

STEM^{in the}lab

Inspiring Idaho's future STEM workforce

Password Management

MISSION

To educate students on the importance of creating and maintaining strong, secure passwords. This activity aims to empower students with the knowledge and skills needed to safeguard their digital identities and foster a culture of cybersecurity awareness.

VOCABULARY

Password: A secret word or phrase used to access something.

Secure: Safe and protected from danger or unauthorized access.

Hacker: Someone who tries to access other people's information without permission.

GRADE LEVELS

This activity is appropriate for students in grades: K-8

MATERIALS

- Paper and pen
- Printed handouts with password examples

ABOUT THIS ACTIVITY

In this lesson, students will learn the basics of password management. They will understand what a password is, why it is necessary, how to create a strong password, how to keep it safe, and whom they can share their password with. The lesson will include discussions, hands-on activities, and practice exercises. Password management is crucial for securing sensitive information and national security information at INL. Strong, unique passwords protect against unauthorized access and cyber threats, ensuring data integrity and compliance with regulations. This supports INL's mission to advance nuclear energy, enhance national security, and promote environmental sustainability.



DIRECTIONS

1. Introduction:

- **Discussion:** Start by asking students if they know what a password is. Write their ideas on the whiteboard.
- **Definition:** Explain that a password is a secret word or phrase that helps keep our information safe.

2. Why Passwords are Necessary:

- **Explanation:** Discuss why passwords are important. Explain that they protect our personal information from people who shouldn't see it, like hackers.
- **Examples:** Share examples of where passwords are used (e.g., unlocking devices, accessing online games, or logging into school accounts).

3. How to Create a Strong Password:

- **Guidelines:** Explain the rules for creating a strong password:
 - Use a mix of letters (both uppercase and lowercase), numbers, and symbols.
 - Your password should have:
 - At least 1 uppercase letter (A-Z)
 - At least 1 lowercase letter (a-z)
 - At least 1 number (0-9)
 - At least 1 symbol (!, @, #, \$, %, ^, &, *, (,), -, _ , +, =)
 - For example: S!llyR@bbit123
 - You can use your favorite animal, game, pet, food, color or word in your password.
- **Activity:** Hand out worksheets and help students practice creating their own strong passwords.

4. How to Keep Passwords Safe:

- **Tips:** Discuss ways to keep passwords safe:
 - Don't share your password with friends or strangers.
 - Don't write it down where others can see it.
 - Use different passwords for different accounts.
 - Change your passwords regularly.

5. With Whom We Can Share Passwords:

- **Discussion:** Explain that passwords should only be shared with trusted adults like parents or teachers.

LEARN MORE

Students + Parents + Educators

For information on grants, training and student opportunities, curriculum ideas, and other resources, please visit ***stem.inl.gov***.

