• Poetry
• Video
• Podcast (interview or commentary) – How-To
• Public service announcement (adapt from the podcast How-To)
• Letter to elected official
• Letter to the local newspaper (letter to editor/op-ed)

It is important for students to produce a product that is more than just an assignment for a teacher. Create a website or other online sharing resources to showcase and publish student work (Google Sites, Wordpress, etc.). Here are some Creative Tools for Making and Sharing.

REFLECT AND CONNECT

LEARNING SHOWCASE

Provide students with the time and opportunity to discuss and look at the products produced by other students.

THE BIG THINK

The culminating activity should be one where students reflect on their learning and their personal role in cyber security.

Students should write a short exposition to illustrate their reflections with the following prompts:

• What did you learn about cyber security and privacy?
• What can you do to protect your identity and work in virtual spaces?
• What questions and/or concerns do you still have?

ADDITIONAL CANADIAN BOOKS AND BOOK LISTS TO SUPPORT THIS SUB-THEME

• Cybersecurity Fiction Books (Goodreads)
• 5 Novels about Information Security (Computer Science Degree Hub)
• YA books about Computers, Hackers, and Hacking (Johnson County Library)
• Our 10 favorite non-fiction cybersecurity books (CyberWire)
• The Best Cyber Security Books (Five Books)

ADAPTATIONS FOR THIS LESSON

The majority of additional resources for this topic are online. Below are a few that can be used to extend the classroom experience and for personal growth.

Websites with a heavy focus on education:

• MediaSmarts
• OpenMedia
• Common Sense Media

Websites with a primary focus on protecting personal privacy rights:

• The Electronic Frontier Foundation
• Select articles from Michael Geist (Canada Research Chair in Internet and E-commerce Law)

Podcasts that focus on cyber security:

• 8 best cyber security podcasts
• Top 50 Cyber Security Podcasts

MORE RESOURCES

• Online disinformation (Government of Canada)
• Digital Citizenship for Educators (Canadian School Libraries Journal)
• Association for Media Literacy
• Digital Safety Resources from Be Internet Awesome