

Critical Making Lesson Plan

Title: Reading Piano

Summary: [summarize the goals, activities, and desired results for the critical making activity]

After children have learned the common necessities for making electricity they will be given a bunch of tools (popsicle sticks, Makey Makey Kit, tin foil, eraser, paper, pencil) on the table with a small group. They will have also been exposed to the Makey Makey Kit before, but not to the idea of making a piano. They have only been able to open the box, explore the materials, and look at the computer program you use with the Makey Makey Kit. They will not be given much instructions except for to explore the materials and try to create electricity. The children will be able to familiarize themselves with the Makey Makey Kit. They will learn how to make a piano with the kit. They will be able to make words and practice reading words while using STEAM skills.

Learning Outcomes: [what do you hope people will learn; what is the abstract idea they will explore; what skills will they practice while exploring the idea]

Students will be able to use a conductor (tin foil) to make electricity.

Students will be able to use popsicle sticks with letters on them to make words.

Students will be able to connect the tin foil and popsicle sticks to create a sound (piano) using the Makey Makey kit.

Students will be able to work together to problem solve and communicate with each other.

Students will be able to make their own anchor charts with their findings from the activity to hang up around the school.

Students will be able to make a closed circuit with the materials provided.

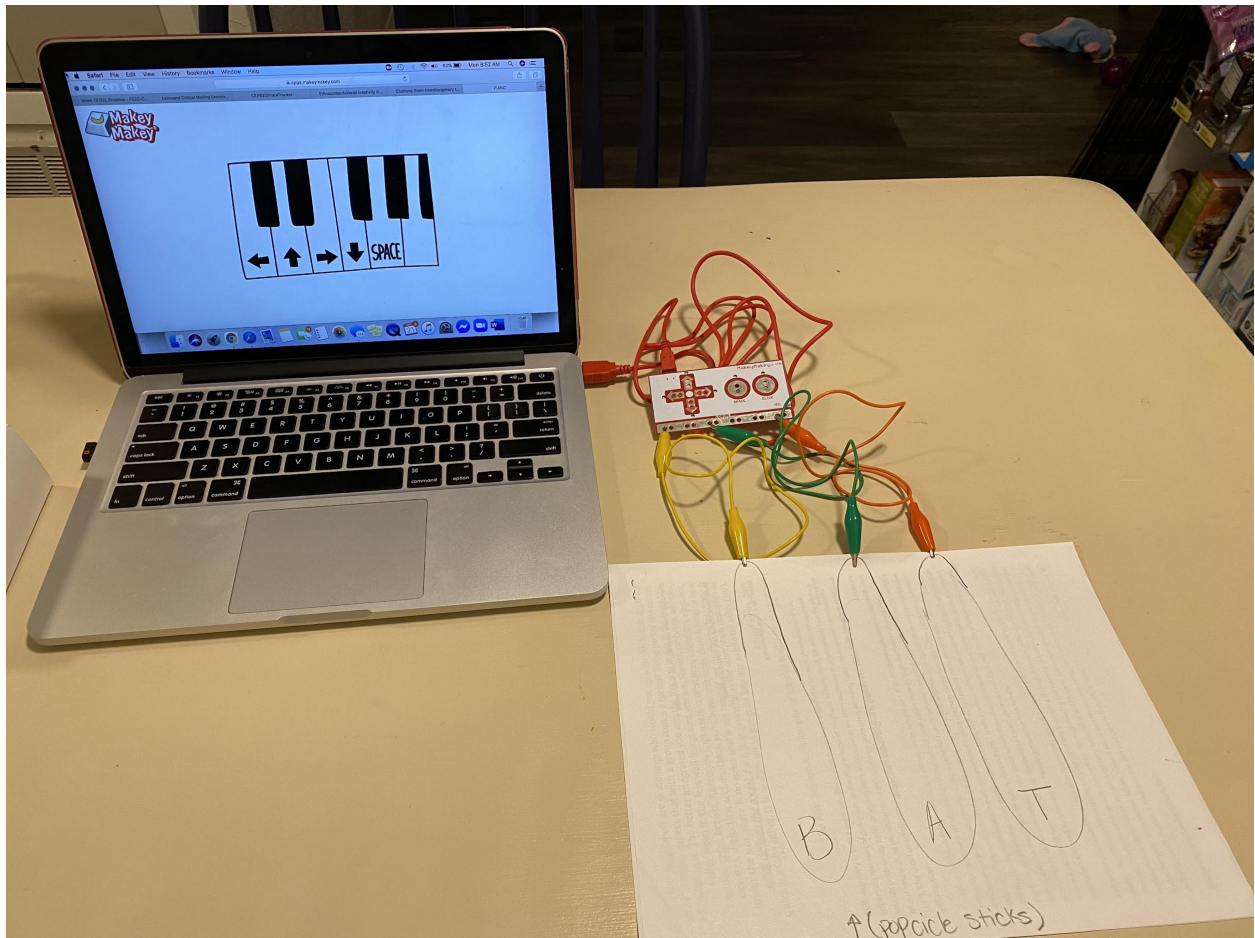
Resources & Materials: [what physical materials and/or digital resources are required to complete the lesson?]

