

# Choose Your Camp

## ROBOTICS AND ENGINEERING

### LEGO ROBOTICS 1: FORCE AND MOTION | Grades K-3

This camp is recommended for kids who have little or no experience with building and/or programming LEGO Robotics. Campers will use Legos to learn about force, motion, and speed, to understand the foundations of block programming.

### LEGO ROBOTICS 2: MOTORS, SENSORS, AND PROGRAMMING | Grades K-3

Kids who have experience with Simple Machines and WeDo kits will use motors and sensors to design and program a robot that can navigate challenging missions to solve a unique problem.

### LEGO ROBOTICS 3: MINDSTORMS | Grades 3-8

This camp is recommended for kids who have experience building and programming simple robots and want to learn more about LEGO EV3 Mindstorms that are used in FIRST LEGO competition. Students will build a robot and be challenged to navigate a mission and solve unique problems.

### GIRLS LOVE LEGOS | Grades K-6

LEGOs are a great start to learning about engineering, coding, and the scientific process. Our LEGO camps are filled with girls until 6 years of age, then we seem to have camps filled with boys. We want a chance to keep your girls interested in these fun and exciting camps. This camp is specially designed with girls in mind and will ensure they love to build, engineer and code with LEGOs!

### ADVANCED ROBOTICS: Solving 21st Century Problems | Grades 4-8

Kids who have experience with block programming and/or LEGO Robotics will use their imagination to create, build, and program Bluetooth-compatible, Arduino-based robots to solve 21st Century problems. Kids will build a robot and be challenged to navigate a mission and solve unique problems.

## COMPUTER DESIGN AND PROGRAMMING

### MAKE MY GAME | Grades K-8

Kids will use Scratch and MIT App Inventor to learn basic block programming, then be given a challenge to design and program their own game to solve a unique problem.

### CODING | Grades 3-8

This camp is recommended for kids who have experience with the Make My Game camp. Campers will learn and practice Java and Python programming languages to create advanced apps or games.

### AUGMENTED REALITY (AR) | Grades 5-8

From crazy selfie filters to gamifying the real world, augmented reality (AR) is the hottest tech trend spanning the globe. Using the latest software in AR, campers will make 3D models come to life on screen.

### DIY VIRTUAL REALITY (VR) | Grades 5-8

Virtual reality games and experiences are at the forefront of cutting edge technology. Using the latest VR apps, campers will explore making VR videos and construct their own virtual reality viewer.

### RASPBERRY PI: CAPABLE LITTLE COMPUTERS | Grades 5-8 (2 Weeks)

Raspberry Pi is a small and powerful computer built specifically with young programmers in mind. Campers will receive their own programmable Pi and learn firsthand about the software and hardware capabilities of these incredible machines while creating in Minecraft and programming Linex.

## 2017 Summer STEM Camps

Spokane Public Schools Summer STEM (Science, Technology, Engineering and Math) Camps provide activities, experiments, projects, and field experiences. These camps offer hands-on, problem-solving, critical thinking, communications, and leadership skills through fun, engaging activities! Brain research confirms that fun is an important ingredient for learning and memory. Summer camps are open to all students in the Eastern Washington region.

### Weeks available:

Week 1: July 10-13 | Week 2: July 17-20  
Week 3: July 24-27 | Week 4: July 31 - August 3

### Camp Fees: \$85/week

USDA Breakfast and Lunch Program offered at camp.  
Breakfast begins at 8 a.m., camp will officially start at 8:30 a.m.

Monday – Thursday | 8 a.m. to 1 p.m.

### Locations

Garry Middle School – 725 E. Joseph Ave.  
Spokane Public Montessori Campus – 1300 W. Knox Ave.  
Sacajawea Middle School – 401 E. 33rd Ave.

### ARDUINO: MICROCONTROLLERS | Grades 5-8 (2 Weeks)

Arduino microcontrollers are open-source electronic prototyping boards that are used to create interactive electronic objects. Campers will use their Arduinos to build interactive objects, that control motors, lights, and produce outputs.

### 3D DESIGN AND PRINTING | Grades 5-8

3D printing is revolutionizing product development and changing the world! Take your ideas from imagination to electronic art and finally a physical 3D object. Using Computer Aided Design, campers can create bookmarks, jewelry, cookie cutters, name keys, and other cool items.

### CYBER CAMP (CYBER SECURITY) | Grades 5-8 (2 Weeks) SACAJAWEA ONLY

An opportunity to learn about cyber safety from the best and brightest CyberPatriots in Spokane Schools. Middle and high school students will teach you how to protect your personal devices. Learn the cyber principles and how to defend against cyber-attacks through virtual images that contain vulnerabilities. You will enjoy being a cyber detective, and solving problems found on virtual operating systems.

## LED NATION – LIGHTS, POWER, PROGRAMMING

### SQUISHY CIRCUITS | Grades K-3

This camp is recommended for kids who have little or no experience with electrical circuitry. Campers will learn to control and modify LED lights by creating squishy circuit animals, magic wands, paper masks, and arm bands.

### WEARABLE TECH | Grades 4-8

This camp is recommended for kids who have experience with electrical circuitry or basic block programming. Campers will use Arduino microcontrollers to transform LED lights into useful accessories that light-up.

### FLASHY, SASSY SCIENCE | Grades 4-8

This camp is designed for kids who have experience with electrical circuitry or basic block programming. Campers will use Arduino microcontrollers to transform LED lights into flashy light-up costumes, clothing, and accessories.

