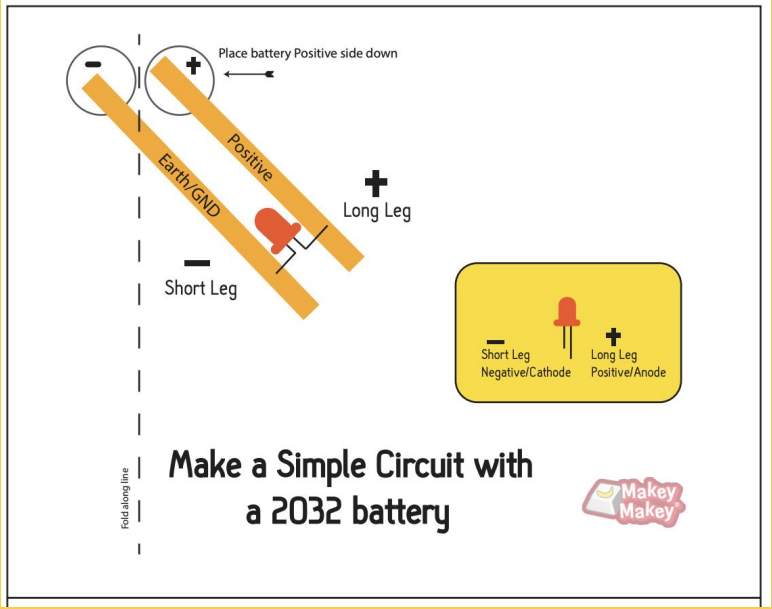
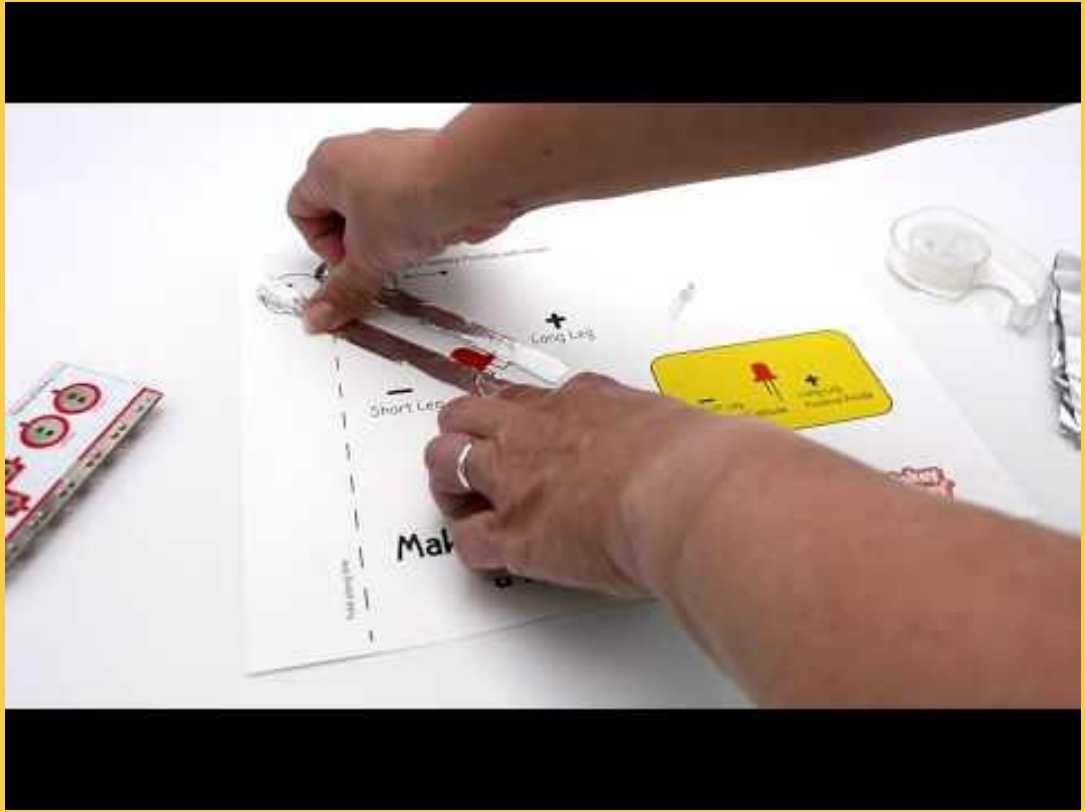
Makey Makey Maker Camp

D2:

What is Conductive?

A Simple Circuit





What is a Maker?

- Tinkerer?
- Maker?
- Engineer?

