

Password Security and Cybersecurity

Textbook

Password Security and Cybersecurity



Noah and Amira's Secret Code Club

It was Tuesday when Noah and Amira got to school and saw a sign on the classroom board: Welcome to the Secret Code Club! Password Required to Enter!

"A secret code?" Amira said.

Ms. Bloom handed them each a card. "Today, we're learning about passwords," she said. "A password is like a secret key that only you know. It helps protect your stuff on the computer."

Noah raised his hand. "Like when I log into my tablet at home?"

"Exactly," Ms. Bloom said. "But here's the tricky part: your password needs to be strong."

"What do you mean, strong?" Amira asked.

"Not that kind of strong. A strong password is one that's hard for someone else to guess. That means no '1234' or just using your name."

"So we can't use 'NoahRocks'?" Noah asked.

"Not if everyone knows that's your nickname," Ms. Bloom said. "Try something with letters and numbers, maybe even a symbol—like a star or exclamation mark!"

Amira thought for a second. "What about 'Treehouse47!'?"

"Perfect!" said Ms. Bloom. "And remember, never share your password with anyone except a grown-up you trust."

"What if I leave my computer on and walk away?" asked Noah.

"Great question," said Ms. Bloom. "You should always log off when you're done, so no one else can get into your stuff. That's part of cybersecurity!"

"Cybersecurity?" Amira asked.

"Cybersecurity means keeping your computer and information safe from danger," Ms. Bloom explained. "It's like having a lock on your secret fort, and your password is the key!"

What Are Passwords?

Passwords are secret codes that protect your digital stuff—like your files, games, and personal information. Think of a password like a key to your digital house!

A password is your personal digital key that:

- Unlocks your computer programs and games
- Keeps other people from using your accounts
- Protects your schoolwork and personal information
- Helps keep you safe online

What Makes a Strong Password?

A strong password is like a strong lock—it's hard for others to guess or break! Strong passwords should have:

The Four Elements of Strong Passwords:

1. Uppercase letters (big letters like A, B, C)
2. Lowercase letters (small letters like a, b, c)
3. Numbers (like 1, 2, 3)
4. Symbols (like !, @, #, *)

Strong Password Examples:

- TreeHouse47! (has big letters, small letters, numbers, and a symbol)
- Cat123@ (mixes letters, numbers, and symbols)
- MyDog8# (personal but not obvious, with numbers and symbols)

Weak Password Examples (Never Use These!):

- 1234 (too simple, easy to guess)
- password (everyone knows this word)
- Noah (your real name is easy to guess)
- abc (too short and simple)

What is Cybersecurity?

Cybersecurity means keeping your computer and information safe from danger. Just like we lock our doors at home, we need to lock our devices with good passwords and smart habits.

Think of Cybersecurity Like a Digital Fort:

- Password = The secret code to enter your fort

- Logging out = Closing and locking the front door when you leave
- Safe browsing = Only letting trusted visitors into your fort
- Not clicking strange links = Not opening the door for strangers

Password Safety Rules

The Golden Rules of Password Safety:

1. Keep passwords private: Only share with trusted adults (parents, teachers)
2. Never share with friends: Even your best friend shouldn't know your password
3. Make them strong: Use the four elements (big letters, small letters, numbers, symbols)
4. Make them unique: Don't use obvious things like your name or "1234"
5. Cover when typing: Use your hand to hide the keyboard when typing passwords

Secure Password Storage

Store passwords safely:

- Write in a special notebook kept at home
- Use a secure folder on your home computer
- Let parents keep a copy in a safe place
- Never store passwords on shared computers
- Don't write passwords on sticky notes

Safe and Unsafe Online Communications

Safe communications:

- Messages to family members
- School-approved educational sites
- Teacher-supervised activities

Unsafe communications:

- Messages from strangers
- Pop-ups asking for passwords
- Emails requesting personal information
- Unknown friend requests

Cybersecurity Best Practices

When Using Devices:

- Always log out when finished
- Lock the screen if stepping away
- Close programs you're not using
- Ask permission before downloading

When Online:

- Don't click strange links or pop-ups
- Don't share personal information
- Tell an adult if something seems wrong
- Only visit approved websites

Red Flags: When to Get Help

Tell a trusted adult immediately if:

- Someone asks for your password
- You see a pop-up asking for personal information
- A website asks for information that seems strange
- Your computer starts acting weird or slow

Critical Thinking Questions

1. Why is a strong password better than a simple one?
2. What could happen if you shared your password with a friend?
3. How is logging out like locking a door?

