

Lesson: Counting Money with Makey Makey

Objective: Students will identify and count U.S. coins to make a specific amount given using Makey Makey.

Grade Level: 2nd grade

Subject: Math

Standard: Common Core 2.MD.C.8 - Work with time and Money

Reasoning: My students already love learning about money and I think it would be a great way to intertwine a technology piece with it too.

Learning Goals:

Students identify the different U.S. coins.

Students can count the different U.S. coins to make a specific amount under a \$1

Innovative Technology: Makey makey (and scratch Jr for the game)

Technology and instructional strategies are connected by students having to touch the correct coin (and know its amount) to tell the scratch program to put that coin on the screen, which should match the correct amount that was given.

Students then will get to play with the makey makey technology by essentially playing the game of touching the coins to add up to a specific amount given!

In the second grade curriculum we are using, students need to add up coins and write the correct dollar amount. Using the Makey makey students meet the curriculum goals while playing with technology and problem solving in a meaningful way.

Steps for Students:

1. The alligator clips are already connected to the right coins.
2. On your worksheet, there are specific amounts you have to make using the makey makey

3. By touching the coins in front of you, you need to make an amount that you see on your worksheet on the computer.
4. On the screen, the program will tell you how much money you have made. That dollar amount should match the dollar amount you see on your worksheet.
5. When the amounts match on your computer and worksheet, draw the coins or write the amounts of each coin you used on your worksheet.
6. Clear your screen
7. Repeat these steps until you have finished all 5 of the problems on your worksheet.

Accommodations/Modifications

- Some students might need a reference sheet of the coins and how much they are worth.

Student-to-student engagement - Students can work in given pairs (or alone - depends on their personalized learning preference). Students will go back-and-forth solving the problems/using the tech).

When they are done, they can give each other money amounts or move to another activity.

Student-to-world connection - Money is already a real world lesson so this lesson just enhances it with technology, problem solving, creativity, and collaboration with their peers.

Assessment:

1. They will be turning in their worksheet that they did with Makey Makey.
2. Seesaw activity/problem with making a specific amount using the coins.

Research: Having students touch objects as a physical moment increases motivation. In a study with Makey Makey, the group of students that used Makey Makey for building circuits did better with the content. I would think the same hands on activity style will help with the concept of Money.

Source: Emmanuel, F., & Alexandra, P. (2020). Using makey-makey for teaching electricity to primary school students. A pilot study. *Education and*

Information Technologies, 25(2), 1193-1215.

doi:<http://dx.doi.org.proxy1.cl.msu.edu/10.1007/s10639-019-10013-5>

The next article gives a lot of tips/tricks for using the Makey Makey in general. For example, it suggests using bigger objects for students with fine motor disabilities. If I had a student in my class with that disability, I would use the bigger example coins for that student to use to complete the task. There are many more tips/tricks in the article that are useful too!

Source: Maich, K., Keith, E., Henning, M., & Mallabar, S. (2018). Makey makey as an assistive resource. *Education Canada*, 58(3), 11. Retrieved from

<http://ezproxy.msu.edu.proxy1.cl.msu.edu/login?url=https://search-proquest-com.proxy1.cl.msu.edu/docview/2130271390?accountid=12598>

Potential Scratch/Makey Makey Resources

- [Coding a Scratch Game for Makey Makey - YouTube](#)
- [Scratch Makey Makey Extension](#)
- [Chat Forum on how to make counting game in scratch](#)

