Overview
CS Hands-On is a 501(c)(3) nonprofit teaching computational thinking skills through technology-free lessons and activities. This curriculum is built to teach fundamental computer science concepts in an engaging, hands-on way. In this mission, students use functions to create a 1 minute stage performance.

Prerequisite Knowledge
There are no prerequisites to this lesson.

Lesson Details
At Abstractopia, students will learn to remove unnecessary details using abstraction with Alon. Students will learn about functions and use functions to create a 1 minute stage performance.

This lesson was developed for students ages 6 to 13, and can be modified for students of all skills and ages. This lesson takes around 30 minutes.

Learning Objectives

Key Question
How can we use functions to create a 1 minute stage performance?

Key Terms
Function: A set of actions that accomplish a specific task

Curriculum Standards
Students should be able to...

- Title and create a function (Abstraction)
- Read, write, and interpret functions (Literacy)
- Act out the process of a function (Creative Arts)

View standards addressed here
Lesson Plan

Materials

- Put on a Show worksheet (per student)

Setup

- Hand out a Put on a Show worksheet to each student
- Set up your classroom to have space for students to perform their functions

Educator Note

At Alon’s Deli, Alon has a function for creating his famous PB&J sandwich. When else can we use functions in our everyday life? Examples can include instructions for baking cookies, doing a cartwheel, or washing the dishes.
Lights, Camera, Action!

Join Alon and his friends to create a performance for comedy, drama, anything you'd like!

Create your function with all of the steps you would take to put on a one-minute production (You will be performing this later!) Here are some of Alon's fan-favorite ideas to help you get started:

- Sing a song
- Play a tune
- Crack a joke
- Take a bow
- Dance to music

Tell a Knock Knock Joke

1. Say 'Knock Knock'
2. Wait for person to say 'Who's there?'
3. Say 'Tank'
4. Wait for person to say 'Tank who?'
5. Say 'You're welcome!'
6. 
7. 
8. 
9. 
10. 

And the curtain opens ... Perform your 1-minute production!

Educator Note

When creating functions, make sure that every step is descriptive. By doing this, we can avoid confusion and misinterpretation in our instruction.
Wrap up & reflect

Group students into pairs and have them discuss the following reflection questions. Afterwards, have students share their ideas as a class.

• What is the importance of functions?
  • Functions help us organize steps or instructions to be in one place
  • Functions come in handy when we need to reuse or reference those instructions, as they are already written and defined