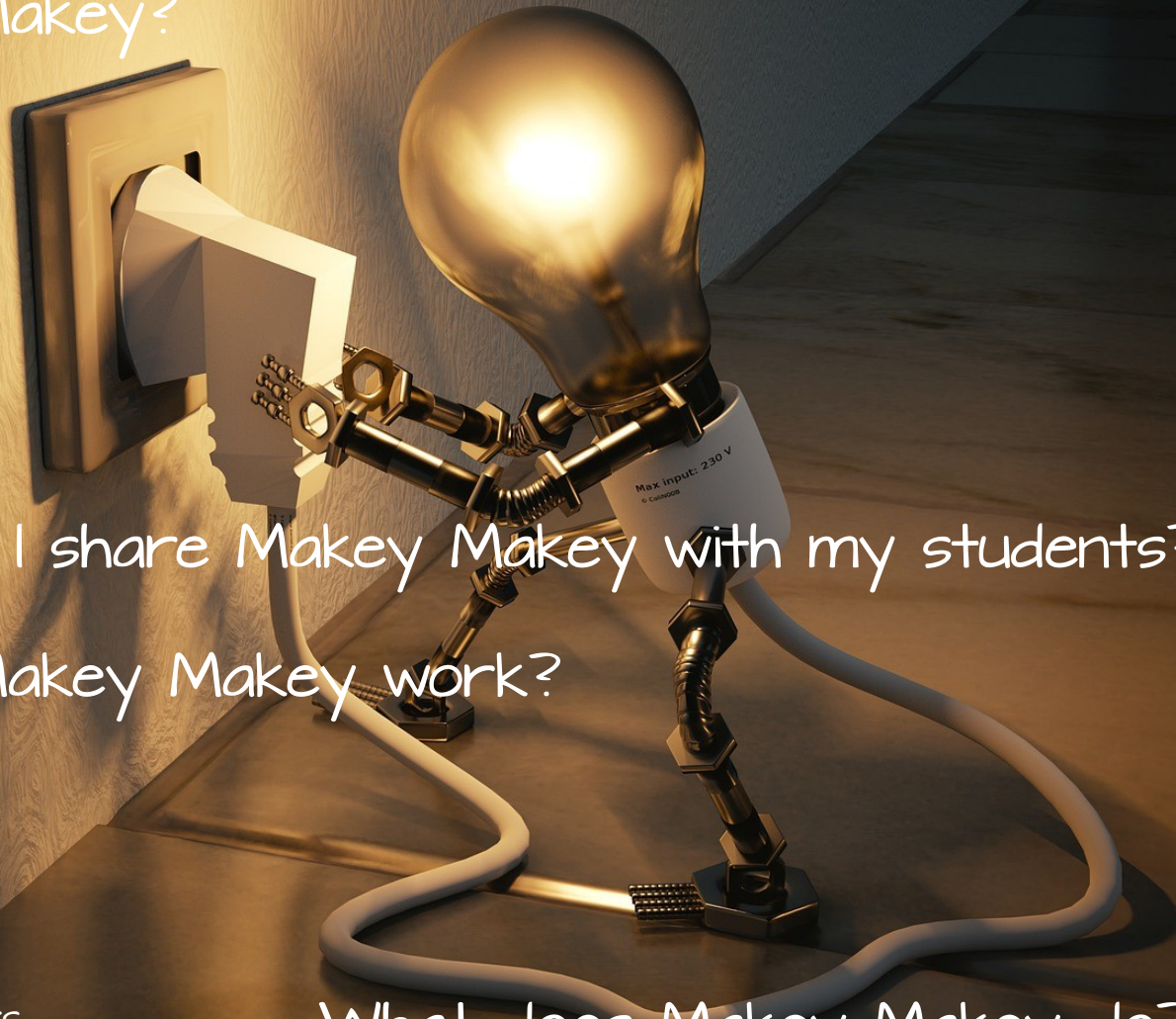# Say Hello to Makey Makey

What is Makey Makey?

How do I share Makey Makey with my students?

How do I make Makey Makey work?

Kara Dawson & Carol Walters

What does Makey Makey do?

Applied Design, Skills, and Technologies K 1 2 3

Big Ideas

- Designs grow out of natural curiosity.
- Skills can be developed through play.
- Technologies are tools that extend human capabilities.

