MAKEY-MAKEY K-2 BLOCK CODING

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

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

> **Next Generation Science Standards**
>
> **K-2 ETS1-1**
>
> *Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.*

OBJECTIVE

Kids will explore programming using block coding.

MATERIALS

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

Optional:

- **Scratch Coding Cards (downloadable from website)**
- **Scratch Jr. and iPads (if available)**

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 to display during the launch. Show the introduction video for the selected tutorial. Prior to the lesson, print a coding journal for each kid. Prepare the following T-Chart to utilize during the launch.

What do you know or think you know about coding?	What do you want to learn about coding?

LAUNCH *5 to 10 minutes*

Ask kids what they know or think they know about coding. Record responses on the left side of the T-Chart. Then, ask what they would like to learn about coding. Record responses on the right side.

EXPLORATION *35 to 40 minutes*

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

Display the preselected coding tutorial. Once done, have groups practice what they have learned on their computers. Have kids sketch or write what they learned in the Coding Journal.

Then, review another tutorial as a large group or have everyone choose one individually. Once done, have them record what they learned in the journal.

CLOSING *10 to 15 minutes*

Have the group clean up and form a large circle. Here are some possible discussion starters:

- *Share one thing learned about coding.*

- *Were there any parts of coding that were challenging?*

- *What would you like to try next?*

ENRICHMENT AND NEXT STEPS

Kids can continue with the Scratch tutorials or use other programming apps such as Hour of Code and Kodable.

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