

Lesson 16: Keyboard Input

45 minutes

Overview

One common way conditionals are used is to check for different types of user input, especially key presses. Following the introduction to booleans and *if* statements in the previous lesson, students are introduced to a new block called **keyDown()** which returns a boolean and can be used in conditionals statements to move sprites around the screen. By the end of this lesson, students will have written programs that take keyboard input from the user to control sprites on the screen.

Question of the Day: How can our programs react to user input?

Standards

Full Course Alignment

CSTA K-12 Computer Science Standards (2017)

- ▶ AP - Algorithms & Programming

Agenda

Warm Up (5 minutes)

Taking Input

Activity (35 minutes)

Keyboard Input

Wrap Up (5 minutes)

Adding Conditionals

Objectives

Students will be able to:

- Move sprites in response to keyboard input
- Use conditionals to react to keyboard input

Preparation

- Check the "**Teacher's Lounge**" forum for verified teachers to find additional strategies or resources shared by fellow teachers
- If you are teaching virtually, consider checking our **Virtual Lesson Modifications**

Links

Heads Up! Please make a copy of any documents you plan to share with students.

For the teachers

- **Keyboard Input** - Slides

▼ Make a Copy

Introduced Code

- `keyDown(code)`

Teaching Guide

Warm Up (5 minutes)

Taking Input

Discuss: So far all of the programs you've written run without any input from the user. How might adding user interaction make your programs more useful, effective, or entertaining? How might a user provide input into your program?

Discussion Goal: The goal here isn't to get into the technical specifics of how programs can take input (students will get to that in the online portion of the lesson), but rather to get students thinking about how user input could change the programs they've made. Encourage students to think back to Unit 1 and the various computer inputs and outputs they explored then. Which inputs would be most useful for the types of programs they've been making?

Question of the Day: How can our programs react to user input?

Activity (35 minutes)

Keyboard Input

Transition: Send students to Code Studio

💡 Teaching Tip ▲

Guide to Programming Levels: Additional guidance for programming levels is provided in the [CSD Guide to Programming Levels](#). This document includes strategies and best-practices for facilitating programming levels with students.



1

Prediction



2-4

Skill Building

2

3

4



5

Practice



6



Assessment



Assessment Opportunity ▲

Formative Assessment: This level can be used as a formative assessment. A rubric is provided in the level, and written feedback can be given to students. [Click here to learn more about giving feedback to students.](#)



Challenges

Wrap Up (5 minutes)

Adding Conditionals

Question of the Day: How can our programs react to user input?

Journal: Think back to all of the programs you've written so far; how might you use user interaction to improve one of your programs from past lessons? What condition would you check, and how would you respond to it?



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