Applied Design, Skills, and Technologies 4 5

Big Ideas

- Designs can be improved with prototyping and testing.
- Skills are developed through practice, effort, and action.
- The choice of technology and tools depends on the task.

Applied Design, Skills, and Technologies 6 | 7

Big Ideas

Design can be responsive to identified needs.

Complex tasks require the acquisition of additional skills.

Complex tasks may require multiple tools and technologies.

Learning Standards

Curricular Competencies

K 1 2 3

⇒ Ideating
⇒ Making
⇒ Sharing

4 5 6 7

⇒ Understanding Context
⇒ Defining
⇒ Ideating
⇒ Prototyping
⇒ Testing
⇒ Making
⇒ Sharing

◆ **Computational Thinking**

- simple algorithms that reflect computational thinking
- visual representations of problems and data
- evolution of programming languages
- visual programming

◆ **Robotics**

- a robot is a machine capable of carrying out a complex series of actions automatically
- uses of robotics
- main components of robots: sensors, control systems, and effectors
- various ways that objects can move
- programming and logic for robotics components
- various platforms for robotics

Science 9

Electric current is the flow of electric charge.

Content

◆ circuits — must be complete for electrons to flow

Relax . . . Breathe . . . These pages will really help!

What is Makey Makey?

Makey Makey is **an invention kit for the 21st century**. Turn everyday objects into touchpads and combine them with the internet. It's **a simple Invention Kit for beginners and experts** doing art, engineering, and everything In-between.
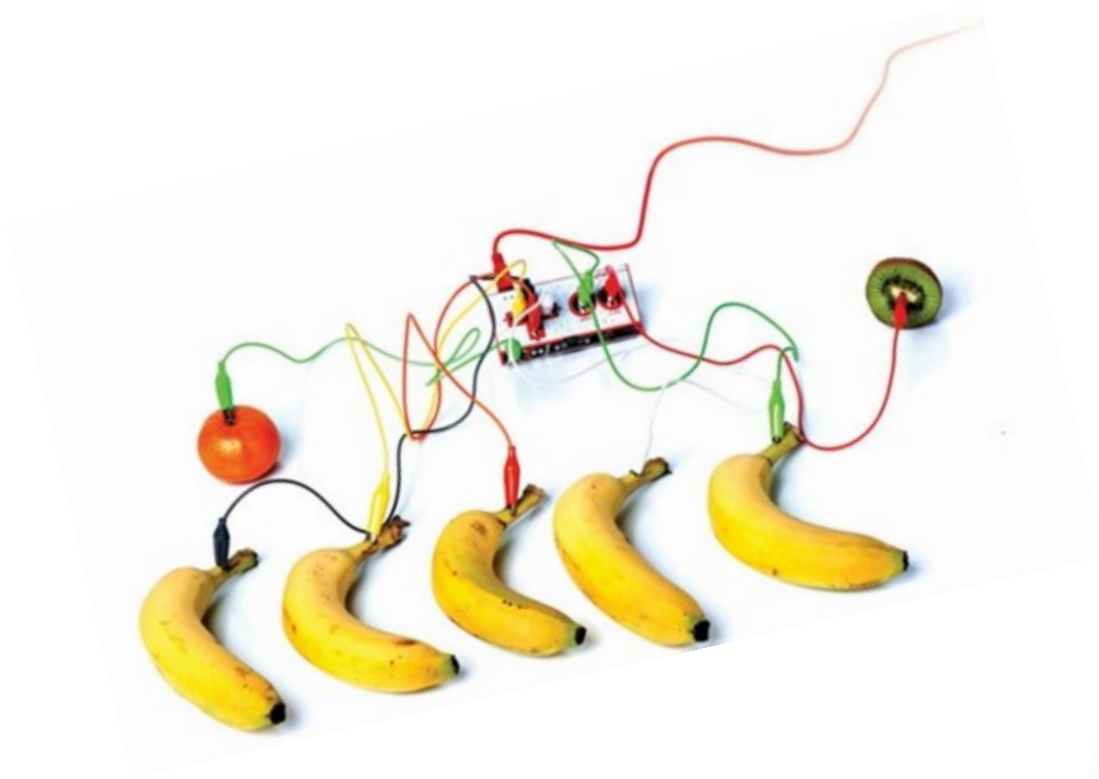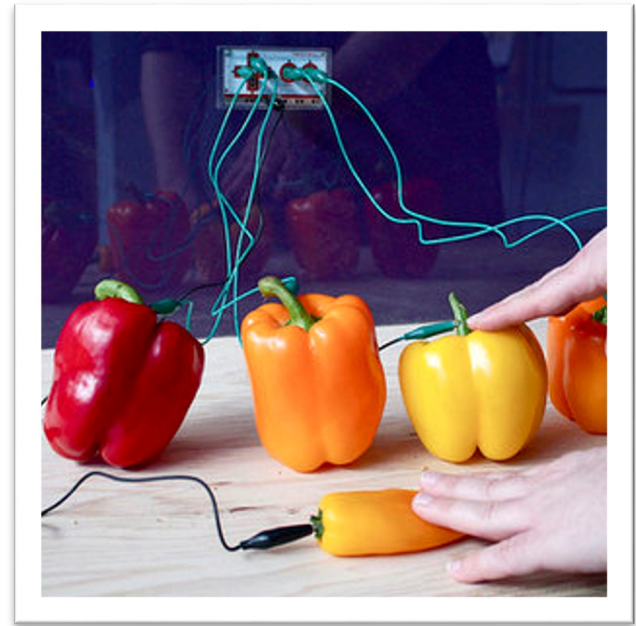
How do I Make Makey Makey Work?

