

LabSpace Winter Schedule 2019



(573) 645-0800

Register at www.LabSpaceRobotics.com

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Science with Miss Laura

LabSpace welcomes Miss Laura, a retired elementary teacher, who has taught around the world. She's bringing her favorite science activities to LabSpace. Here's the schedule, more will be added soon.

Simple Machines- Hands-on exploration of the six simple machines. How can the machines help you do work? Combine the machines to see what effect that will have on the amount of force required to move an object. Grades 3-4 with an adult helper, grades 5+ can attend on their own. \$12 per maker with a cap of \$20 per family.

Thurs, Jan 17 1:00-2:30
Mon, Jan 21 9:00-10:30
Mon, Jan 21 12:15-1:45

Electricity and Magnetism - Investigate permanent magnets, measure force with weights and balance, construct closed and open circuits, search for conductors and insulators, make an electromagnet, and experiment with a telegraph key. \$12 per maker with a cap of \$20 per family.

Fri, Jan 18 4:00-5:30
Thur, Jan 24 12:15-1:45 Grades 5+
Fri, Jan 25 6:00-7:30 Grades 5+
(grades 3 or 4 with an adult helper)
Mon, Feb 10, 5:15-6:45 Grades 1-2

The Acid Test- Discover and measure the properties of chemical reactions for two experiments. In the third experiment, they will test the acidity of fruits and prepared juices; be sure to bring one favorite squeezable fruit or juice to test. They will chart and compare results with provided fruits and juices. \$10 per maker, max of \$20 per family.

Thurs, Jan 17 11:00-12:30 Grades 5+
Mon, Jan 21 10:45-12:00 Grades 5+
Fri, Jan 25 4:45-5:45 Grades 5+
Grades 3 and 4 with an adult helper

Balloon Rockets and Airplanes

Explore Newton's Third Law as you make and experiment with balloon rockets! Can you make a 2 stage rocket? What happens when you change the launch angle? How is the flight different with more or less air? Come find out! Then experiment with wind-up airplanes. Can you get the plane to stop where you want? \$5 per maker, max of \$10 per family.

Friday, Jan 18 6:00-7:00 Grades 3+

Game Design

Build and design your own video games using The Games Factory 2 game engine. We'll focus on good programming practices, user interface design, testing and refining our games. The class will work on constructive criticism skills-how to make productive suggestions for game improvement. Tuition: \$120 for 8 one-hour sessions. We encourage students to get a copy of The Games Factory 2. It is available on Amazon for about \$25. We get lots of programming done in class, but game design takes time and having access to the program at home will allow students to practice what they've learned. Level 1 is for beginners.

Level 1-Fri 6:00-7:00 2/8-4/4 (no class 3/29)
Platform Games- Thur 6:00-7:00 1/9-30

Mad Scientists

Our new science program for grades K-2. We'll be knocking down targets, making things fly and building our own toys as we explore magnets, static electricity, exciting chemical reactions, elastic potential energy and more. Families are encouraged to stay and work together in class. This session will cover different projects than November's classes.

Wed 4:30-5:15 1/9-1/30
Fri 5:30-6:15 1/11-2/1

Music and Making- Pre-K

Join us Wednesday mornings Jan 9-Feb 27 for some fun maker and play experiences and then a short sing along. We'll rotate between playdough, painting, science experiences, and art projects. Projects will be gear to ages 3+ but may be enjoyed by younger and older children. Adults should stay and participate in play with their child and also get to have some "grown-up" conversations. Tuition is \$4 per maker with a max of \$8 per family. Please register at LabSpaceRobotics.com to let us know you're coming.

Digital Arts with Rick Rother

LabSpace is excited to have Rick Rother back to present more of his Digital Arts Classes for students ages 9+. Students will be given firsthand knowledge and practical experience in creating and developing their own world and visual language for all to enjoy! Students of all experience levels are welcome. They learn to use tablets and free software to enhance their creations so they can continue creating at home.

Animation-Feb 2 8:30-10:30
Stop Mo Level 1-Mar 16 8:30-10:30
Stop Mo Level 2-Apr 27 8:30-10:30

Robot Lab Grades 2-4

Bring your Lego creations to life! We'll learn about motors, gears, pulleys, and sensors as we build and program a new creation in each class. Each week, we'll learn more about programming our creations using a special programming language created just for these robotics sets. Tuition: \$100 for eight 60-minute classes.

Level 1 Thur 5:10-6:10 2/7-4/4 (no class 3/28)
Level 2 (our old level 3 and 4 new classes)
Thur 4:00-5:00 2/7-4/4 (no class 3/28)

Robot Lab Grades 3+

No experience required -An intro to building and programming robots using Lego Mindstorms. Students will program their robots to complete a variety of fun challenges. In our beginning classes, each student works on their own robot and computer, we don't share. That way we can be sure that everyone understands all the concepts and we can help as needed. Tuition: \$100 for eight 60-minute classes.

Students who have previous robotics experience are welcome in the advancing classes. We focus on specific challenges in these classes, but encourage the students to be more independent in how they arrive at a solution.