Sentence Stems

- "A strong password includes (blank space) because (blank space)."
- "Cybersecurity protects (blank space) by (blank space)."
- "I keep passwords secure when I (blank space)."

Questions (5)

1. What is a password used for?

MULTIPLE CHOICE

Choose the correct answer:

- A. To clean your computer
- B. To call your teacher
- C. To keep your device and information safe
- D. To play outside

2. Which is a good example of a strong password?

MULTIPLE CHOICE

Choose the correct answer:

- A. 1111
- B. Cat9\$Tree!
- C. yourname
- D. abc123

3. Who should you share your password with?

MULTIPLE CHOICE

Choose the correct answer:

- A. Your best friend
- B. A trusted adult only
- C. Your whole class
- D. Everyone who asks

4. What should you do when you're done using a device?

MULTIPLE CHOICE

Choose the correct answer:

- A. Leave it on
- B. Close the lid
- C. Let someone else use it
- D. Log off

5. What makes a password weak?

Choose the correct answer:

- A. It has numbers and symbols
- B. It's very easy to guess
- C. It's long and tricky
- D. Only you know it

Games (3)

1. Passwords Matching

Match the reminder to its description

[Full Screen](#)[Audio](#)[Instructions](#)[Answer Key](#)[Pause](#)[Clear All](#)[Check Matches](#)

Attempts: 0

Use a mix of letters, numbers, and symbols

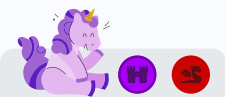
Only share it with a trusted adult

Don't leave your device open for someone else to use

Keep it private

Make your password strong

Log off when you're done



2. Password Categories

Categorize the passwords into strong and weak passwords.

Full Screen

Audio

Instructions

Answer Key

Pause

Clear All

Check Order

Attempts: 0

Strong Passwords

Weak Passwords

C0d3nglsFUn!




Le@rNinGisGr8

password2

abcde

YourName

SkillStRuCk7!



3. What to Include Categories

Full Screen

Audio

Instructions

Answer Key

Pause

Clear All

Check Order

Attempts: 0

Passwords - Things to Include

Passwords - Things Not to Include

At least 8 letters and numbers




Your birthday

Uppercase and lowercase letters

Symbols

The word PASSWORD

Your name



Blocks Challenges (5)

1. Password Report



Password Report

Program 3 sprites to tell us about passwords or give examples of passwords as they move around the scene. Have each sprite use at least 2 speech bubbles.

3 12 6 1



Submit ↑



2. Search and Find



Search and Find

Squirrels hid hundreds of acorns every fall! They are expert food hidiers but often forget where they've hidden them all. Using at least 2 acorn sprites, motion blocks, and look blocks, have the squirrel sprite go on a hunt to find the acorns. When the squirrel reaches the acorns, play a sound block!

3 5 2 2 1 3



Submit ↑



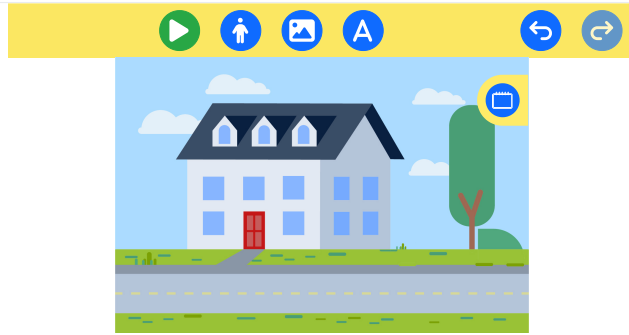
3. Desert Snake



Desert Snake

Using the snake sprite and desert background, program the snake sprite to explore the desert. How can you use the motion blocks to make it "slither"?