Choose your learning style. Some people like to jump right in;. Others take a more cautious approach. Watching your students tackle Makey Makeys will give you another lens into their learning style.

Jump in!

Some learners are fearless. Let them jump into this technology! They'll figure it out through trial and error.

How do I Make Makey Makey Work?

The Perfectionist:

Some learners will want to dot their 'I's and cross their 't's before trying to make Makey Makey work. And that's just fine too! There's a user manual that comes with Makey Makey. Some students might like to read through it before getting started.

There are also lots of **videos** to get started,

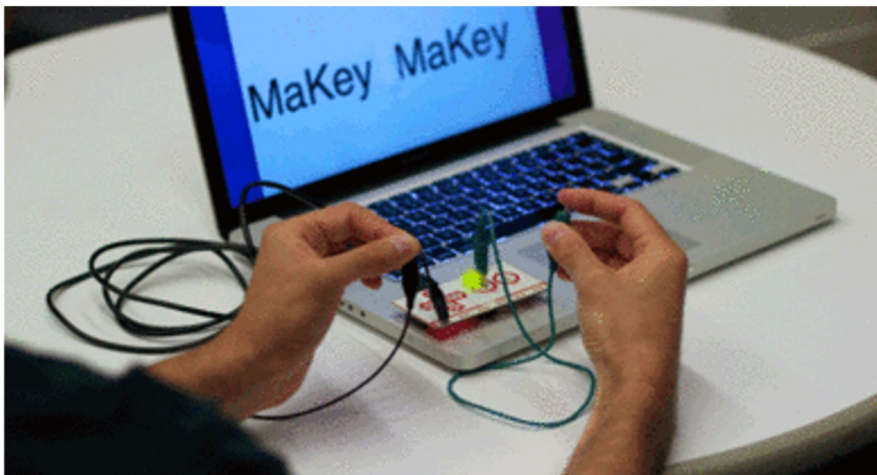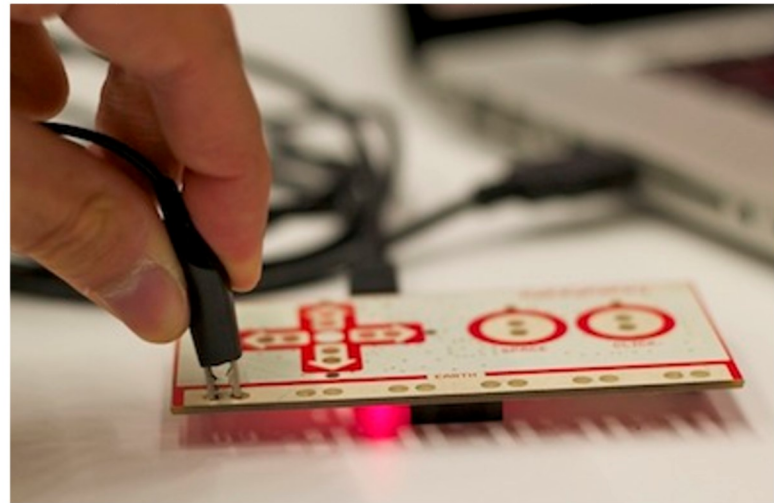https://www.youtube.com/watch?v=rfQqh7iCcOU

