

SCIENCE OF CIRCUITS

Thursdays, Jan 29-April 30 (no class February 19, April 9; 12 weeks)

9:30am-10:45am

Ages 6-8

Students are introduced to simple and complex circuits and electrical components through hands-on activities, including building series and parallel circuits, experimenting with power sources, exploring insulators and conductors, as well as learning life skills such as stripping wires. All lab costs are included in registration fee.

Instructor: Jessica Barnes, BSc

Location: Science Center (suite 5)

Course fee: \$220 OR \$20/lab

10% sibling discount

Register for full semester or individual labs.

LAB SCHEDULE:

Simple Circuits - Thursday, January 29

We kick off the series by diving into the electrifying world of Snap Circuits®! Students spark their curiosity as they discover how electricity moves and level up their designs from simple loops to awesome, multi-component creations.

String Light Circuits - Thursday, February 5

Students learn how electricity flows through string lights as they investigate open and closed circuits.

Deconstructing Electronics - Thursday, February 12

Students study simple and complex circuits by taking apart electronic toys, learn about the electrical components and strip and splice wires to repair broken circuits, all while we emphasize safety and the complete proper use of basic tools.

Scribble Bots - Thursday, February 26

Students bring robots to life as they build their own vibrating, dancing scribble bot! A simple motor + a custom circuit = a wild, colorful drawing machine they engineer entirely themselves

Citrus Batteries - Thursday, March 5

We turn lemons into literal power! Students create citrus batteries, follow electric current as it flows through fruit, and use volt meters to measure their homemade energy sources.

Rainbow Salt Circuits - Thursday, March 12



This week, we experiment with electrical conduction by creating rainbow salt circuits with basic household items.

Paper Circuits - Thursday, March 19

Students explore the components of simple circuits as they create a paper circuit to power an LED.

LED Flashlight Lab - Thursday, March 26

We engineer handheld popsicle-stick flashlights as students discover new ways to shape wire, build circuits, and make an LED beam bright—all while learning the science behind real flashlights.

Powering Circuits - Thursday, April 2

Students explore the many ways to power a circuit—batteries, solar cells, and more! Along the way, they test energy sources, observe differences in output, and learn how fuses protect devices from overloads.

Squishy Circuits - Thursday, April 16

Electricity gets squishy! Students sculpt with conductive and insulating dough to design glowing creations, experimenting with LED placement and circuit design in a playful, hands-on way.

Circuit Bugs - Thursday, April 23

Students create adorable light-up “circuit bugs” as they experiment with conductors, insulators, and creative creature design. Each bug becomes a tiny glowing invention!

Complex Circuits - Thursday, April 30

We take Snap Circuits® to the next level! Students explore resistors, switches, and motors as they build advanced, multi-step circuits and discover how engineers design real working systems.

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