Level 1 - Thur 5:15-6:15 2/7-4/4 (no class 3/28)
Advancing Thur 4:00-5:00 2/7-4/4 (no class 3/28)

Computer Club

We'll use the Scratch programming language and learn basic computer concepts while we create some fun projects. The Scratch programming language was designed at MIT to provide an intuitive introduction to programming for students ages 8-16. We'll learn about concepts like loops, wait statements, and events. We will be using an Art Theme for this session of Computer Club. 8 sessions, Tuition: \$60. Ages: 9-13.

Thur 6:30-7:30 2/7-4/4 (no class 3/28)

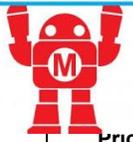
Circuits, Circuits, Circuits

Students will start with very simple circuits and add to their knowledge base in each class. Students will make paper lanterns to practice simple circuits. Then, they will expand those skills to make a doorbell for their rooms at home. Finally, students will be able to get creative to make their own board games with a light-up WINNER sign! Tuition: \$40 Ages 8+. Parents are encouraged to stay and work with their child. Registration Deadline: Jan. 15, 2018.

Tuesdays 5:45-6:45 2/5 -2/26

LabSpace Maker Camps Winter 2019

Maker Camp



	Description	Ages	Date(s)	Price
Sink or Float?	What sinks and what floats? Hands-on experiments with lots of science vocabulary and concepts. Come sink the raft! Pre-k and kindergarten.	4-6	Thur, Jan 24 11:00-12:00	\$5 per maker, max of \$10 per family.
WiggleBot	Build a robot that scribbles as it wiggles! You'll learn to wire a circuit with a switch and then we'll attach some markers so that it can create some fun art and it spins.	7+	Sat, Jan 5 10:00	\$8 per maker
Bow and Arrow	Make a bow from craft sticks, a rubber band and hot glue. Add an arrow from a straw and you'll be ready to practice your archery. Younger welcome with a hands-on helper.	7+	Sat, Jan 5th 11:30	\$8 per maker
Permanent Marker Tie Dye	Join us to decorate dish towels with permanent markers and then see what happens when you add a few drops of alcohol to your design. You'll get to take your towel home with you. Make sure to pop it into the dryer for 15 minutes to set your design.	5+	Sat, Feb 2 10:00-10:45	\$6 per maker
Make your own Valentines	Let's make Valentine's cards together! Join us Monday, Feb 11 from 4-5 or Tuesday from 4-5:30. We'll have lots of supplies for you to use and a Cricut machine for you to cut some fancy shapes.	All Ages	Mon, Feb 11 4:00-5:00 Tues, Feb 12 4:00-5:30	\$5 per maker with a cap of \$10 per family.
Rubber Band Wind-up Racer	Make a rubber band powered racer to take home. Use a paper tube, wooden wheels, rubber bands and paper clips to make a fun wind-up racer. Experiment with the power of elastic potential energy. What happens when you add another rubber band? Ages 5-7 should have a hands-on, adult helper.	5+	Sat, Feb 23 10:00-11:00	Tuition: \$5 per maker
Celebrate Dr Seuss' Birthday at LabSpace	The United Way is sponsoring a bring Dr Seuss birthday celebration! Come see all the fun for kids spread throughout the mall. At LabSpace we'll be making Wockets for your Pockets and we'll have some robots to experiment with.	All Ages	Sat, Mar 2 9:30-11:00	Free
Balloon Car	Design a balloon powered car from recycled materials. Use the engineering design process as you build, test and improve your car.	8+	Sat, March 23 10:00	\$5 per maker
Clip Mobile	Using recycled materials, create a "clip mobile" to carry a box of paper clips down a ramp. We'll explore friction as we try our clip mobile on different surfaces.	8+	Sat, March 23 11:30	\$5 per maker
Storybook Maker Camp	In this 60-90 minute cross-curriculum class we'll read a picture book and make a related project. Classes will focus on concepts such as engineering, science, problem solving, critical thinking, etc. Additional reading lists will be provided so you can continue exploring at home. February's books will be The Most Magnificent Thing by Ashley Spires and Rosie Revere Engineer by Andrea Beaty. Both books illustrate the trial and error process of inventing and making. The stories encourage kids to keep trying and improving, especially when they're making something. We will be making rubber band helicopters, and then we'll try to make them even better!	Pre-K-Grade 2	2/4, 3/4, 4/1 10:30-12:00	\$5, max of \$10 per family
Young Maker Morning	We'll have several "mini" projects set out for you to choose from and you can make as many as you like. This is family event-all are welcome to stay and build. \$5 builder. Makers younger than 8 must have a hands-on adult helper.	Ages 5+ with an adult	Feb 9 Mar 9 10:00-12:00	\$5

Register at LabSpaceRobotics.com or (573)645-0800. Registering will help us know how many materials to prepare and how many teachers to staff.

Classes that don't meet minimum enrollment will be cancelled, so let us know you're coming.

We're excited to provide these low-cost making opportunities! Thank you to Capital Mall for making them possible. More events will be added, please check out website for the most up to date schedule.