Getting Started with Makey Makey

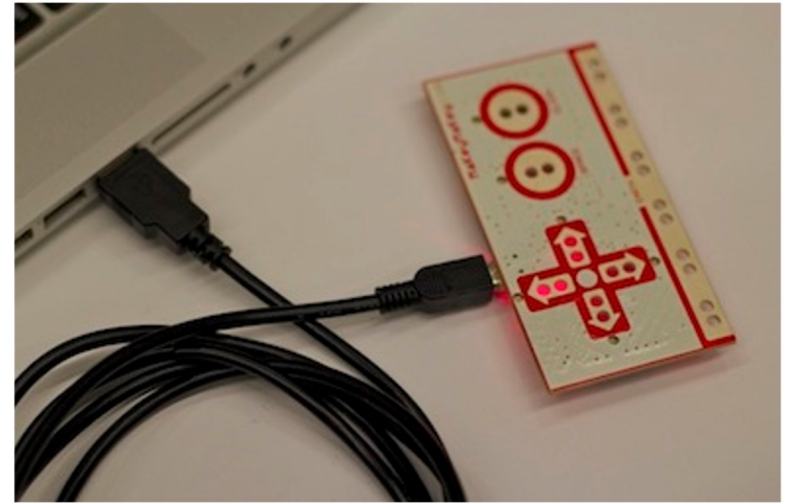

The following link provides lots of basics to get started.

Plug in.

Connect.

Play!

https://makeymakey.com/how-to/classic/
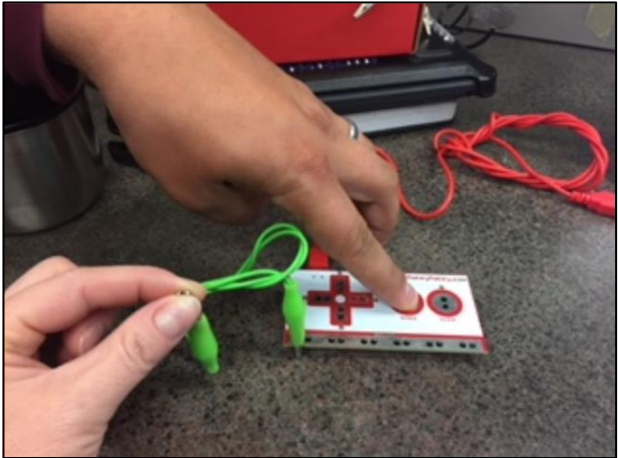
Getting Started with the Makey Makey:

1	Plug the smaller end of the red cord into the Makey Makey and the larger USB end into the computer.	
2	If a pop-up window comes up telling you your computer is installing drivers, close the window.	
3	At the bottom of the Makey Makey you will see the label **Earth** with sets of holes underneath it. Connect one of your alligator clips to one of the holes on **Earth**.	
4	Now if you hold the other end of that alligator clip, the Makey Makey is grounded. If you touch the circle on the Makey Makey, the cursor on your computer should move forward as though you are touching the space bar.	

Now Try Fruit

1	Now try hooking another alligator clip to the two holes in the Space circle.	
2	Hook the other end of the alligator clip to a piece of fruit	
3	Now when you touch the fruit, the cursor on your computer should move forward as though you are touching the space bar.	
4	Visit the Makey Makey website: https://makeymakey.com/apps/	
5	Open one of the apps and try using your Makey Makey to make music.	
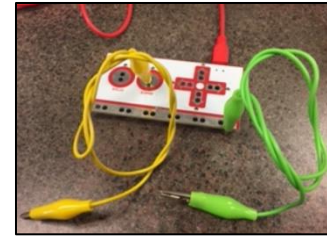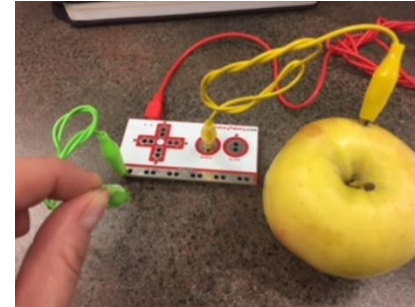
Some ideas-What can I do with the Makey Makey?

