



# Minds in Motion

## CodeMoji

### Activity Rundown:

You probably use at least a couple dozen emojis every single day! Our phones, including the emojis themselves, are full of code. Have you ever been curious about some of the code that goes into your emojis, bitmojis or animojis? In this activity, we are going to show you how to code your own emoji!

### You will need:

- + Computer, laptop, or tablet, or phone

### Let's do it!

- 1) The first item on our to do list to go to the website <https://www.codemoji.com/>
- 2) This is where we will begin to code our emoji!
- 3) Click the button that says **"Go Play"** and then **"Workshop"** on the right hand side.
- 4) You will see the layout and all the different options you have to code your emoji.
- 5) Before we can code our emoji it is best that we learn a little bit of background knowledge about coding. Check out the **"Background"** section of this activity to learn some important computer science definitions!
- 6) These are all key terms that can be found in coding. Now lets begin!
- 7) You can start by choosing your emoji or character in the **"Character"** tab.
- 8) This leaves us with two other tabs in this section including **"Action"** and **"Sound"**.
- 9) Explore these two tabs and begin to apply them to your emoji through dragging and dropping the pieces of code in the **"Sequence"** tab.
- 10) Once you are ready to compile your code and see what your emoji can do click **"Run"**.
- 11) Did your emoji do exactly what you wanted it to do? If not, this is a good time to go back and debug your code!





## Background

### **Algorithm**

A list of steps to finish a task. A set of instructions that can be performed with or without a computer. For example, the collection of steps to make a peanut butter and jelly sandwich is an algorithm.

### **Block-based programming language**

Any programming language that lets users create programs by manipulating “blocks” or graphical programming elements, rather than writing code using text. Examples include: Code Studio, Scratch, Blockly, and Swift.

### **Bug**

An error in a program that prevents the program from running as expected.

### **Call (a function)**

This is the piece of code that you add to a program to indicate that the program should run the code inside a function at a certain time.

### **Code (a program)**

One or more commands or algorithm(s) designed to be carried out by a computer.

### **Command**

An instruction for the computer. Many commands put together make up algorithms and computer programs.

### **Computer science**

Using the power of computers to solve problems.

### **Data**

Information. Often, quantities, characters, or symbols that are the inputs and outputs of computer programs.

### **Debugging**

Finding and fixing errors in programs.

### **Decompose**

Break a problem down into smaller pieces.

### **Define (a function)**

To add code inside a function so that the program knows what it is supposed to do when the function is called.



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## Function

A piece of code that you can easily call over and over again. Functions are sometimes called 'procedures.'

## Function call

The piece of code that you add to a program to indicate that the program should run the code inside a function at a certain time.

## Function definition

The code inside a function that instructs the program on what to do when the function is called.

## Loop

The action of doing something over and over again.

## Programming

The art of creating a program.

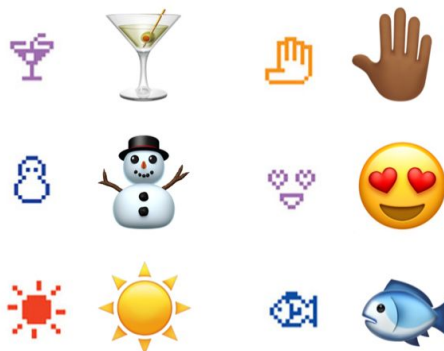
## Run program

Cause the computer to execute the commands you've written in your program.

## Variable

A placeholder for a piece of information that can change.

**Emoji fun fact:** In 1999, the Japanese designer Shigetaka Kurita created the first collection of cell phone emoji! Below is an image showing his emojis compared to the ones we most commonly use today:





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## Resources:

<https://www.madewithcode.com/projects/emojify>

<https://info.jkcp.com/blog/basic-coding-terminology>

<https://hackernoon.com/how-will-coding-be-relevant-in-the-future-74594c2b015f>

<https://www.youtube.com/watch?v=cKhVupvyhKk>

## Reach out!

We would love to hear from you about all the amazing STEM projects you are doing at home! Show us your finished products on any of the following social media platforms by tagging us or by using the following hashtags. We hope these projects have brought some excitement to your day during these difficult times.

Let us know how we did! Please [click here](#) to fill out a short survey on how well we did and what you would like to see more of in the future. Thank you!

Twitter: **@MyMindsInMotion**

Facebook: **@mindsinmotion2014 & @ucactiveliving**

Instagram: **@ucalgaryactive**

Please use the following hashtags!

**#ucalgarycamps #ucalgarytogether**