Create a Filter

**Big Idea:** You are a programmer!

**About the Activity**
Create a cool filter for a video by using JavaScript functions.

Learn the syntax of calling a function, and how to change its arguments to get different effects.

**Time: 45-60 minutes**
- 10 minutes background
- 20-35 minutes coding
- 10 minutes sharing
- 5 minutes reflection
- (10-20 minutes extended reflection)

**Background**

**The basics of JavaScript**

JavaScript is a programming language. Since computers don't speak human languages like English or Spanish, we use programming languages to talk to them. JavaScript is the programming language that we can use to talk directly to web pages.

**Functions** are the main way of getting things done in JavaScript. A function is an action that has a name. Functions are written with parentheses.

```javascript
blur(50);
```

Some functions need one or more **arguments** inside the parentheses. This tells the function extra information about what to do.

```javascript
tint("blue", 50);
```

The tint function takes two **arguments**: a color and an amount. The order matters!

Teacher Reference: [More on Functions](#)
Code Challenge

If you feel you have a long enough class, have students film a 3-second video of them being themselves. If not, use one of the videos provided. They will use code to perfect a filter that reflects their uniqueness.

Have students follow the "Create a Filter" tutorial. They should read the instructions on the left and carry them out. When they've followed all the instructions on one panel, they will click the button to advance to the next part.

Circulate throughout the room to troubleshoot and keep students moving through the instructions.

Sample Solution

Sharing:

Class:

Publish all the projects to the public Vidcode Gallery. Look at them all together. Whose stands out? Whose looks like yours?

Stand up and go talk to someone whose filter is similar to yours. Now go talk to someone whose filter is different.

Talk about why you chose those filters and what they say about your personality.

Imagine a world in which everyone made the same choices. Would that world be interesting? Diversity makes the world better!

Partner:

Share your project with a partner. How are your projects similar? How are they different? Identify some of the different choices you made and point out where the difference are in your JavaScript.

Reflection:

- Who’s a programmer? You are!
- What is a function? (An action that has a name.)
- What is an argument? (More information about what or how much the function should do.)
- Does the order of the arguments matter? (Yes!)

Extended Reflection:

Discuss the following questions with you class and write your thoughts in your journal:
• Does code look like you expected? Is it easy, hard, straightforward, confusing?
• How does it feel to create your own filter vs. using one someone else made?
• How could knowing JavaScript change how you use the internet (for example, creating vs. consuming)?