



Integration Opportunities

Math 3.PFA.1c Protect private information by identifying personal data that should remain confidential and creating strong passwords (e.g., using a pattern of characters, numbers, and symbols). Solve contextual problems involving recognizing and extending patterns related to password creation.

Health 3.1.k Have students discuss the need for personal safety and identify the type of personal information that should remain private (name, address, phone number, school name, and pictures) when interacting with others online. Then have students identify ways to keep personal information private.

3.CYB.1 Cybersecurity

The student will apply safe practices to protect private information. (a) Identify and distinguish personal information that should be private. (b) Describe the importance of using a strong password. (c) Create and use strong passwords to protect private information.

Understanding the Standard

To protect private information, many online platforms use usernames and passwords to make sure that only certain individuals have access to a person's information. Usernames are unique account names given to individuals and should not include private information such as full names or phone numbers. Passwords are used to protect devices and information from unauthorized access. Because computer programs can be used to guess passwords, strong passwords have characteristics that make them more difficult to guess. Many websites have rules as to the length and composition of passwords; these rules help create stronger passwords. Students will explain how passwords help protect privacy, classify strong and weak passwords, and also explain how strategies such as logging off of devices and keeping passwords a secret can help protect information.

Term	Definition
Private	Free from being observed or disturbed by other people.
Username	A special public name given to an individual to identify them on an online network.
Password	A secret code used to log into accounts and keep information private.
Strong password	An effective password that would be difficult to break
Weak password	A password that is easy to guess or to break by repeatedly trying a list of words or letter combinations

Prerequisite Knowledge

Students should have a foundational knowledge of logging into computers and internet safety.

Summary of a Lesson

As a whole group, discuss the function of a password and brainstorm the best practices for creating and using passwords online (e.g. change passwords periodically, use different passwords for different accounts, log off devices, etc). Then, have students use the suggestions for creating strong passwords [1. Use uppercase and lowercase letters. 2. Use numbers. 3. Use symbols. 4. Use at least 8 characters. 5. Don't use words from a dictionary. 6. Don't use the same password twice. 7. Don't use personal information] to create 3-4 passwords. With a partner, students will test how strong their passwords are by playing a game of "Password" where each will take turns trying to guess their partner's password with limited clues. Passwords will then be classified as "weak" or "strong" based on the number of clues needed.

