Cryptography during the American Revolution

TOPIC: FOUNDATIONAL PRINCIPLES OF CYBERSECURITY

GRADES: 3-5

LESSON DURATION: 1-2 HOURS

SOFT SKILLS: COMMUNICATION, PROBLEM SOLVING, COLLABORATION

Introduction:

- As part of the unit on the American Revolution, students are typically fascinated by stories about spies. In this lesson, students will learn about spies but also the methods of protecting information during a time of war.

Learning Outcome:

- Students will understand the role of espionage and basic cryptography during the Revolutionary War.
- Students will develop their own version of a mask letter to understand an early version of cryptography.

Materials:

- Presentation
- Henry Clinton letter

Activities:

1. During the unit on the American Revolution, introduce students to the idea of espionage and basic cryptography. A presentation is contained here. Only the section on the Revolutionary War should be used.
2. Once students have a basic idea of cryptography and its importance, have students complete an activity in which they replicate the masking letters method.
3. Begin by having students read Henry Clinton's mask letter available here via the Clements Library at the University of Michigan.
4. Then show students how a mask works by placing it over the letter. Have students read what the mask letter says.
5. Students should then be put into pairs. Each student group should choose a side: either Patriot or British. Both students are now either Patriots or Brits. Once the students decide, they should write a mask letter to their partner explaining what they have learned about the war to this point. Each partner needs to use the same mask shape. The content of the letter itself can be whatever the student chooses to write about but should remain top secret.

6. Once each partner is done, they should exchange letters. If they are both using the same mask properly, they should have no issue reading each other's letter. Have each partner rewrite the "secret statement" of the letter given to them.
7. After partners are done, they should go take a letter from an enemy group. They
8. After both activities are complete, ask students to come back together as a class. Were they able to read their fellow partners letter? Why? Could they read the enemy letter? If so, how long did it take? Why could they read it? If not, what made it hard to read?
9. Review the importance of encrypted data during both times of war and peace. Explain that certain online transactions and information is protected via a more complicated method.
10. A rubric for the partner project is available online. Online rubric