Source: thatlibrarymediateacher.com

Yesterday's Homework: Tinkering

Add 2 alligator Clips & Tinker

Take pictures and describe what you do in Google docs or slides One person can hold an EARTH wire and another person can hold a KEY PRESS wire and when they fist bump, it will complete the circuit and activate the Makey Makey. Alternatively, if one person holds both wires, the loop will always be closed and the circuit always complete!

Yesterday's Homework: Tinkering

Makey Makey Maker Camp…

Talk about Your Tinkering

- Describe what you did
- Talk about how it felt
- your schedule/when/how long did you tinker?
- What did you like? What was hard?
- Did you fail?

Activity #2: Making a Makey Makey Circuit

The great news is that when you Makey Makey a circuit, you don't have to worry about polarity. you only have to have two conductive items & something that bridges the circuit to make it a closed path!

For example: One person can hold an EARTH wire and another person can hold a KEY PRESS wire and when they fist bump, it will complete the circuit and activate the Makey Makey. Alternatively, if one person holds both wires, the loop will always be closed and the circuit always complete!

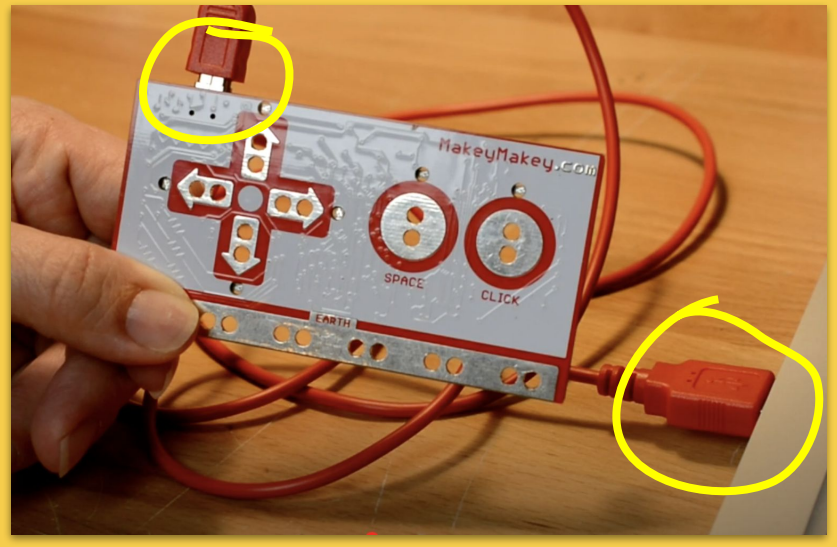
Activity #2 Materials:

- Makey Makey
- Red USB Cable
- Computer with USB Port

Activity #2: Create a Makey Makey Circuit

The great news is that when you Makey Makey a circuit, you don't have to worry about polarity and you only have to have two conductive items and something that bridges that circuit to make the circuit a closed path!

Take out your Makey Makey & the Red USB Connector. Connect the red cable to Your Makey Makey & the USB port on Your computer.



guide for first time Makey Makey

Community Work Time

Try this...

...Demo

It's Kahoot Time!

Scavenger Hunt

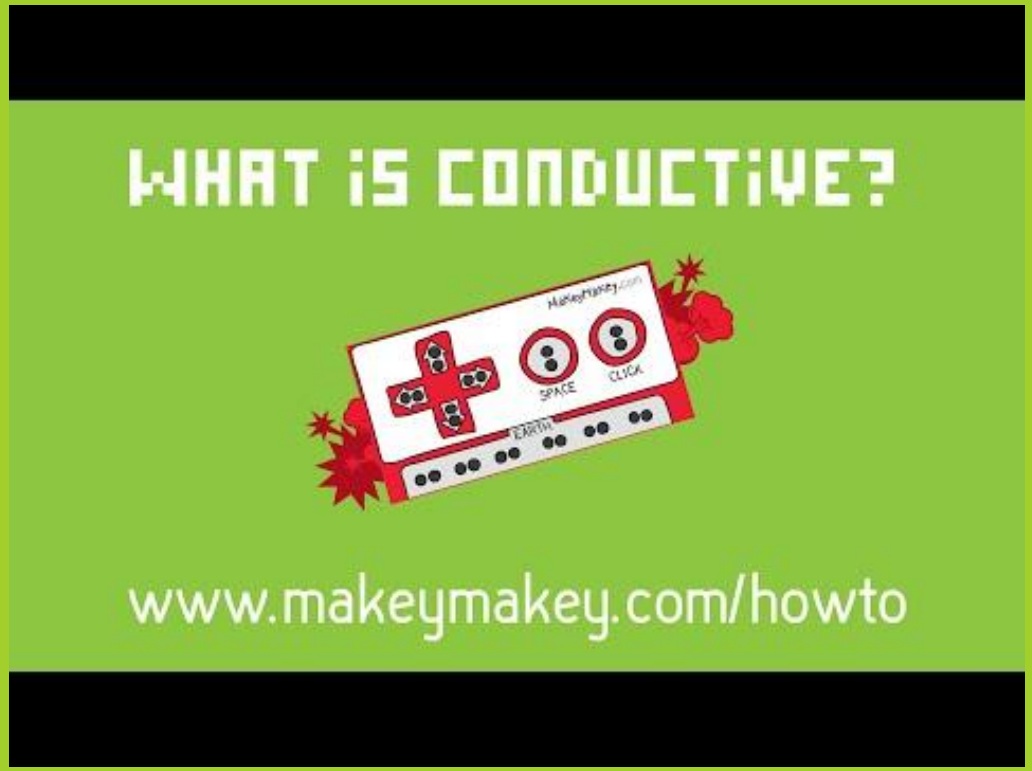
Create your own list
Suggestions, something...