For lot of ideas and to see how other classes are using the Makey Makey, please visit the gallery on the Makey Makey page:
https://labz.makeymakey.com/remixes

Here are some other ideas with lesson plans:

IDEA	What is it?	Link to a lesson plan
Create a piano	In this lesson you use 6 bananas to make a six-key piano with the Makey Makey. You can make many different types of instruments-this is a great introduction.	http://librarymakers.net/piano-keyboard-makey-makey
Makey Makey Game Controller Challenge	Students (Grades 5 and up) create games in Scratch and then use the Makey Makey to create game controllers.	https://makeymakey.com/lessons/game-controller-challenge/
Makey Makey Science and Math Classify and Sort Lesson Plan	Students (Grades 5-9) can create a classifying and sorting game for shapes and angles.	https://makeymakey.com/lessons/sort-and-classify-lesson/
Simple Circuit Challenge	Students use the Makey Makey to learn simple circuits, parallel circuits and switches by completing challenge cards.	https://labz.makeymakey.com/cwists/preview/559-simple-circuits-challengex
Hacking Poetry with Makey Makey	Students will create visuals to go with poetry. Then they record their voice in Scratch reading the poem and use the Makey Makey to have the listeners press on the visuals to hear parts of the poem.	https://colleengraves.org/2016/12/01/resource-hacking-poetry-with-makey-makey/ https://docs.google.com/document/d/1325lCUC2iW68YZv_LdE8vloOklPa6j-pqqd14kuG9z0/edit
Jar Jar Keys	Students create a musical project with jars and water and the Makey Makey.	https://makeymakey.com/guides/jar.php

Makey Makey Educators Guide - https://makeymakey.com/education/Makey_Makey_Educators_Guide.pdf

How do I Make Makey Makey Music?

The Perfectionist:

Check out videos to show how music can be
made using the Makey Makey.

https://www.youtube.com/watch?
v=wkPt9MYqDW0

LEGO Drummer

Musical Paintings

Dip Hop by Pizza Hut Canada

Balloonophone
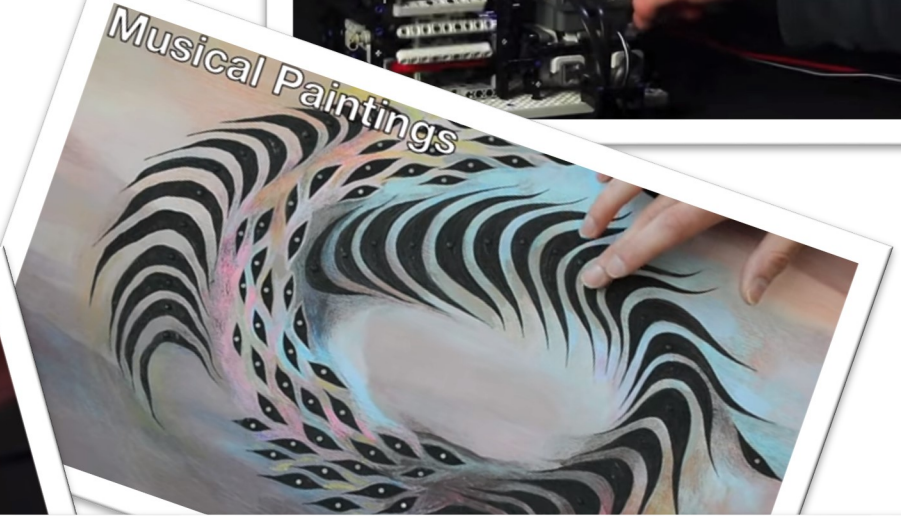
What materials work with Makey Makey ?

The Perfectionist will research this before trying.

The jumper will jump right in and see what happens!

Any material that can conduct at least a tiny bit of electricity will work. Here are some materials people have used in our workshops including Ketchup, Pencil Graphite, Finger Paint, Lemons, etc.:

Other materials that work great: Plants, Coins, Your Grandma, Silverware, Anything that is Wet, Most Foods, Cats and Dogs, Aluminum Foil, Rain, and hundreds more...

How Do We Increase Student Engagement?

Co-constructed Ideas

Clear Learning Intentions

Questions: Using oral language to prompt thinking

Descriptive Feedback

Ownership, Engagement, Motivation, Self-Regulation & Goal Statements

Peer and Self Assessments

FORMATIVE ASSESSMENT STRATEGIES

SD#71 - Based on the work of Black, Cameron, Cooper, Gregory, Davies, Halbert, Kaser, Stiggins & Wiliam

Co-constructed Ideas

How can we work cooperatively together so that everyone can learn?

