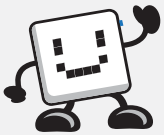


TURNING ON THE LIGHTS

STUDENT SECTION

HELLO, MY NAME IS CODEY AND I AM HERE TO HELP YOU LEARN HOW TO USE YOUR CODE CUBE. I AM SURE YOU WILL HAVE LOTS OF FUN USING YOUR IMAGINATION AND CREATIVITY TO COMPLETE DIFFERENT ACTIVITIES!

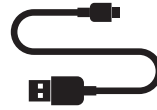


The first thing we will do is learn how to make your Code Cube display an image. Gather the materials listed, and we will get started.

MATERIALS NEEDED



Code Cube



Micro USB cable



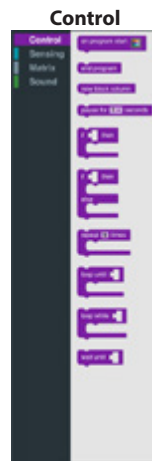
Computer with Code Cube application open

CODING TIME

There are four menu selections available for writing your code: Control, Sensing, Matrix, and Sound. With this lesson, we will use actions from the Control and Matrix menus.

BEFORE YOU BEGIN, MAKE SURE YOUR CODE CUBE IS CONNECTED AND PAIRED WITH YOUR COMPUTER.

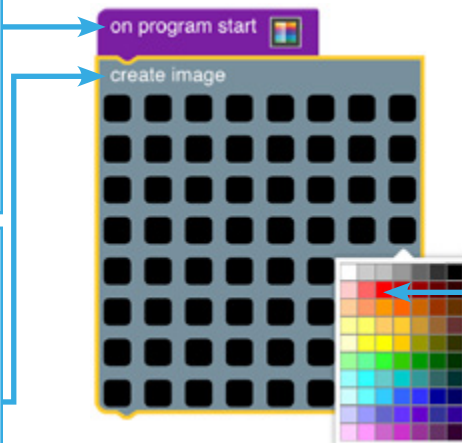
1. OPEN THE CODE CUBE APPLICATION IN A CHROME BROWSER.
2. ATTACH, OR TETHER, THE CODE CUBE TO YOUR COMPUTER WITH THE CABLE.
3. CLICK **CONNECT CUBE** IN THE TOP-LEFT CORNER OF THE APPLICATION AND SELECT YOUR CODE CUBE FROM THE LIST. THEN, CLICK **CONNECT**.



Move the following code blocks into the programming area of your application and arrange them as shown.

On program start tells the Code Cube to run the program when uploaded (**Send Code**). It automatically runs when tethered or, when it is not tethered, when the start button is pressed.

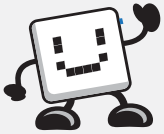
Create image tells the Code Cube what color to display for each pixel. There are 64 pixels on the Code Cube display (eight rows by eight columns). The default is black, but you can change the color of any pixel by clicking on it.



When you click on a pixel, a color palette will pop up. There are 70 different colors to choose from. Choose the color for each pixel to make a great image!

Note: You can use the blank templates on your worksheet to try different designs with colored pencils before transferring them to your program.

CONGRATULATIONS! YOU HAVE JUST FINISHED YOUR FIRST PROGRAM WITH YOUR CODE CUBE. USE THIS CODE TO COMPLETE ANY OF THE FOLLOWING ACTIVITIES. I CAN'T WAIT TO SEE WHAT YOU CREATE! I WILL BE BACK WHEN YOU ARE READY FOR LESSON 2.



Now, recolor your pixels to make the following shape in your program.



To display this image on your Code Cube, click **Send Code** in the upper left of your application. It should automatically appear on the display if it is tethered to your computer.

Note: When you create a code or display, you might want to use it again. Save it by:

1. Clicking **Save Blocks**.
2. Giving it a descriptive name (such as Lesson 1).
3. Choosing the location where you want it saved.

ACTIVITIES



ELA – Create a Character

This is your chance to dream up a character that you would like to meet or maybe never meet. It could be a monster (good or bad), a pet, a person, a superhero, or anything you can think of that would have certain characteristics. Use a program like the one you used in Lesson 1 to create the image and display it on your Code Cube. Write down the characteristics of your character so you can share them with others.

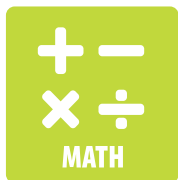
Use a worksheet to sketch your ideas and write your responses.



SEL – How Are You?

How are you feeling right now or today in general? Create an image that communicates how you are feeling. Use a program like the one you used in Lesson 1 to create the image and display it on your Code Cube. Write down things that make you feel like your image so you can share them with others.

Use a worksheet to sketch your ideas and write your responses.



Math – Symmetry

When one half of an image looks like a mirror image of the other half, it is said to have reflectional symmetry. A plus sign and a square have symmetry. There are different kinds of symmetry, but you will create an image that has reflectional symmetry. Use a program like the one you used in Lesson 1 to create the image and display it on your Code Cube. Write down at least three places where you might see an example of your image in your classroom or community.

Use a worksheet to sketch your ideas and write your responses.



Science – Just a Stage

Think about the stages in a life cycle of an animal such as a frog or butterfly. Create an image or icon that represents that stage. Use a program like the one you used in Lesson 1 to create the image and display it on your Code Cube. Write down the stages in the life cycle of the animal that include your image and explain when your image would happen.

Use a worksheet to sketch your ideas and write your responses.