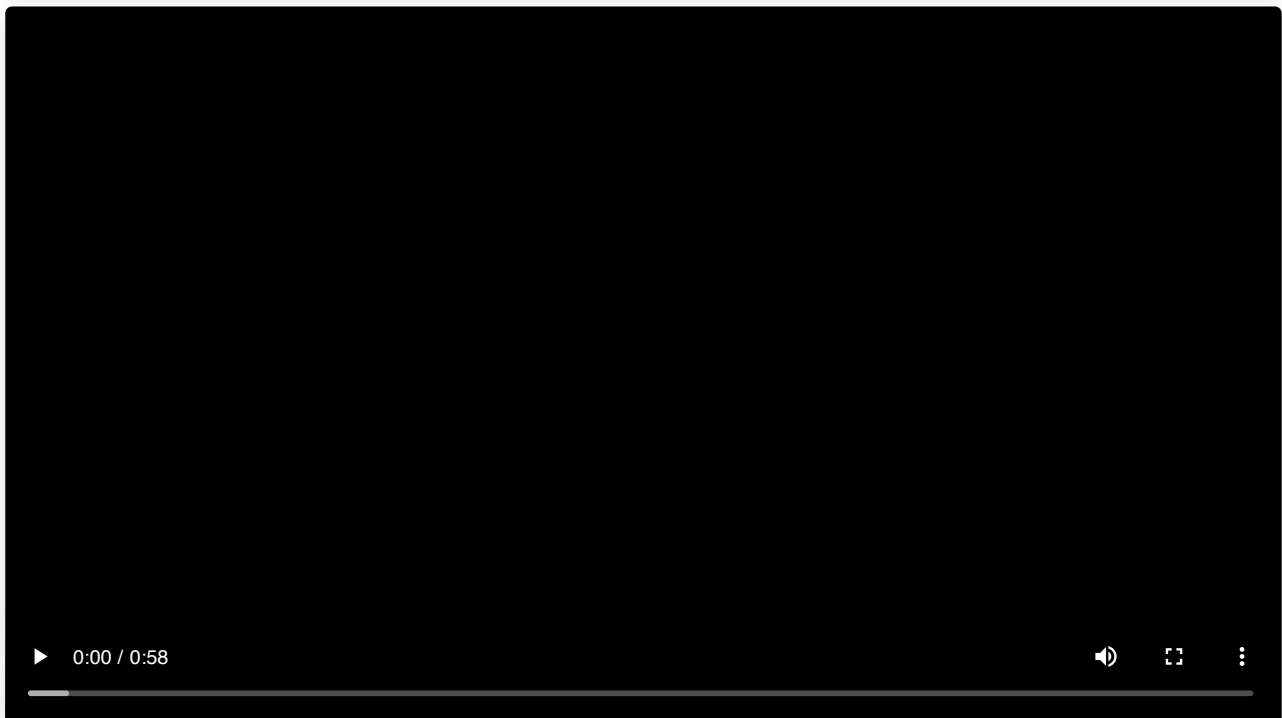
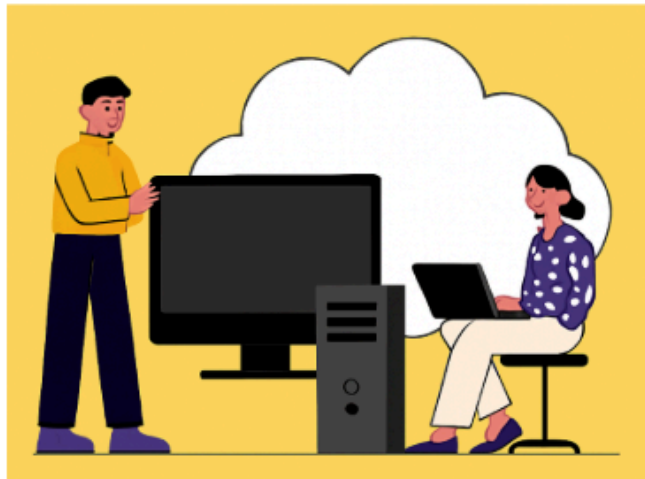


## Hardware and Software

### Textbook

## Hardware and Software



### "The Hardware and Software Quest"

Jamie and Brooke were sitting in their classroom, eagerly waiting to learn more about computers. They had already seen the big computer in the corner, and Jamie was full of questions.

"Hey Brooke," Jamie asked, "How does the computer know what to do when I click on a game or open a website?"

Brooke replied, "That's a great question, Jamie! The answer is both simple and amazing. Computers are made up of two main parts: hardware and software."

Jamie tilted his head, looking puzzled. "What's the difference between hardware and software?"

Brooke took a deep breath, ready to explain. "Hardware is the physical parts of a computer that you can actually touch. For example," she said, pointing to the computer, "the screen, keyboard, and mouse are all hardware!"

Jamie nodded. "So, if I can touch it, it's hardware?"

"Exactly!" Brooke said. "Now, the software is what makes the hardware work. It's like the brain of the computer. Software tells the computer what to do—like when you play your favorite game or open a webpage. Software isn't something you can touch because it's a set of instructions inside the computer."

