

Computer Devices

Textbook

Computer Devices



Introduction

Every day, we use many cool tools that help us with tasks and make things easier. Some of these tools are actually **computers**, even if they don't look like the big ones you see at school. From the phone in your pocket to the TV in your living room, computers are working to help us do things like learn, play, and connect to other devices.

Let's look at some of these amazing devices and see how they work together!

What is a Computer?

So, what exactly is a computer? How do we know if something is a computer? With many everyday items becoming smarter, it can be tricky to tell! Let's look at some ways to know.

A computer is a machine that helps us do many things. It can:

- **Hold Information:** It remembers things like pictures, videos, and words.
- **Help Us Get Info:** We can use it to find facts, play games that teach us things, and do school work.

- **Connect Things:** It helps devices send messages to each other.

Computers take what you tell them to do (your **inputs**), follow the steps, and show you what you want (the **output**).

Computer Devices

Think about all the different kinds of computers you use. Here are some types of computer devices:

- Laptops
- Tablets
- Phones
- TVs
- Smart Watches

All of these, and more, are examples of computers. Computers are machines that quickly work with information. Because these devices are powerful and connect to many other devices, it's good to know how they work and how to use them for different tasks.

Connecting with Our Devices

One important way we use computers every day is to send information to other devices. Even though they look different, many computer devices help us send messages and data!

- **Phones and Tablets** are like small, portable tools for sending and receiving messages. We often use them for quick text messages, making calls to talk directly, and even video calls to see things. They are also good for sending pictures and videos or using group messaging apps.
- **Laptops** let us send longer emails, join online video meetings for school, and use instant messaging apps. Because they have bigger screens and keyboards, they are often used for more detailed tasks.
- Even your **Smart Watch** helps by showing quick messages or call alerts right on your wrist, so you don't miss important information.
- And **Smart TVs** can also connect! Some have cameras for video calls, letting you see people on a big screen, or can show information from other apps.

From a quick message to a video stream across the world, different computer devices work together to send information every day, making it easier for us to share and receive data.

When Devices Get "Smart": Artificial Intelligence

Beyond just connecting us, many of our computer devices are getting super "smart" because of something called **Artificial Intelligence**, or **AI**. AI is like giving a computer a brain that can learn and solve problems, almost like people do! It helps our devices understand what we want and even make guesses about what we might like.

You might be using AI every day without even knowing it!

- **Voice Assistants:** When you talk to your phone (like saying "Hey Google" or "Siri") or a smart speaker, AI is listening and trying to understand your words to answer questions or play your favorite song.
- **Smart Suggestions:** Has your TV ever suggested a show or movie you might like based on what you've watched before? That's AI at work, learning what you prefer! Music apps also use AI to suggest new songs.

- **Face Unlock:** Many phones use AI to know your face to unlock the screen, making it fast and safe.
- **Navigation:** When a map app on your phone helps you find the fastest way to get somewhere, AI helps it figure out traffic and roads in real-time.

AI makes our devices more helpful, gives us personalized outputs, and can even seem like magic! It's a big part of how computers are always finding new ways to help us and make tasks easier.

Critical Thinking Questions

1. How do you think using computers, like tablets or phones, can make learning or playing more interesting for you?
2. If you could invent a new computer device, what would it do, and how would it help people with their daily tasks?

Questions (5)

1. True or False: Computers are machines that quickly process and work with information.

MULTIPLE CHOICE

Choose the correct answer:

- A. True
- B. False

2. Select the 2 computer devices.

SELECT MULTIPLE

Select all that apply:

- A. Laptop
- B. Candle
- C. Smartphone
- D. Clock

3. True or False: A computer takes your commands/input, follows the instructions, and shows the output you want!

MULTIPLE CHOICE

Choose the correct answer:

- A. True
- B. False

4. Which of the following is an example of what a laptop can do?

MULTIPLE CHOICE

Choose the correct answer:

- A. Make phone calls
- B. Write documents and browse the internet
- C. Take pictures

