LEGO EV3 Robotics Camp
This one week camp is planned for rising 3rd through 5th grade students. In pairs, they will build an autonomous robot to carry out pre-designed missions. Students will design, build, and program a LEGO EV3 robot that will operate autonomously to compete against other camp teams in competitions such as the SumoBot Challenge and the Maze Challenge. Additional activities such as science experiments, may also be integrated throughout the week. Students will learn project management in a team setting, how to build with the LEGO EV3 platform, and basic programming of the EV3 system. The teams will compete in a final competition on Friday morning.

VEX IQ Robotics Camp
This one week camp is for rising 4th through 8th graders. In pairs, students will build an autonomous robot to carry out pre-designed missions. Students will design, build, and program a VEX IQ robot that will operate autonomously and via remote control to compete against other camp teams in competitions such as the SumoBot Challenge and the Maze Challenge. In this camp the students will code in RobotC to integrate sensor feedback into their autonomous code. Students will learn project management in a team setting, how to build with the VEX IQ system, and basic programming of the robot. The teams will compete in a final competition on Friday morning.

VEX 1 Robotics Camp
This one week camp introduces rising 6th through 12th grade students to competitive robotics through the VEX EDR robotics design system. This camp is ideal for students interested in coding and robotics. In pairs, students will build and program a robot to operate on a field by remote control and autonomously. Students will learn basic computer programming in RobotC by completing sensor integrated challenges throughout the week. The teams will compete in a final camp competition Friday morning.
Rocketry Camp
This one week camp will introduce rising 7th through 12th grade students to rocketry. During the camp, students will learn the basics of rocketry and how they work, rocketry safety as well as building and launching several rockets. Students will also learn how to use RockSim, a simulation tool for building and launching rockets. The camp will have a field trip to safely launch their competition sized rocket on Friday.

CAD/3D Printing Skills Camp
This camp is for rising 9th through 12th grade students and explores how significant innovations in the areas of 3D computer graphics and 3D printing technologies are revolutionizing how designers, artists, and engineers create products and tools. Students will learn an overview of modern 3D design and modeling techniques and also explore the range of printing and prototyping technologies in use today. The mission of this 3D Printing and Engineering Design Course is intended to provide students with the tools to bring design ideas to life. Imagining a concept in your mind is just the beginning. A product may then be brought to life through the application of advanced engineering tools like Computer Aided Design and Drafting (CAD) and 3D printing. By the end of the camp, students will have gained hands-on experience creating their own designs and shaping the creative process to final printed production. This camp is 3 hours a day for 2 weeks.

Programming Camp
This camp will provide students in rising 9th through 12th grade with new skills in programming and electronics engineering. The goal of this camp is to shift focus away from simply using electronics to understanding how they work by programming them! Students will learn to work with an Arduino Board to combine components like LEDs, motors, and sensors. Students will also learn how to program starting with the very basics, turning on and off an LED, to more sophisticated situations like maneuvering a car. We will use real life examples to help students understand the importance of the skills taught in camp. This camp is 3 hours a day for 2 weeks.
**Cybersecurity Camp**

This one week camp is for rising 9th through 12th graders and will introduce the students to the world of Cybersecurity. This camp is designed to provide students with knowledge and hands-on experience in cybersecurity and introduce them to the many career opportunities in the growing field. The camp will increase students’ knowledge of networking and computer security including attack and defense strategies, all through tutorials, hands-on activities and will culminate with a mock competition towards the end of the camp. Students must bring their own laptop with the minimum specifications: an i5 or comparable AMD processor (NO Macs/Apple based laptops), 6 GB of RAM and 20 GB free hard drive space available.

**Scratch Programming Camp**

This one week camp is for rising 4th through 6th graders. Students will use the basic concepts of the Scratch programming language to develop creative stories, animations, simulations, and games. Students will work on individual projects and collaborate on group projects. Students will learn about computational thinking skills such as sequencing, loops, conditionals, and operators. Students will learn about computation practices such as iterating, testing, debugging, and reusing. Students will create, personalize, share, and reflect upon their own projects throughout the week. Students will also be focusing on math skills throughout the week as well.