

Computational Thinking

Programming Fundamentals with JavaScript

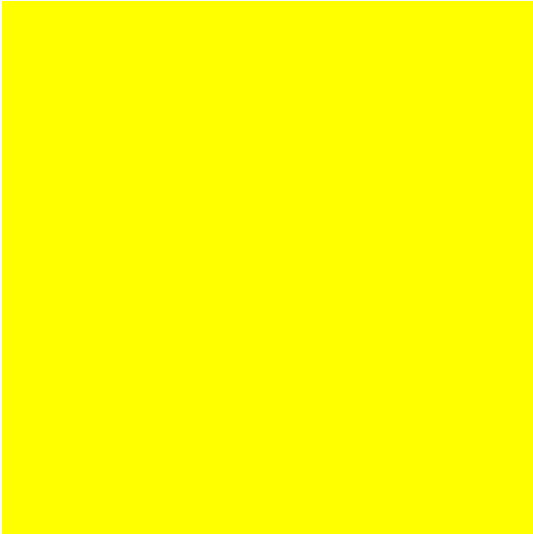
▶	Variables	9 min
▶	Methods	7 min
▶	Functions	5 min
▶	Types	4 min
▶	DukeLearnToProgram Environment	10 min
📄	Try It! Using Variables, Methods and Functions	30 min
▶	For Loops	6 min
📄	Try It! Using For Loops	30 min
▶	Conditional Execution	7 min
📄	Programming Exercise: Modifying Images	1h 30m
★	Practice Quiz: Modifying Images with JavaScript	8 questions

Implementing the Green Screen Algorithm

Review

A PDF copy of all of this module's Try It exercises for JavaScript can be found in the **Resources** tab. Also be sure to refer to the JavaScript documentation we provide for this course (<http://www.dukelearntoprogram.com/course1/doc/>), also linked in the **Resources** tab.

Make a yellow square that is 200 pixels wide and 200 pixels high, like this:



Think through the steps you will need to do to solve this problem. You will need to:

1. Create a new image, specifying that the new image is 200 pixels wide and 200 pixels high.
2. Then, for each pixel in that image:
 - Make the pixel yellow.

You can use the following line of code to create an image that is 2 pixels wide and 2 pixels high. This image will be all black. How would you create an image that is 200 pixels wide and 200 pixels high? Try it and see if you were correct!

```
1 var img = new SimpleImage(2,2);
2 print(img);
```

Once you have made the image, for each pixel you will need to change its color to yellow. What does it mean to make a pixel yellow? Remember that yellow pixels have a red value of 255, a green value of 255, and a blue value of 0.

Need help? If you are struggling writing your for loop, review the **For Loops** video. The method **values** will be critical to writing your loop. Be sure to review the documentation to understand how this method works: <http://www.dukelearntoprogram.com/course1/doc/> (also available from the **Resources** tab).

Extra Challenge!

What if you wanted to make your image magenta instead of yellow? Magenta has a red value of 255, a green value of 0, and a blue value of 255. You can experiment with other colors too!

Mark as completed