MAKEY MAKEY 3-5 BLOCK CODING

OVERALL TIME *One or two 50- to 60-minute lesson(s)*

GROUPS *Four to five kids per computer. Depending on the grade level and time available, consider having the groups already formed.*

> **Next Generation Science Standards**
>
> **3-5 ETS1-1**
>
> *Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.*

OBJECTIVE

Kids will explore programming using block coding to solve a problem or complete an action.

MATERIALS

- **Electronic device**
- **Coding Journal**
- **Scratch website:** *https://scratch.mit.edu/*

Optional:

- **Scratch Coding Cards (downloadable from website)**

KEY TERMS

Algorithm: a list of steps to complete a task

Program: an algorithm that contains a series of coded instructions to be followed by a computer or other machine

Programming: designing and creating a program

PREPARATION

Take some time to view the tutorials on the website. Then, choose a tutorial for the kids to view. Connect a computer to a projector during the launch. Show the introduction video for the selected tutorial. Prior to the lesson, print a coding journal for each person.

LAUNCH *5 to 10 minutes*

Provide each kid with a coding journal. Give them five minutes to respond to the following questions in their journal:

- *What is your experience with coding?*
- *What would you like to learn about coding?*

Next, have them partner up and share their responses with three other people. Have each person write down one thing their partners shared in the journal. Have music, a timer, or a bell to signal a partner change.

EXPLORATION *35 to 40 minutes*

Review the school's technology expectations with the group. Explain that they will be learning how to code using Scratch.

Introduce the group to the coding tutorials on the Scratch website using the one you have preselected. Provide each kid with a coding journal. Each person then chooses one tutorial to explore from each of the Scratch categories: animation, art, music, games, or stories.

Kids will not have time to view all tutorials during this lesson. In the journal, kids should write down what they learned from the tutorials they viewed. Additionally, they may note any categories they may want to revisit.

CLOSING *10 to 15 minutes*

Have everyone clean up and form a large circle for a coding debrief. Here are some possible discussion starters:

- *Share one thing you learned about coding.*

- *Were there any parts of coding you found challenging?*

- *What is one thing you would like to try?*

ENRICHMENT AND NEXT STEPS

Have kids continue with learning to code using the Scratch tutorials or other programming apps such as Hour of Code or Hopscotch.

Print out extra sets of Scratch task cards to take home.