MARKER EDURSE

STEM activities created with kids in mind to encourage hands-on learning, tinkering, creativity, and physical computing.

<u>Get a Makey</u> Makey for home

Class 1: Designing Switches and Sensors

Class 2: Hack a Toy! Design momentary and work with future projects.

Hack a plushie with momentary switches to

Class 3: Designing Alarm Systems

Class 4: Crafting Tilt Sensors

non-momentary switches.

Tinker with movement and learn how movement can close a switch.



Student Class Learning Link Description https://makeymakey.com/ non-momentary sensors to <u>blogs/how-to-instruc-</u> tions/lesson-eight-crafting-and-designing-switches https://makeymakey.com/ M blogs/how-to-instructions/ maker-class-lesson-twocreate a body systems toy! hack-a-toy Design an alarm system to 1) Press <start flag> 2) Let <space bar> up to activate, https://makeymakey.com/ press down to deactivate 3) Hook up to Makey Makey to secure blogs/how-to-instructions/ work with momentary and your toy box in real life! maker-class-lesson-three-Toy Bo alarms https://makeymakey.com/ <u>blogs/how-to-instruc-</u> tions/maker-class-les-<u>son-four-recycla-</u>



Learning Objective

Tinker with everyday materials to design and test a device that can complete a circuit. Investigate electrical engineering concepts.

Understand how bodies work and design a toy to assist others in learning about body systems.

<u>ble-tilt-sensors</u>

Design creative solutions for unique problems and understand the importance of cause-and-effect while designing alarms.

Understand how a tilt sensor works then build and debug a unique tilt sensor design out of recyclable materials.

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Class 5: Life Cycle Project

Use order and sequence to code special effects in Scratch!

Class 6: Sequencing Music and Secret Codes

> Class 7: Pixel Art Finger Paint

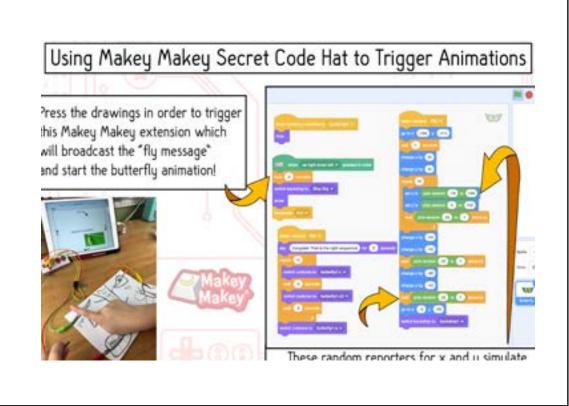
Class 8: Invention Challenge Craft a cardboard synthesizer and code secret sequences for custom animations.

Combine conductive touch points on a coordinate plane and code pixel art Finger paint in Scratch!

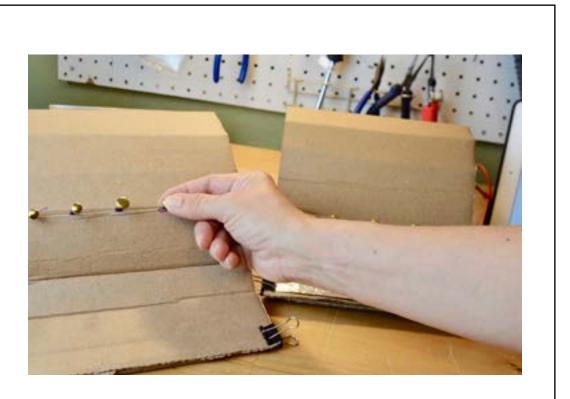
Use the design cycle to invent a tactile math or literacy game to help someone else learn.

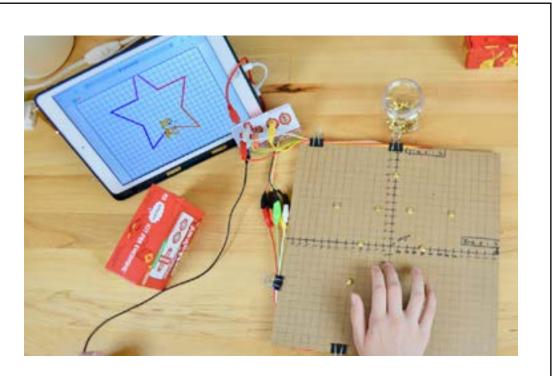


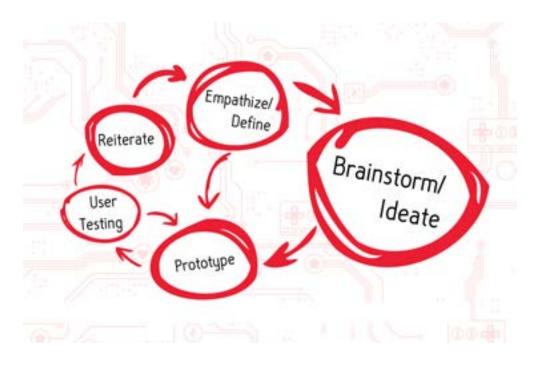
Class Description



https://makeymakey.com/blogs/ how-to-instructions/makerclass-lesson- ve-secret-codesand-coding-a-makey-makey-<u>life-cycle-project</u>







https://makeymakey.com/blogs/ how-to-instructions/advancedsequencing-and-secret-codeprojects-code-this-close-en-<u>counters-secret-code-music</u>

https://makeymakey.com/ blogs/how-to-instructions/ maker-class-lesson-fourpixel-art- ngerpaint

https://makeymakey.com/ blogs/how-to-instructions/maker-class-eight-math-literacygame-design-thinking-challenge



Student Learning Link

Learning Objective

Understand the life cycle and code a life cycle project. Use coding concepts to design animations.

Use cardboard techniques and implement conductive touch pads to create a musical instrument.

Understand how to plot points on a coordinate plane both physically and virtually. Then combine this technique to make physical computing pixel paint!

Understand the enginerring process and design a wide range of solutions for unique user problems.