

Basic Cyber Attacks

TOPIC: FOUNDATIONAL PRINCIPLES OF CYBERSECURITY

GRADES: 4-5

LESSON DURATION: 1 HOUR

SOFT SKILLS: RESEARCH, COLLABORATION, COMMUNICATION

Learning Outcomes:

- Students will display a knowledge of the basic types of cyber-attacks to display safe online behavior and prevention of being a victim.

Materials:

- [Teacher Notes](#)

Activities:

1. The teacher should explain that today students will learn about harmful online behaviors. The teacher should explain that although some of the information today may be a little bit scary, it is important to discuss so that we all know how to protect ourselves.
2. The teacher should ask for volunteers or assign one student to each of the following terms: ransomware, virus, botnet, trojan horse, and social engineering (phishing, vishing, piggybacking, shoulder surfing, dumpster diving). Each student should be handed a poster with their term on it and a black hat (or some other distinctive physical object).
3. These individual students should be given 10-15 minutes to research what his/her term means from a cyber-attack angle. Meanwhile, all the remaining students in class should be tasked with researching all of the terms, rather than just one. Students have to work quickly and their task is to research different ways to protect or prevent each attack.
4. Once all student volunteers understand their assigned term, have them put on their hats, hold their poster with the term on it, and stand at the front of the room.
5. The remaining class should then be told that they are the good guys-like doctors-they need to figure out how to protect themselves from each threat in a black hat.
6. The remaining students should be told that once the game is live, they should raise their hand as soon as they have an idea of how to handle one of the black hat guys. If they are called on and they state a proper fact, the threat must take off his/her hat and the student who listed the correct tip should stand beside the "black hat." The "black hat" should remain standing, holding his/her poster with this hat now taken off. Once one more student comes up with another tip, the threat must sit on the floor and drop his/her sign. It takes two facts for each threat before he/she must sit down. **Dumpster diving can sit after 1 safety tip. All others should have 2 prior to sitting.*
7. Once the game is live, the teacher can call on whomever to try to take down the threats.

© 2018 Teach Cyber



This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

8. When the game is over, the teacher should review both the types of cyber-attacks discussed and the methods of security to protect against the attacks. [Teacher notes available here.](#)

© 2018 Teach Cyber



This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](#).