

# INTERMEDIATE MAKER COURSE

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



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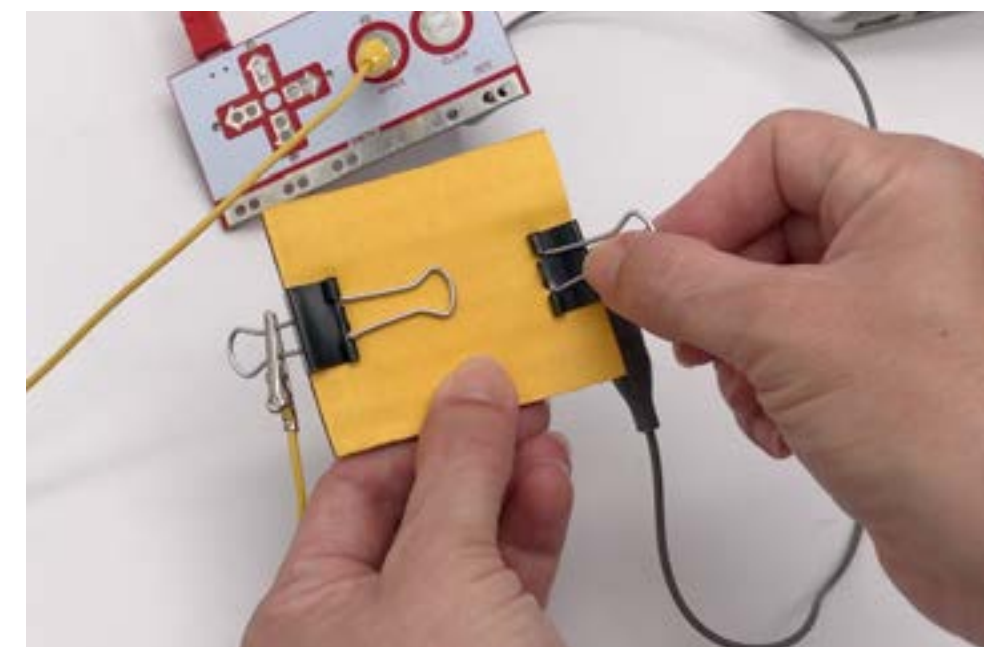
## Class Description

## Student Learning Link

## Learning Objective

### Class 1: Designing Switches and Sensors

Design momentary and non-momentary sensors to work with future projects.



<https://makeymakey.com/blogs/how-to-instructions/lesson-eight-crafting-and-designing-switches>

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

### Class 2: Hack a Toy!

Hack a plushie with momentary switches to create a body systems toy!

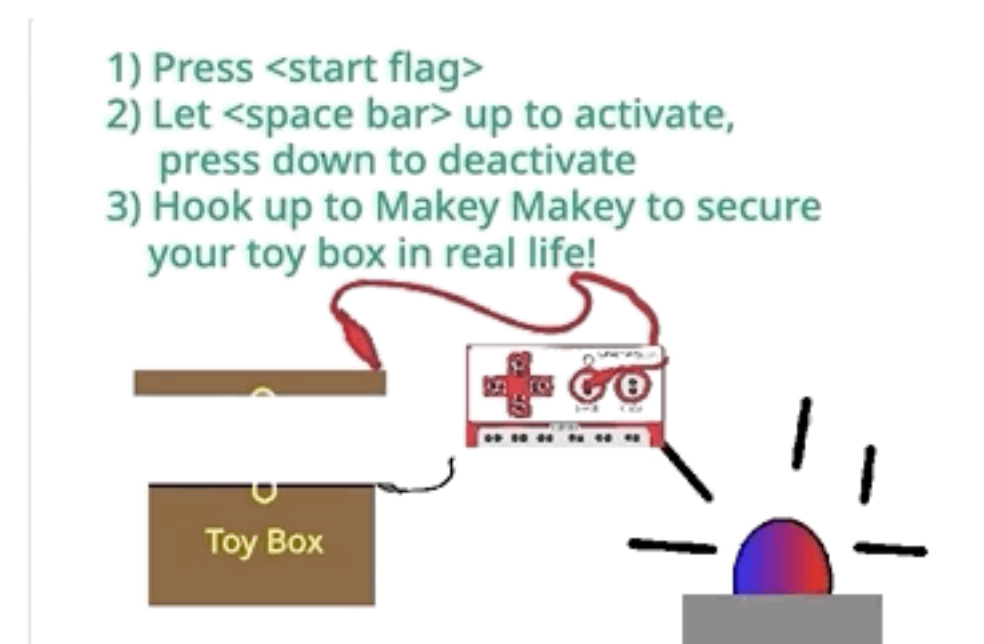


<https://makeymakey.com/blogs/how-to-instructions/maker-class-lesson-two-hack-a-toy>

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

### Class 3: Designing Alarm Systems

Design an alarm system to work with momentary and non-momentary switches.

