



Patterson Elementary STEAM Academy Day

Science, Technology, Engineering, Art and Math

Friday, March 8th, 2019

FOURTH and FIFTH GRADE (1:45 pm – 3:00 pm)

The Patterson PTA is pleased to offer the opportunity again for the students of Patterson to participate in a hands-on STEAM class of their choice. These classes will be taught by Patterson parents, educators, and local professionals knowledgeable in their field. All courses will take place **during school hours** and all students will be participating. No advance preparation is required of the students. Please take a look at the course descriptions listed below and discuss them with your child - students should choose **ONE** class to attend. Registration this year will take place online starting on **Tuesday, February 19 at 7:00 p.m.** A detailed description of registration procedures can be found at the end of this form. We want to thank all the volunteers leading these classes and are looking forward to an exciting and unique STEAM-focused learning opportunity for our students!

We are also looking for several parent volunteers for the day of the event to assist the instructors. If you are interested in helping this year, please contact Leslie at ruffing08@gmail.com or Carrie at carrie.giacobbe@gmail.com.

STEAM Academy Day Registration Information for Fourth and Fifth Grade

Dentist for a Day – Put on scrubs and become a dentist for the day! This course will give students the opportunity to participate in experiments that show how cavities break down teeth. They will learn how acids and bases affect tooth enamel and how the pH of acids can lead to the breakdown of enamel and cavities. They will practice placing “fillings” in teeth with real composite resin materials used in the office and take impressions on dental models. Lots to see, do and learn in this course as students will become excited about the dental world and learn its importance to a healthy mouth and body. (*Instructor: Gina Jacobsen, DDS*)

Doctor for a Day – Come and learn about the world of orthopedics and how the skeletal system works! Students will learn about different aspects of orthopedics, from fracture healing to joint replacement and sports medicine. Through hands on experiments, they will learn about how their bodies move, how bones break, and how to repair a torn tendon. They will also learn about many of the different types of jobs in orthopedics - doctors, nurses, physical therapists, scientists and engineers, and how each of these help us to keep our bodies healthy and moving well. (*Instructor: Liz Shewman*)

Home Design Studio – Learn how to design and draw your own dream home! This workshop will give you a brief description of home design styles and famous architects. Then, let's roll up our sleeves and hit the drafting table! Students will be instructed on how to "engineer" scaled floor plans of anything from your own home, bedroom, tree house, game room or whatever fabulous design you can imagine. There will be an interior studio as well, where you can select colors, furniture, pictures and other inspirational ideas to "decorate" your space. All your ideas will be arranged in a presentation board to bring home to present to your parents! (*Instructor: Dawn Dalson*)

Just Do It – Have you ever wondered who came up with the phrase “Just Do It” for Nike, or why your favorite cereal is found on the top shelf at the store? Students will learn about data collection and how it is used in marketing strategy. Students will take a short survey and use the results to make a decision. (*Instructor: Ryan Kocher*)

Basics of Computer Programming with Minecraft – Learn the basics of Computer Science by using Blockly, a system which uses visual blocks that you can drag and drop to write programs, to program characters to move through a simulated piece of the Minecraft World. See how your drag and drop code stacks up with coding languages used by real programmers. Students will learn concepts such as commands, repeat loops, and if statements that computer programmers use every day and are the foundation to Computer Science. (*Instructor: Matt Giacobbe*)

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Ozobots – Do you think coding is complicated? Come and see how coding with markers can train a robot! (*Instructor: Al Davenport, IPSD District Tech Dept.*)

How to Makey Anything into a Computer! – Can you make a piano out of a banana and tin foil? Can you play a video game with play dough? Using Makey Makey you can turn anything into a computer! (*Instructor: Molly Larson, IPSD District Tech Dept.*)

Robotics with Codeverse – All students during our robotics session will complete a light sensor challenge and navigate an obstacle course built by the kids! They'll learn all about the robots design and how to engineer each! (*Instructor: Codeverse LLC*)

Green Screen Can Take You Anywhere! – Have you ever traveled somewhere on vacation and would like to go back or have somewhere that you would love to go? Come and see how with some green screen magic, you can go anywhere! (*Instructor: Andy Fekete, IPSD Instructional Specialist, District Tech Dept.*)

Build (and Play) Your Own Canjo! – Learn to make and play your own musical instrument - a canjo! In this class, students will assemble their very own single-stringed instrument. We'll attach our resonator, tuning machine, and nut and then string it up and make music. Learn about how stringed instruments work, the parts of typical stringed instruments, and the relationship between length and pitch. After building our canjo we'll tune it up and learn to play some simple songs. Each student goes home with their very own canjo. Students should bring in their own empty soda can to be used as the body of their canjo. (*Instructor: Patrick Jaromin*)

Buildings and Structures – How do Architects and Engineers make the buildings stay up? Why don't they fall over? How do they get them so high and make it that shape? In this class, find the answers to these questions by thinking like an Architect and an Engineer. As an Architect use your creativity to design a building. As an Engineer come up with solutions to any problems while constructing the building. Using marshmallows and toothpicks, build an Eiffel tower, Dome or your designed Structure. (*Instructor: Studio Nafisa*)

Makers Space: Stop Motion Animation – Using an iPad we will take pictures using physical objects to create animation that is captured one frame at time. When we play back the sequence of images rapidly, it creates the illusion of movement. This will become a short story. (*Instructor: Dawn Maly, Patterson*)

STEAM ACADEMY DAY REGISTRATION DETAILS

- Online registration for STEAM Academy Day courses will open on **Tuesday, February 19 at 7:00 p.m.** and close on Monday, February 25, 2019.
- Any student not signed up for a class by registration closing will be randomly assigned to a STEAM Academy Day course. Every course is sure to be educational and fun!
- **You may only sign up for ONE class per student.**
- Follow the link below to the Sign-Up Genius page for your student's grade, choose an available course, and include required information: Student Name, Grade/Teacher, Email (parent/guardian).
- Please understand that some courses may fill more quickly than others, we recommend having a few back-up choices ready.
- Electronic registration links will also be posted in the Patterson S'more Weekly Announcements email, the Patterson School website at <http://patterson.ipsd.org> under the PTA, STEAM/Science Fair tabs, on Memberhub, and the Patterson PTA Facebook page.

Fourth and Fifth Grade Registration Link:

<https://www.signupgenius.com/go/4090d4da5ab2aa1f85-4th5th>

Should you have any questions regarding STEAM Academy Day or your registration, please contact Carrie Giacobbe at carrie.giacobbe@gmail.com or Leslie Ruffing at ruffing08@gmail.com.

Thank you to all our presenters and volunteers!