5. What is an example of what a smartphone can do?

MULTIPLE CHOICE


Choose the correct answer:

- A. Print documents
- B. Play video games with a controller
- C. Listen to music, make calls, and send messages

Games (3)

1. Computer Devices Typing Game

Full Screen Audio Instructions Restart Pause



0s 100%

Computers take your com

2. Computer Devices Category Game

Full Screen

Audio

Instructions

Answer Key

Pause

Clear All

Check Order

Attempts: 0

Tablet

Pen

Toaster

Laptop

Smart Phone




Book

Smart Watch

Lightbulb

A Computer Device

Not A Computer Device



3. Computer Devices Memory Game

Full Screen

Audio


Instructions

Answer Key


Pause

Flips: 0


1




2




3




4




5




6






7



8





Blocks Pro Challenges (1)

1. Computer Devices

Computer Devices

Create a presentation about computer devices.

Draw each of these devices using the drawing tool - a laptop, tv, and cell phone. Each device should be its own sprite.

Program each device to name what it is and explain what it is used for. Use the broadcast message blocks so the devices take turns explaining.

Requirements

0/2

3 Looks

5 Event

Blocks must be connected to an Event block in order to pass the requirements

Submit

The image shows the Scratch code editor interface. The 'Code' tab is selected, and the 'Motion' category is chosen from the left sidebar. The code area contains the following blocks:

- move 10 steps
- turn 15 degrees
- turn 15 degrees
- go to random position
- go to x: 0 y: 0
- glide 1 secs to random position
- glide 1 secs to x: 0 y: 0
- point in direction 90
- point towards mouse-pointer
- change x by 10
- set x to 0
- change y by 10
- set y to 0
- if on edge, bounce
- set rotation style left-right

The right sidebar shows the 'Sprite' panel with 'Sprite1' selected. The 'Stage' panel shows 'Backdrops' with '1' selected. The 'x position' checkbox is checked at the bottom left of the code area.

Answer Keys & Solutions

Questions

1. True or False: Computers are machines that quickly process and work with information.

MULTIPLE CHOICE

Correct Answer:

A. True ✓ Correct

B. False ✗ Incorrect

Explanation:

Laptops, smart phones, and smart watches are all examples of computers.

2. Select the 2 computer devices.

SELECT MULTIPLE

Correct Answers:

A. Laptop ✓ Correct

B. Candle ✗ Incorrect

C. Smartphone ✓ Correct

D. Clock ✗ Incorrect

Explanation:

A clock and candle do not have the ability to process information.

3. True or False: A computer takes your commands/input, follows the instructions, and shows the output you want!

MULTIPLE CHOICE

Correct Answer:

A. True ✓ Correct

B. False

✗ Incorrect

4. Which of the following is an example of what a laptop can do?

MULTIPLE CHOICE

Correct Answer:

A. Make phone calls

✗ Incorrect

B. Write documents and browse the internet

✓ Correct

C. Take pictures

✗ Incorrect

Explanation:

Think about the tasks you can typically perform on a laptop.

5. What is an example of what a smartphone can do?

MULTIPLE CHOICE

Correct Answer:

A. Print documents

✗ Incorrect

B. Play video games with a controller

✗ Incorrect

C. Listen to music, make calls, and send messages

✓ Correct

Explanation:

Consider the various functions and capabilities of a smartphone.

Games

1. Computer Devices Typing Game

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

2. Computer Devices Category Game

Category Solutions:

Category 1: A Computer Device

- Tablet

- Laptop
- Smart Phone
- Smart Watch

Category 2: Not A Computer Device

- Toaster
- Pen
- Lightbulb
- Book

Scoring:

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

Students must sort items into their correct categories.

3. Computer Devices Memory Game

Memory Game Pairs:

1.  iphone ↔  iphone
2.  laptop ↔  laptop
3.  tablet ↔  tablet
4.  desktop computer ↔  desktop computer

Students must find all matching pairs by flipping cards and remembering their positions.