



# BASKETBALL PASSWORD

## **Lesson Description:**

Students will learn about confidentiality and the importance of having a strong lengthy password/passcode by viewing a PowerPoint and conducting a group physical activity that demonstrates the effectiveness of lengthy difficult passwords when protecting a computer system from nefarious actors.

**Prerequisite Knowledge:** No prerequisite is required.

**Length of Completion:** 1.5 hours

**Level of Instruction:** Middle and High School Students

**Applicable GenCyber Concepts:** Confidentiality and Defense in Depth

**Resources that are Needed:** PowerPoint, basketball, sheets of paper and markers.

**Accommodations Needed:** There are no accommodations needed for this lesson.

## *LEARNING OUTCOMES*

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- Apply skills learned regarding password protection.
- Understand the importance of strong passwords.
- Learn how to develop strong passwords using basic guidelines and an online password creator tool.

## *LESSON DETAILS*

**Interconnection:** This lesson is an extension of the 1.1 Confidentiality and Ethical Issues PowerPoint, which includes introduction concepts regarding personal privacy and password protection. The main activity includes reviewing the “1.2 Confidentiality and Ethical Issues” PowerPoint.

**Assessment:** Students will be questioned as they complete the physical activity and asked to explain the process of strong passwords regarding confidentiality.

**Extension Activities:** Review of the process for creating strong passwords/passcodes.

**Differentiated Learning Opportunities:** The lesson contains different ways to learn about password protection such as visual, auditory, and includes a kinesthetic activity to increase understanding among various learners.

## LESSON

**Lesson 1 Details:** For lesson 1, please describe:

**Warm Up:** For the warm up, students were engaged in a discussion on how to create a strong password that is difficult to crack by hackers. A guided discussion was used to detail the various elements of creating strong lengthy passwords.

**Lesson:** The first part of the lesson includes an expository approach through a PowerPoint presentation about Confidentiality and Ethical Issues ("1.1 and 1.2 Confidentiality and Ethical Issues"), which includes some strong password examples and basic guidelines for creating strong passwords. Afterwards, a password activity is illustrated through a basketball exercise. Below are the steps involved in this activity:

1. From the class, select ten students. These ten students are divided into two groups (Group A, and Group B) of five students each. Each group is placed in a horizontal line facing each other. Group A represents the hackers and Group B represents the users.
2. Students in Group A (hackers) are asked to pass the basketball to Group B (users). An explanation is provided that passing the ball and catching it represents stealing/hacking the information when there is no password (no students in the middle).
3. Students are instructed to make direct or bounce passes, lob passes are NOT allowed (higher arc passes).
4. Slowly start adding students from the rest of the class to the middle to represent the various letters, special characters, and numbers in a password and instruct them to prevent the ball from being passed on. (Optional: Each student can have a sheet of paper clipped to

their shirt with a special character, number, lowercase, or uppercase letter that they represent, which they can create using markers).

5. The students in the middle must try to prevent/block the ball from being passed around. Very much like users use passwords to prevent the data from being stolen.
6. Students will learn that when there are only a few characters/letters/numbers in the middle it is still relatively easy to pass the ball (hack). As more and more students go to the middle it becomes a lot harder to pass the ball or steal the information.
7. The goal is to teach that the more characters (students) in a password, the more difficult it will be to pass the ball and steal the information since the best passwords are the longest and the most diverse with numbers, upper and lowercase letters and special characters.