

STEAM Academy summer 2017

july 5 - august 3

9:30 am – 3:30 pm

University of Portland



Entering
grades 6-7

Join Saturday Academy and the University of Portland for a five-week experience in

SCIENCE
TECHNOLOGY
ENGINEERING
ARTS and
MATH



- Attend morning tutoring classes in math and reading to help prepare you for the next school year.
- Participate in afternoon classes in Finding Fibonacci, Digital Photography, LEGO® Physics, Programming for Beginners and Chemistry of Color

for further information and to register contact

Heidi Venneri

503-200-5859

heidi@saturdayacademy.org



Class descriptions

Chemistry of Color

Explore the science behind what you see.

Explore the colorful side of chemistry and learn about light, color, chromatography and pH.

Investigate how our eyes perceive different colors by examining light rays through a spectroscope. Observe color changes triggered by chemical reactions and discover what produces bright and colorful fireworks. Create your own colorful reaction as you determine the acidity of substances using pH indicators.

Digital Photography

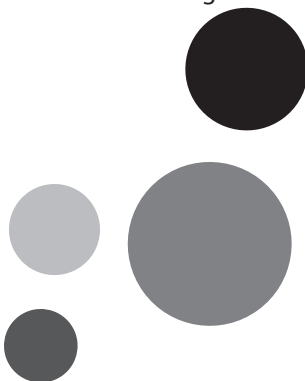
Discover the power of photography.

Photography is a wonderful way to discover the world around us. Beginning students learn the basic controls on digital cameras and tips to enhance pictures using different functions such as ISO, aperture and shutter speed. They discuss composition, lighting and perspective and learn how to best capture an image regardless of the lighting or weather conditions. In addition to improving camera skills, students learn how to save, edit and print their photographs. At the end of the course, students are presented with some of the finished prints of their favorite images.

Finding Fibonacci

What is the Golden Ratio?

Students find the hidden order behind pine cones, sea shells, tree branches, rabbits, and the Egyptian Pyramids encapsulated in a single number sequence. Through investigations into statistics, Platonic solids, bee genealogy, plant growth and architecture, students will discover ways to generate and uncover Fibonacci numbers. They delve into the fascinating and beautiful world of Penrose tilings, creating some unique and gorgeous works of art with mathematical meaning.



LEGO® Physics

Build a bigger, better LEGO machine.

How tall can a tower rise? How far can a bridge span? Can students build a tower three times taller by using three times the amount of materials? Students answer these questions and others as they learn how to apply physics principles to solve real world problems. Using LEGO building components, students investigate structural designs and employ gears, cams and pendulums to explore kinetic and potential energy. Working individually and in teams, they build towers and Ping-Pong launchers.

Programming for Beginners

Program interactive stories and games.

During this class students acquire the building blocks of programming languages, computer animation and video-game design. They code games, control digital characters and create 3D worlds. Students use their skills to develop an idea into a video game or digital animation short in the program of their choice.

About Saturday Academy

Saturday Academy offers hands-on, in-depth classes, camps and workshops for students in grades 2-12. Our focus is science, technology, engineering, math, the arts and college prep. Classes are offered throughout the Portland Metro area. Saturday Academy to You (SA2U), our school-based program, brings Saturday Academy classes to your school or organization. Our Apprenticeships in Science & Engineering (ASE) program provides internships for students in grades 10-12 throughout Oregon and southwest Washington.

The University of Portland and Saturday Academy do not discriminate on the basis of race, color, national or ethnic origin, sex, disability, age or any other basis protected by federal, state or local law in its educational programs, admissions policies, scholarships or in employment.

for more information about saturday academy visit

www.saturdayacademy.org