

Winter Enrichment 2018

Introduction to Physical Computing

Grades: 5th- 8th

Dates: 2/1, 2/18, 2/22, 3/1, 3/8

Time: 3:00pm- 4:15pm

Where: Bernardsville Middle School

Fee: \$120.00

Based on internationally recognized educational curriculum and brought to you by experienced educators and professional experts in computer engineering, project & network management, our curriculum introduces students to computer systems, electronic circuitry, and sensor science using single board computer, Raspberry Pi, breadboards and a variety of sensors without a steep learning curve. Students do not need prior knowledge or experience with programming languages or electronics. During this course, students will develop knowledge in simple electronics and computing by doing hands-on projects to learn how to set up Raspberry Pi, connect sensors, work with a breadboard, and write basic code to control the circuits and sensors. Students will apply newfound knowledge to a series of challenges including programming a LED and a button press to control a circuit, building a security alarm, and programming sensors like ultrasonic distance sensor.

Advanced Robotics with Lego Mindstorms EV3

Grades: 5th- 8th

Dates: 1/31, 2/7, 2/14, 2/21, 2/28

Time: 3:00pm- 4:15pm

Where: Bernardsville Middle School

Fee: \$120.00

Experience the cutting edge of technology with the introduction of **LEGO® MINDSTORMS EV3 Robotics**. Students will be captivated in this 75 minutes class as they incorporate the newest generation of motors, sensors and software by programming their commands directly into the intelligent brick. Test their capabilities by moving an object with a robotic claw, building a robot that draws, or creating a mouse trap. Our endless list of builds is sure to provide the complete fundamental components of robotics at its best!

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Character Design and the Principles of Animation

Grades: 5th- 8th

Dates: 1/30, 2/6, 2/13, 2/20, 2/27

Time: 3:00pm- 4:00pm

Where: Bernardsville Middle School

Fee: \$110.00

Program Material Fee: \$10.00 paid to instructor for pads and pencils

Learn the principles of animation and how to adapt them into character creation. You will create 2 characters, a hero and villain along with basic props. You will learn the many ways of animation.

Remote Control Lego Model Building

Grades: K- 4th

Dates: 2/1, 2/8, 2/22, 3/1, 3/8

Time: 3:45pm- 4:45pm

Where: Bedwell Elementary School

Fee: \$90.00

Our one hour classes explore science, technology, engineering, and math (STEM) concepts using LEGO® bricks. Students participate in 5 week sessions focusing on exciting motorized creations with weekly themes such as Inventions, Life Science, and Technology. All curriculums have been created and designed by engineers and educators.

Each class students will see their creations in motion using LEGO wireless remote controls. As they enjoy the fun of building, students will understand the basic working principles of many ingenious devices that are part of our everyday lives. Students will also learn how to magnify, diminish, and redirect force to move objects at different speeds and different directions.

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American Red Cross Babysitting Course

Grades: 5th- 8th

Dates: 1/30, 2/1, 2/6, 2/8

Time: 3:00pm- 5:00pm

Where: Bernardsville Middle School

Fee: \$95.00

To provide youth who are planning to babysit with the knowledge and skills necessary to safely and responsibly give care for children and infants. This training will help participants to develop leadership skills; learn how to develop a babysitting business, keep themselves and others safe and help children behave; and learn about basic child care and basic first aid.

All requests for refunds must be submitted in writing to Bernardsville Recreation seven (7) business days prior to the start of the program or trip. Programs refunds are \$15.00 or 15% of the program fee (whichever is greater)