1 10 1



Submit ↑



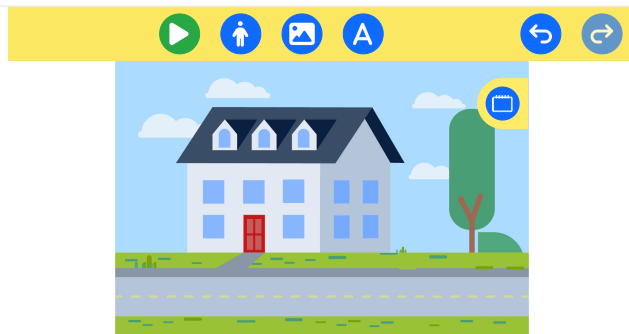
4. On Repeat



On Repeat

Program your sprite to be on a repeat loop at least 5x. The loop should include at least 3 motions, 1 look, and 1 sound.

1 3 1 1 1 1 1



Submit ↑



5. Mountain Hike



Mountain Hike

Using the mountain background, program two sprite friends going on a walk by the mountains. Have them each make a comment during the walk.

 2  12  2  2



Submit 



Answer Keys & Solutions

Questions

1. What is a password used for?

MULTIPLE CHOICE

Correct Answer:

- A. To clean your computer ✗ Incorrect
- B. To call your teacher ✗ Incorrect
- C. To keep your device and information safe ✓ Correct
- D. To play outside ✗ Incorrect

Explanation:

Think about locks and keys!

2. Which is a good example of a strong password?

MULTIPLE CHOICE

Correct Answer:

- A. 1111 ✗ Incorrect
- B. Cat9\$Tree! ✓ Correct
- C. yourname ✗ Incorrect
- D. abc123 ✗ Incorrect

Explanation:

Mix letters, numbers, and a symbol.

3. Who should you share your password with?

MULTIPLE CHOICE

Correct Answer:

- A. Your best friend ✗ Incorrect

B. A trusted adult only

✓ Correct

C. Your whole class

✗ Incorrect

D. Everyone who asks

✗ Incorrect

Explanation:

It's called a secret for a reason!

4. What should you do when you're done using a device?

MULTIPLE CHOICE

Correct Answer:

A. Leave it on

✗ Incorrect

B. Close the lid

✗ Incorrect

C. Let someone else use it

✗ Incorrect

D. Log off

✓ Correct

Explanation:

It's the smart and safe way to leave.

5. What makes a password weak?

MULTIPLE CHOICE

Correct Answer:

A. It has numbers and symbols

✗ Incorrect

B. It's very easy to guess

✓ Correct

C. It's long and tricky

✗ Incorrect

D. Only you know it

✗ Incorrect

Explanation:

Think about something anyone could figure out.

1. Passwords Matching

Matching Game Solutions:

1. →
2. →
3. →

Students must drag items from the left to match with corresponding items on the right.

2. Password Categories

Category Solutions:

Category 1: Strong Passwords

- C0d3!ngIsFUn!
- Le@rNinGisGr8
- Sk!!!StRuCk7!

Category 2: Weak Passwords

- YourName
- password2
- abcde

Scoring:

- Gold: 1 attempts or fewer
- Silver: 2 attempts or fewer
- Bronze: 1 attempts or fewer

Students must sort items into their correct categories.

3. What to Include Categories

Category Solutions:

Category 1: Passwords – Things to Include

- At least 8 letters and numbers
- Uppercase and lowercase letters
- Symbols

Category 2: Passwords – Things Not to Include

- Your name
- The word PASSWORD
- Your birthday

Scoring:

- Gold: 1 attempts or fewer
- Silver: 2 attempts or fewer
- Bronze: 3 attempts or fewer

Students must sort items into their correct categories.

