

## **CIRCUIT SCIENCE**

Mondays, January 26-May 4 (no class Feb 16, March 16, April 6; 12 weeks)

9:30am-10:45pm

Ages 8-10

Spark, build, and invent your way through a semester of hands-on electricity fun! From powering robots and crafting glowing paper cards to making citrus batteries, squishy circuit sculptures, and your very own flashlight, students become electrical engineers as they create brighter and more complex circuits each week. All lab costs are included in the 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** - Monday, January 26

We explore the basics of electricity and components of circuits as we create increasingly complex designs with our Snap Circuits®.

**String Light Circuits** - Monday, February 2

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

**Deconstructing Electronics** - Monday, February 9

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** - Monday, February 23

Today, we build a functioning scribbling robot using a simple circuit to power a motor.

**Citrus Batteries** - Monday, March 2

Students get creative with citrus fruits as they follow the flow of current and learn how to use a volt meter.

**Rainbow Salt Circuits** - Monday, March 9

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

**Paper Circuits** - Monday, March 23

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

**LED Flashlight Lab** - Monday, March 30

We create popsicle LED flashlights to study other ways copper wire is used to create simple circuits.

**Powering Circuits** - Tuesday, April 13

Students investigate different types of power sources, including different battery types and solar cells, and discover the value of fuses.

**Squishy Circuits** - Monday, April 20

Kids experiment with conductive and insulating dough and LEDs to design creative light-up sculptures.

**Circuit Bugs** - Monday, April 27

Students get creative with conductors and insulators as they create circuit bugs.

**Complex Circuits** - Monday, May 4

Students use Snap Circuits® to explore resistors, switches and motors as they experiment with complex circuits.