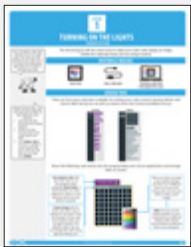
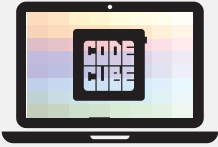


Teacher Tips

In Lesson 1, students learn how to make the Code Cube display an image that they create.

Materials

- Code Cube
- Micro USB cable
- Computer with Code Cube application open
- Lesson 1 student pages

Vocabulary

- Create image
- On program start

"HELLO, MY
NAME IS
CODEY!"



Codey appears on the student lesson pages with tips to help students while they complete their lessons.

Teacher Tips

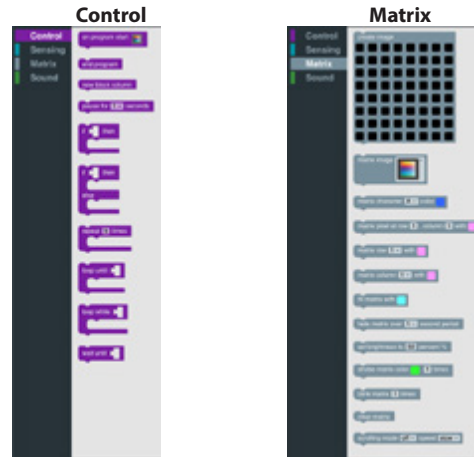
- Students are told how to pair the Code Cube with the computer by following these steps:
 1. Open the Code Cube application in a Chrome browser.
 2. Attach, or tether, the Code Cube to your computer with the cable.
 3. Click **Connect Cube** in the top-left corner of the application and select your Code Cube from the list. Then, click **Connect**.

- You might want to designate a place for students to save their programs where you can have access to all of them if you want to test them yourself (such as on a server or in the cloud).

- Students are told how to save their program by following these steps:
 1. Click **Save Blocks**.
 2. Give it a descriptive name (such as Lesson 1).
 3. Choose the location where you want it saved.

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.



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.

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.

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.

Teacher Tips



- It might be helpful to have worksheet pages available for students to use while completing the activities.

ACTIVITIES

**ELA – Create a Character**

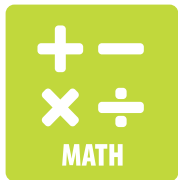
This is your chance to dream up a character that you would like to meet or maybe never meet. It could be a monster (good or bad), a pet, a person, a superhero, or anything you can think of that would have certain characteristics. Use a program like the one you used in Lesson 1 to create the image and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