Jamie nodded, starting to understand. "So, when I play a game on my tablet, the game is software, and the tablet itself is hardware?"

"That's right!" Brooke said.

## What is Hardware?

Hardware is the physical parts of a computer or device.

Here are some examples of hardware:

- The **monitor (screen)**: This is where you see what's happening on the computer.
- The **keyboard**: This is where you type your letters and numbers.
- The **mouse or touchpad**: Helps you move the cursor around.
- The **printer**: Helps you make copies of things from your computer.
- **Speakers**: Let you hear sounds and music from the computer.
- **Webcam**: A camera that lets you take pictures or make video calls.
- **Microphone**: Lets the computer hear your voice.

## What is Software?

Software is the set of instructions or programs inside the computer. It's the part that tells the hardware what to do!

Here are some examples of software:

- **Apps or games**: Like the game you play on your tablet.
- **The operating system**: This is the software that helps the computer run, like Windows or macOS.
- **The browser**: This is where you can open websites and search for things.
- **Word processors**: Programs that help you write and type.

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## Using the Keyboard to Write

The keyboard is an important piece of hardware! We can use it to type letters, numbers, and words. Let's practice writing simple sentences with the keyboard.

**Keyboard Practice:**

- Find the letters on the keyboard to spell: **cat**
- Type a simple sentence: **The cat is big.**
- Try another sentence: **I like dogs.**
- Practice typing: **My name is (blank).**

When you type sentences, you're using hardware (the keyboard) and software (the typing program) working together!

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## Critical Thinking Questions:

1. What do you think would happen if you didn't have any software in your computer? Would it be able to do anything?
2. If you touch something on a computer, like a keyboard or a mouse, what part of the computer is it: hardware or software?
3. Can you think of an example where software makes hardware do something cool, like a game making the characters move?

## Sentence Stems

These sentence starters help us talk about hardware and software:

1. **"Hardware is (blank) because I can (blank)."**
2. **"Software helps the computer (blank) by (blank)."**
3. **"The difference between hardware and software is (blank)."**

## Questions (5)

### 1. What is hardware?

MULTIPLE CHOICE

Choose the correct answer:

- A. The instructions that tell a computer what to do
- B. The parts of a computer you can touch
- C. The programs that run on a computer
- D. A type of game you can play

## 2. What does software do?

MULTIPLE CHOICE

Choose the correct answer:

- A. It is a part of the computer you can touch
- B. It tells the computer what to do
- C. It is a type of food for computers
- D. It is used to play music on the computer

## 3. Which one of these is an example of hardware?

MULTIPLE CHOICE

Choose the correct answer:

- A. A web browser
- B. A game you play
- C. A computer screen
- D. A video clip

## 4. Which of these is an example of software

MULTIPLE CHOICE

Choose the correct answer:

- A. Microsoft Word App
- B. Keyboard
- C. Mouse
- D. Monitor

## 5. What do hardware and software need to work together to do?

MULTIPLE CHOICE

Choose the correct answer:

- A. Help you play outside
- B. Clean the computer
- C. Make the screen bright
- D. Make the computer do things like play music or show videos

## Games (3)

### 1. Hardware and Software Categories

Full Screen

Audio

Instructions

Answer Key

Pause

Clear All

Check Order

Attempts: 0

Mouse or touchpad

Windows or macOS

Browser

Keyboard

Apps or games

Monitor (screen)

Hardware

Software

### 2. Software Typing Race

Full Screen

Audio

Instructions

Restart

Pause

0s

100%

s

oftware is instructions

### 3. Hardware Typing Race

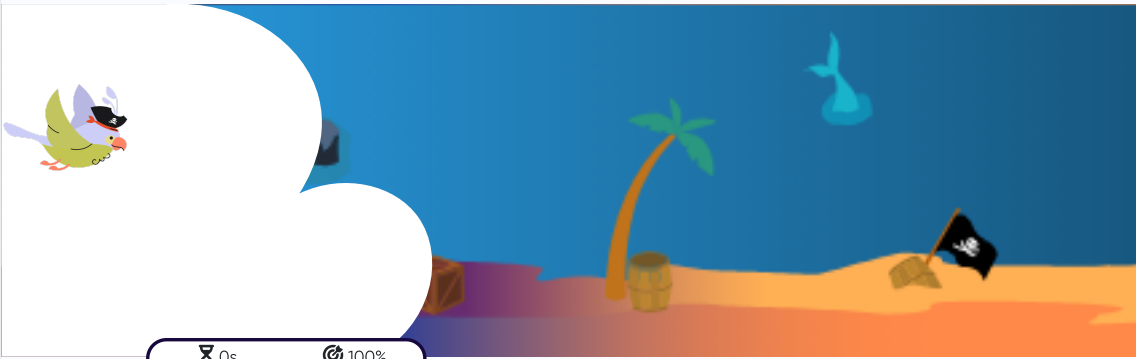
Full Screen

Audio

Instructions

Restart

Pause



0s

100%

monitor is hardware

## Blocks Challenges (5)

### 1. "Hello, I'm a computer"



"Hello, I'm a computer"

Computers can't talk on their own, but software can help them say things!