1. 4 sets (one for each group) of popsicle sticks with alphabet letters on each stick.
Multiple sticks with vowels on them for each group.
2. Tin foil, paper, eraser, pencil for each group
3. 4 Makey Makey Kits
4. 4 Laptops
5. Anchor Chart about electricity with facts/ pictures generated from the class from previous lesson
6. Piano website : <https://apps.makeymakey.com/piano/>

Duration: [how long will the lesson last?]

Two Sessions, day one 45 minutes and day two 30 minutes. The first session to explore and create. The second session they will be given a word family group. They will have to make up 5 words in that word family and present them to the class. Then everyone will finger pop the words together as a class while the group presents their words.

Image (photo or drawing) of final deliverable or prototype:]



Lesson Outline

Introduction - 5 minutes

Introduce the activity. Remind children about Makey Makey Kit they explored the previous day. Give them the problem they must solve. How can you make electricity by using only the materials given to you in this box. I want you to create a circuit with these materials, but wait there's more... you must put the popsicle sticks in order to make different words.

Mini-Lesson - 5 minutes

Review the anchor chart about electricity and have children repeat after me or say the findings on their own and the class will repeat after the student speaker. Children will need to remember or look at our class anchor chart for reference that you need a conductor to make electricity.

Guided Practice - Throughout the entire activity

[What will you do to show students what you want them to do in the activity, either demonstrating it yourself or running through the tutorial?]

Children will need to use what they learned from exploring the Makey Makey kit the previous day. I want this to be a student led activity. I am there for support or to give guidance and clues. I am not there to tell them how exactly to make the kit work. This is a new way of teaching that I learned through my time as an undergraduate at Michigan State University. If children need help I will refer them back to the facts about circuits and electricity on the anchor chart. They have all the materials they need and through trial and error they should be able to figure out how to make the piano work.

Activity - [time duration]

[What will students do to create the deliverable?]

Children will work in groups and communicate with each other. They will decide what materials they will need to start with to make a reading piano. They will use the materials on the table and the website listed in the materials list to make a piano. I want them to be able to create different words by using the popsicle sticks with letters on the bottom. They will have to press on each popsicle stick. This will guide them to finger pop each letter sound of the word. Then they will push the sounds together to make a word. This activity combines reading and STEAM together to make a fun activity.

Share-Out - Day Two 30 minutes

[What will student do to make their deliverable public and share it with others?]

Students know how to make a circuit and what they need to use as a conductor and ground. They will get their materials back out and make at least five words in the word family that I give them. Each group will have a different word family. I will be walking around and taking pictures.

Then children will present their words to the class. We will all finger pop the words together as a class and learn about the different word families and their endings. Then each group will make a mini anchor chart of the materials they needed to make the piano and tell why/what made it work. I will print the pictures and we will hang these around the school for others to learn about our project.