red,
you can eat
you wear
Soggy
that represents your culture

Bouncy
Useful/functional
Metal
Sentimental
Round
squishy

Conductivity Tester Demo

Think about the properties of the materials testing in this video While watching, Make some predictions about what makes things conductive.



(2:12)

What Makes Things Conductive?

Your Makey Makey Kit...

Materials Needed for Day 2

- Makey Makey /Red USB Cable
- Is it Conductive Worksheet
- Foil
- Glue Stick
- 2 alligator clips
- Cardboard
- Scavenger Hunt items
- Ruler or wooden spoon (optional)
- Scissors (optional)

Makey Makey & USB Connector (red)

Dough, Glue Stick, scissors

Foil

2 alligator clips

Cardboard

Ruler/Wooden Spoon

Constraints...

Did you have any constraints?

How did you use your problem solving skills to overcome them?

Create a Testing Station

Did you know everything in this world is either a conductor or an insulator? Today we experiment with all sorts of objects to find out what is conductive so you can start designing your own inventions. Here is a quick example of what your finished experiment will look like.

(1:32)

Community Work Time: Create a Testing Station

Testing Demo:

Playdough and Paper

Test an item by laying it across the conductive tape traces. If it is conductive, the game will tell you! Sometimes, it helps to use a plastic ruler to press down on the item so you don't accidentally set off the conductive radar with your hands! Label the item in your t-chart as you test them!

2:12

It is important to note that electrons are lazy and if they find an easier way to close the loop, you will short your circuit and your LED won't light up! So this means if you are having trouble lighting an LED with this simple circuit template, you should check:

- Does the positive circuit trace come in contact with the negative circuit trace? Make sure to leave a gap under your LED. (If your positive trace goes directly to your negative trace, then the electrons will not be forced THROUGH the LED. you have to keep the two lines separated!
- Do the circuit traces accidentally touch where you've made your battery connections?
- Is your LED wired correctly?

Community Work Time: Experimenting

What Conclusions Can you draw from your material testing?

Is it conductive?

Test items for conductivity. Lay items across the tape tracks to see if they are conductive. List items on the chart below after testing.

Conductive	Non-conductive (Insulator)

Now what?

What conclusions can you draw from your material testing?

Discuss...

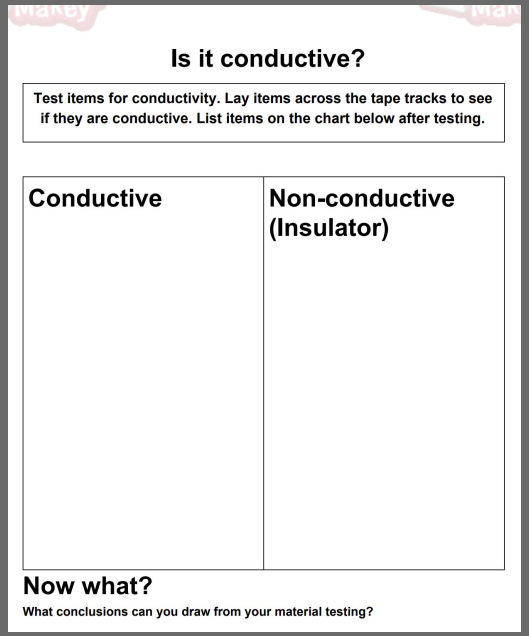
How are the conductive items alike?

What do the insulators have in common?

What makes a conductor different from an insulator?

What items did you not test that you think might be conductive?

Why do you think the alligator clips and alligator heads are covered in plastic?



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