When the green play button is clicked, make your character introduce itself as a computer.

1 1 1



Submit ↑



### 2. Name that hardware!



Name that hardware!

Program your character to say the names of three hardware parts (like "screen, mouse, keyboard").

1 3 1



Submit ↑



### 3. Software Star

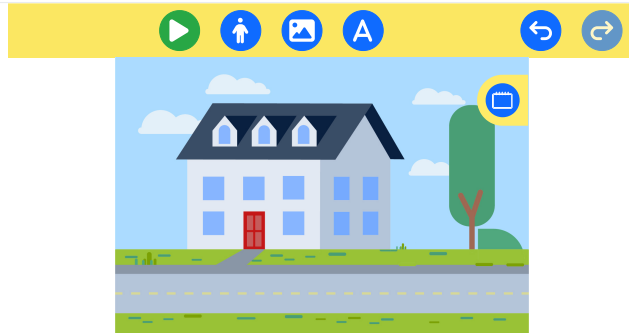


#### Software Star

Did you know? Games, music apps, and video players are all types of software!

Make your character say the name of a software they use (like "drawing app!") and do at least 5 motions afterward (like walking or spins or jumps).

1 5 1 1



Submit ↑



### 4. Messy Room!

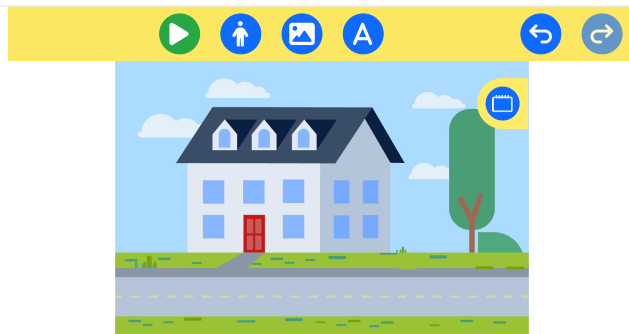


#### Messy Room!

Oh no... the dog got into the room! For this scene, pick the room background and the dog sprite.

Have the dog hop and run all over the room, barking with excitement!

1 10 4 1



Submit ↑





## 5. Favorite Animal Moves



### Favorite Animal Moves

Kangaroos are amazing jumpers—they can leap really far and high! They can jump over 10 feet high in a single hop! Can your character move like a kangaroo or another animal you love? Choose an animal sprite and make your sprite move.

Motion block challenge: How can you use motion blocks to make it jump? Try it!

1 8 1

Submit ↑



## Answer Keys & Solutions

### Questions

#### 1. What is hardware?

MULTIPLE CHOICE

Correct Answer:

- A. The instructions that tell a computer what to do ✗ Incorrect
- B. The parts of a computer you can touch ✓ Correct
- C. The programs that run on a computer ✗ Incorrect
- D. A type of game you can play ✗ Incorrect

#### Explanation:

Hardware is something you can touch, like the screen or keyboard.

#### 2. What does software do?

MULTIPLE CHOICE

Correct Answer:

- A. It is a part of the computer you can touch ✗ Incorrect
- B. It tells the computer what to do ✓ Correct
- C. It is a type of food for computers ✗ Incorrect
- D. It is used to play music on the computer ✗ Incorrect

#### Explanation:

Software tells the computer how to do things like play games.

#### 3. Which one of these is an example of hardware?

MULTIPLE CHOICE

Correct Answer:

- A. A web browser ✗ Incorrect

B. A game you play

✗ Incorrect

C. A computer screen

✓ Correct

D. A video clip

✗ Incorrect

**Explanation:**

Hardware is something you can touch.

#### 4. Which of these is an example of software

MULTIPLE CHOICE

**Correct Answer:**

A. Microsoft Word App

✓ Correct

B. Keyboard

✗ Incorrect

C. Mouse

✗ Incorrect

D. Monitor

✗ Incorrect

**Explanation:**

Software is the instructions telling the computer what to do.

#### 5. What do hardware and software need to work together to do?

MULTIPLE CHOICE

**Correct Answer:**

A. Help you play outside

✗ Incorrect

B. Clean the computer

✗ Incorrect

C. Make the screen bright

✗ Incorrect

D. Make the computer do things like play music or show videos

✓ Correct

**Explanation:**

Both hardware and software work together to make the computer do things like show pictures.

### 1. Hardware and Software Categories

#### Category Solutions:

#### Category 1: Hardware

- Mouse or touchpad
- Keyboard
- Monitor (screen)

#### Category 2: Software

- Browser
- Windows or macOS
- Apps or games

#### Scoring:

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

*Students must sort items into their correct categories.*

### 2. Software Typing Race

*Typing game - no answer key needed. Students practice typing the provided content.*

### 3. Hardware Typing Race

*Typing game - no answer key needed. Students practice typing the provided content.*