Questions: Using oral language to prompt thinking

How can we make sure that we are curious throughout this work?

I can work with others to design creative ways to program the Makey Makey.

Descriptive Feedback

What does positive, descriptive feedback sound like?

Makey Makey

Writing Opportunities ...

Please, please provide opportunities for your students to write about Makey Makeys. Their writing can take on several formats:

- A makey Makey story,

- (fictional narrative)

- Create Makey Makey directions (proceduaral writing)

- Write in role pretending you are a Makey Makey

- Write lyrics to accompany your Makey Makey music.

There are so many possibilities. The Makey Makeys will provide experiences that will fuel writers.

SAMPLE "I" STATEMENTS

1. Novelty and value
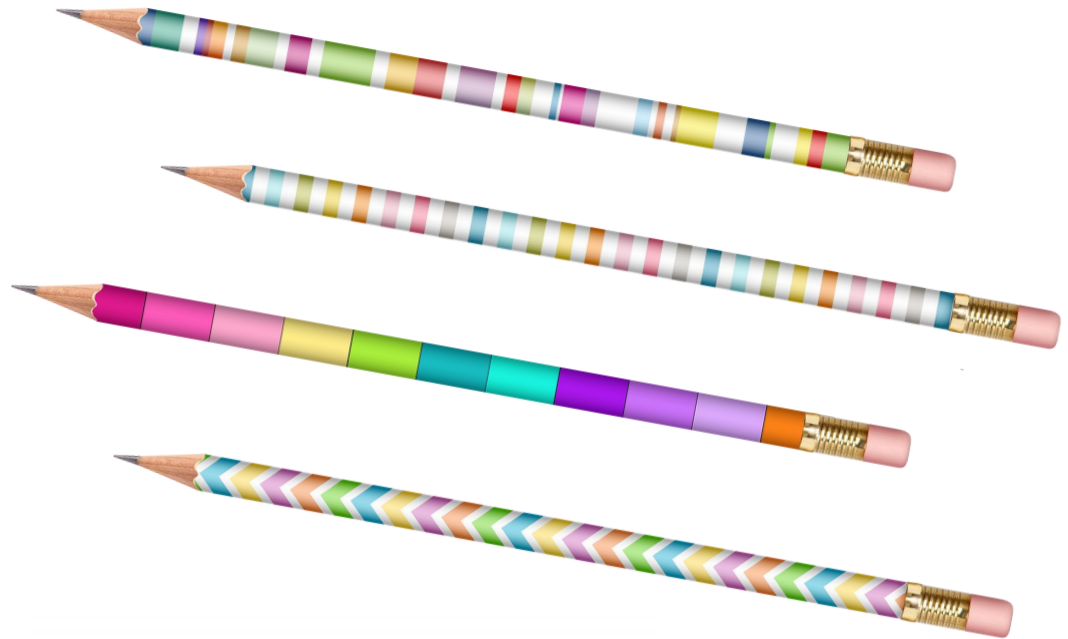
→ I get ideas when I play. My ideas are fun for me and make me happy.

→ I can get new ideas or build on other people's ideas, to create new things within the constraints of a form, a problem, or materials.

→ I generate new ideas as I pursue my interests.

→ I get ideas that are new to my peers.

→ I can develop a body of creative work over time in an area I'm interested in or passionate about.

CREATIVE THINKING
Competency Profiles

C T PS
Core Competencies

SAMPLE "I" STATEMENTS

2. Generating ideas

→ I get ideas when I use my senses to explore.

→ I build on others' ideas and add new ideas of my own, or combine other people's ideas in ne_ to create new things or solve straightforward problems.

→ I deliberately learn a lot about something (e.g., by doing research, talking to others or prac_ so that I am able to generate new ideas or ideas just pop into my head.

→ I have deliberate strategies for quieting my conscious mind (e.g., walking away for a while, _ something relaxing, being deliberately playful) so that I can be more creative.

→ I have interest and passions that I pursue over time.

SAMPLE "I" STATEMENTS

3. Developing ideas

→ I make my ideas work or I change what I am doing.

→ I can usually make my ideas work within the constraints of a given form, problem, and materials if I keep playing with them.

→ I build the skills I need to make my ideas work, and usually succeed, even if it takes a few tries.

→ I use my experiences with various steps and attempts to direct my future work.

