



Problem Solving and Computing

Lesson 5

Input and Output

Teacher Resources

For Teachers!

Lesson Overview

This lesson introduces focuses on two of the features identified in the previous lesson, input and output, that can help classify devices as a computer and has students identify different methods of input or output in common apps. In this lesson, students consider how computers get and give information to the user through inputs and outputs. Students first consider what information they would need to solve a "thinking problem", then use that information to produce a recommendation. They then identify the inputs and outputs of that process. Afterward, students consider an app that engages in the same process and determine how that app inputs and outputs information. Last, they consider other types of inputs and outputs that computers can use to help solve problems.

More guidance and resources for this lesson are available in the **Lesson Plan:**

- <https://studio.code.org/s/csd1-2023/lessons/5>

Warm Up



Prompt:

Imagine that you are going to recommend a pet to someone

What are three questions you would ask them to help make that recommendation?

Prompt:

Take turns asking your questions and making a recommendation to your partner

Key Vocabulary:

Input - the information computers get from users, devices, or other computers

Output - the information computers give to users, devices, or other computers

Question of the Day

How do computers use input and output to get and give the information that they need to solve problems?

Activity



Pet Chooser App

Try playing this pet chooser app a few times.

- What are the inputs?
- What are the outputs?



The image shows a screenshot of a mobile application interface. It has a light green background. At the top, the text "How cute should the pet be?" is displayed in a bold, black, sans-serif font. Below this text, there are two purple rectangular buttons with rounded corners. The top button contains the text "Very Cute" in white, bold, sans-serif font. The bottom button contains the text "Medium Cute" in white, bold, sans-serif font.

Story Creator App

Try out this app that writes a custom story for you.

- What are its inputs?
- What are its outputs?

**Fill in the blanks to
create a custom story!**

Name

Color

Food

Emotion

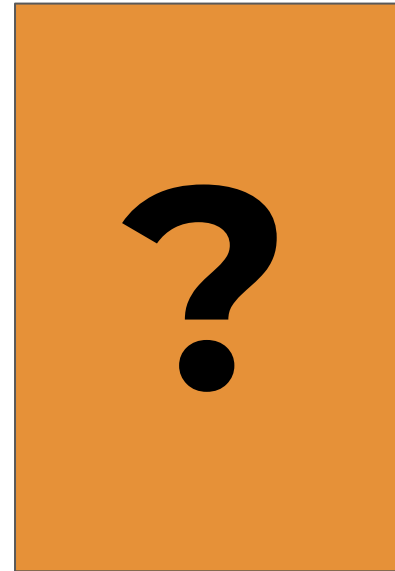
City

**Make a
Sci-Fi
Story!** **Make a
Western
Story!**

Your App Idea

With your partner, think of a new app idea.

- What does the app do?
- What inputs and outputs does it need?



Other Sources of Input

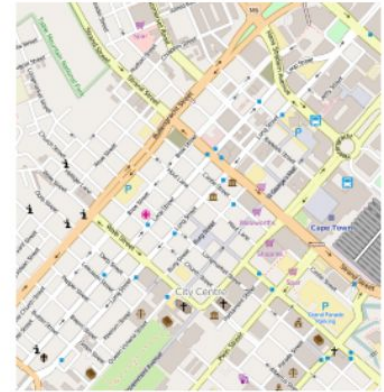
So far, all of the input that we have seen comes directly from the user.

Is there any other way that apps can get the information that they need?

Improved Pet Chooser App

This new version of the pet chooser app also tells you where you can find a pet.

- What are the new inputs?
- What are the sources of the new inputs?



Closest pet shop:

Downtown Pets and More

1584 Maple St

Open Now!

Wrap Up





Prompt:

Brainstorm an everyday activity you or people you know do with an app or computer

- What is the input used for that activity?
- What is the output?



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Question of the Day

How do computers use input and output to get and give the information that they need to solve problems?