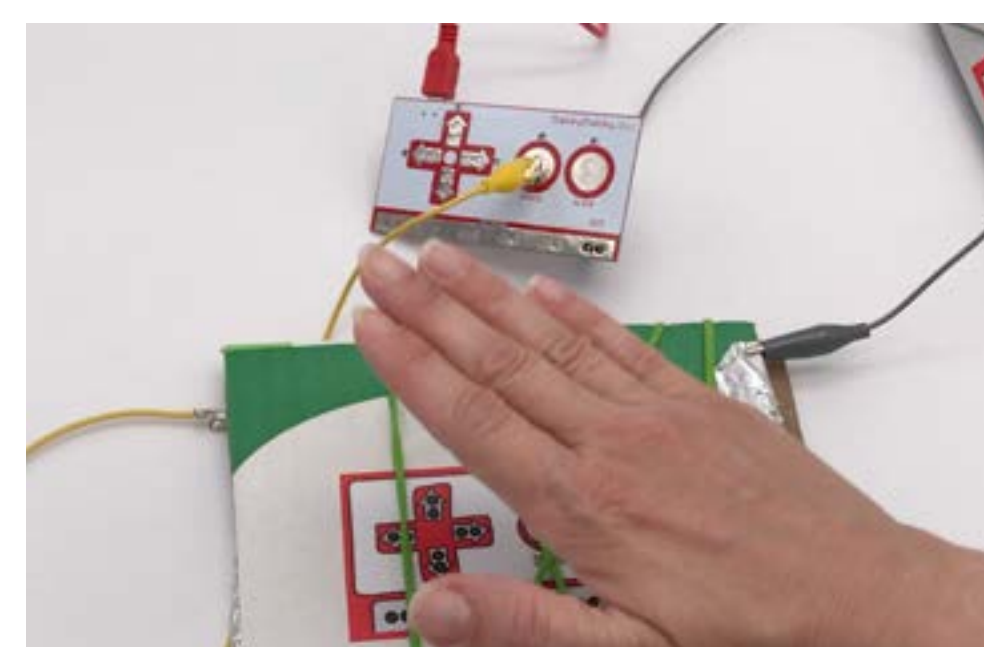


<https://makeymakey.com/blogs/how-to-instructions/maker-class-lesson-three-alarms>

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

### Class 4: Crafting Tilt Sensors

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



<https://makeymakey.com/blogs/how-to-instructions/maker-class-lesson-four-recyclable-tilt-sensors>

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!



<https://makeymakey.com/blogs/how-to-instructions/maker-class-lesson-ve-secret-codes-and-coding-a-makey-makey-life-cycle-project>

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

### Class 6: Sequencing Music and Secret Codes

Craft a cardboard synthesizer and code secret sequences for custom animations.



<https://makeymakey.com/blogs/how-to-instructions/advanced-sequencing-and-secret-code-projects-code-this-close-encounters-secret-code-music>

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

### Class 7: Pixel Art Finger Paint

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

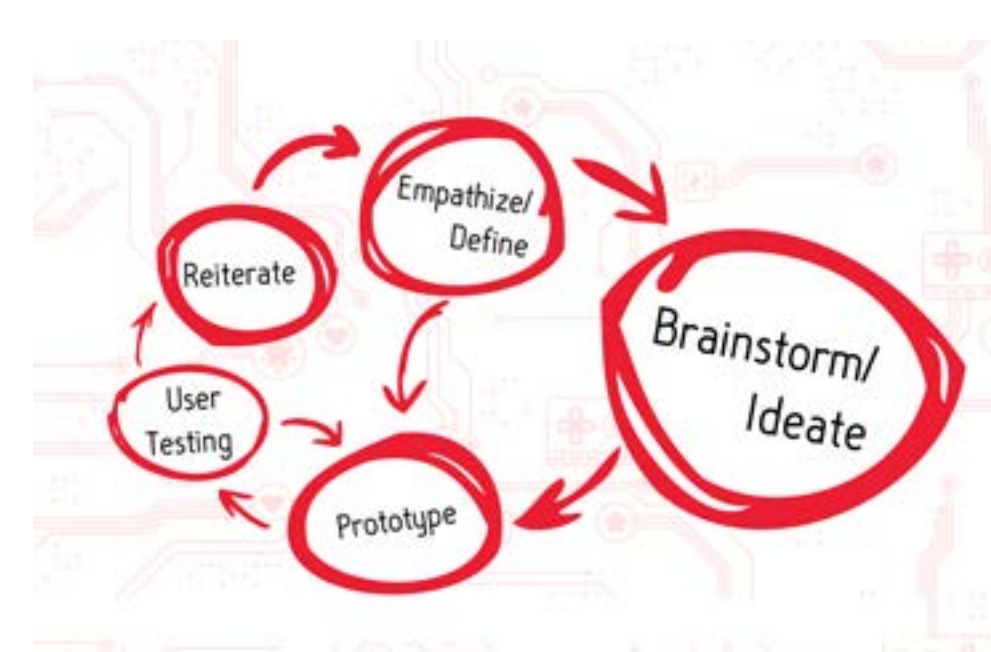


<https://makeymakey.com/blogs/how-to-instructions/maker-class-lesson-four-pixel-art-fingerpaint>

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

### Class 8: Invention Challenge

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



<https://makeymakey.com/blogs/how-to-instructions/maker-class-eight-math-literacy-game-design-thinking-challenge>

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