→ I can persevere over years if necessary to develop my ideas. I expect ambiguity, failure, and setbacks, and use them to advance my thinking.

PS SOCIAL RESPONSIBILITY
Competency Profiles

C **T** **PS**
Core Competencies

SAMPLE "I" STATEMENTS

→ With some direction, I can demonstrate respectful and inclusive behaviour.

→ I can explain when something is unfair.

→ I can advocate for others.

→ I take action to support diversity and defend human rights, and can identify how diversity is beneficial for my community, including online.

3. Valuing diversity

SAMPLE "I" STATEMENTS

→ With some support, I can be part of a group.

→ I am kind to others, can work or play co-operatively, and can build relationships with people of my choosing.

→ I can identify when others need support and provide it.

→ I am aware of how others may feel and take steps to help them feel included.

→ I build and sustain positive relationships with diverse people, including people from different generations.

4. Building relationships

Watch a video, read a user manual, a book or just jump in!

Inspiring Makers to Experiment, Create, and Learn

The Big Book of MAKER SPACE Projects

Colleen Graves and Aaron Graves

STEAM KIDS

50+ science / technology engineering / art / math hands-on projects for kids
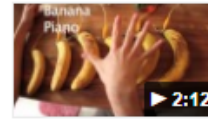
MaKey MaKey - An Invention Kit for Everyone - YouTube
https://www.youtube.com/watch?...fOqh7iCcOU ▼
May 14, 2012 - Uploaded by Jay S...
Get yours at makeymakey.com M...
Dough, let your kitty take a ...
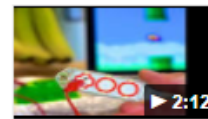▶ 2:12

MaKey MaKey - An Invention Kit for Ev...
https://vimeo.com › jay silver
Feb 22, 2013 - Uploaded by ja...
Get yours at makeymakey.co...
Dough, let your kitty take a ...
▶ 2:12

Makey Makey
https://www.makeymakey...
May 9, 2012
Makey Makey: Ever playe...
clip the Internet to your w...
▶ 2:12
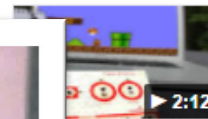
MaKey MaKey: An Invention Kit for ...
https://www.kickstarter.com/.../makey-make...
May 13, 2012
Jay Silver is raising funds for MaKey MaKey: An Invention Kit for Everyone on Kickstarter! Ever played Mario ...
▶ 2:12

Key MaKey Music Examples - YouTube
https://www.youtube.com/watch?v=wkPt9MYqDW0 ▼
Nov 17, 2013 - Uploaded by Eric Rosenbaum
How can you make music with MaKey MaKey? Here are 19 amazing examples by makers from around the ...
▶ 3:28

Key MaKey: An Invention Kit for Everyone - YouTube
https://www.youtube.com/watch?v=_DWQ6ce2Ags ▼
May 16, 2012 - Uploaded by Jay Silver
MaKey MaKey.
▶ 2:08

Getting Started: www.makeymakey.com/howto

SETUP
1) Plug in USB
Small side of USB cable plugs into MaKey MaKey, big side plugs into computer.
2) Close Popup Window
Your computer may tell you to install drivers or do some setup. You can click cancel or close the window.
3) Connect Yourself to Earth
Connect one side of an alligator clip to "Earth" on the bottom of the front side of MaKey MaKey. Connect the other side to your body by holding the metal alligator clip between your fingers.
4) Connect an Object to MaKey MaKey
Connect one side of an alligator clip to "space" on MaKey MaKey. Connect the other side of the alligator clip to an object that can conduct some electricity (like a banana, a penny, or some clay).
5) Try it
Now, when you touch the object, you should see a green light on the MaKey MaKey, and your computer will think the space key was pressed. If you have a text editor, you should see that you can now use your banana or penny as a "space bar."

PLAY
1) Surf the Web
Find a game, a music instrument or something else on your computer that you can control with the arrow keys, space, or mouse click. We have suggestions at www.makeymakey.com/howto
2) Invent
Try making a video game controller, a musical instrument, or a button for a video, a slideshow or your webcam. Try out different materials, like fruits, vegetables, foil, mud, graphite, coins, or even people. The only limit is your imagination!
3) Repeat
Keep repurposing and redesigning the world!

See www.makeymakey.com/howto for more tips, troubleshooting, FAQ, and videos.

Be Stoked! Change the World!
Be the Change!