## LIGHTS, CAMERA, ACTION

### VIDEO CONSTRUCTION-BEGINNER AND ADVANCED | Grades 5-8

Produce, direct, light, shoot, and edit like the experts! Kids will plan and produce their own short movie. Campers will learn to use graphics, music, voice over, and live action video while developing leadership, communication, project management, design, and technical skills.

### STOP-MOTION ANIMATION-BEGINNER AND ADVANCED | Grades K-8

Kids will learn stop-motion animation techniques using storyboards, props, backdrops, and cameras. Collaborating on teams, campers will plan and produce their own short movies, which they can take home to premiere to friends and family.

## KIDS LOVE SERIES

### KIDS LOVE PHYSICS | Grades K - 6 | Week 1

Students will use Hot Wheels cars and roller coasters to explore physics concepts like mass, velocity, gravity, and potential and kinetic energy. Competing in teams, campers will develop presentation skills and learn to change the world through engineering.

### KIDS LOVE CHEMISTRY | Grades K - 6 | Week 2

I'm Positive I've lost an Electron! Learn the basics about the elements that make up our world! We will become friends with the Periodic Table of Elements while exploring how chemicals react with one another and begin to predict these reactions. Then we'll turn our reactions into yummy treats!

### KIDS LOVE BIOLOGY | Grades K - 6 | Week 3

There are trillions and trillions and trillions of microorganisms on Earth (and possibly some on Mars!). Let's get familiar with microscopes and explore the shapes, sizes, and roles of many different microorganisms, including some that create clean fuel!

### KIDS LOVE BIOMED | Grades K - 6 | Week 4

Join us as we navigate the human body! Together we will learn what makes our complex human bodies work. We will dive deeper into topics like diabetes and why a healthy diet and life style are so important for our bodies. EveryBODY can relate to this camp.

## AND EVEN MORE!

### CAMP CRIME SCENE | Grades 5-8 (2 Weeks) SACAJAWEA ONLY

Immerse yourself in challenging puzzles with crime scene investigation. Learn evidence collection techniques, study the clues, analyze the data, and maybe even solve the crime. Explore science and medicine in the world of law enforcement.

### GADGET GALAXY – STEM AND ARTS MAKERSPACE | Grades 6-8

You've explored robotics, engineering, coding, production, and 3D Printing. Now let's take your ideas to the next level and put your creativity to the test. The Gadget Galaxy lets students create and test new ideas like inventors. The lab provides activities that develop resourcefulness, resiliency, creativity and confidence in taking risks and testing new ideas.

### STEM LEADERSHIP CAMP | Grades 8-10 SACAJAWEA ONLY

Students gain important skills to help them excel in high school and beyond by probing deeper into their STEM interest area. This camp will include time for hands-on experiences in engineering and robotics, computer science and biomedical fields. This camp will include guest speakers, field trips to STEM businesses, and local college and university programs, and project-based activities. Projects will include goal setting, design thinking, collaboration, public speaking, and mentoring younger students in Summer STEM Camps.

 **STEM Afterschool and Summer Programs**

### WEEK 1 - JULY 10-13

#### Garry

G1R1 - Robotics 1  
 G1R2 - Robotics 2  
 G1R3 - Robotics 3  
 G1R4 - Advanced Robotics  
 G1GL - Girls Love Legos + Code  
 G1C1 - Make My Game  
 G1C2 - Coding  
 G1C3 - Raspberry Pi (2 wk camp)  
 G1C4 - Arduino (2 wk camp)  
 G1V1 - Video Construction  
 G1V2 - Stop Animation  
 G13D - 3D Design/Print  
 G1RC - Kids Love Physics  
 G1SC - LED Squishy Circuits  
 G1WT - LED Wearable Tech  
 G1FS - Flashy Sassy Science  
 G1AR - Augmented Reality  
 G1VR - Virtual Reality  
 G1GG - Gadget Galaxy

#### Sacajawea

S1R1 - Robotics 1  
 S1R2 - Robotics 2  
 S1R3 - Robotics 3  
 S1R4 - Advanced Robotics  
 S1GL - Girls Love Legos + Code  
 S1C1 - Make My Game  
 S1C2 - Coding  
 S1C3 - Raspberry Pi (2 wk camp)  
 S1C4 - Arduino (2 wk camp)  
 S1V1 - Video Construction  
 S1V2 - Stop Animation  
 S13D - 3D Design/Print  
 S1RC - Kids Love Physics  
 S1SC - LED Squishy Circuits  
 S1WT - LED Wearable Tech  
 S1FS - Flashy Sassy Science  
 S1AR - Augmented Reality  
 S1VR - Virtual Reality  
 S1GG - Gadget Galaxy  
 S1SL - STEM Leadership  
 S1CP - CyberCamp (2 wk camp)  
 S1CS - Camp Crime Scene (2 wk camp)

#### Montessori

M1R1 - Robotics 1  
 M1R2 - Robotics 2  
 M1R3 - Robotics 3  
 M1R4 - Advanced Robotics  
 M1GL - Girls Love Legos + Code  
 M1C1 - Make My Game  
 M1C2 - Coding  
 M1C3 - Raspberry Pi (2 wk camp)  
 M1C4 - Arduino (2 wk camp)  
 M1V1 - Video Construction  
 M1V2 - Stop Animation  
 M13D - 3D Design/Print  
 M1RC - Kids Love Physics  
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To register online go to the Parents online payments page [www.spokaneschools.org/Page/1778](http://www.spokaneschools.org/Page/1778) then click on the blue rectangle: **"Online School Payments"**

**If your camper is a Spokane Public School student,** the User ID is your child's student ID Number (typically 6 digits) and the password is the student's last name (usually with the first letter capitalized).

Every SPS student has a unique Student ID Number that stays with them from entry until they graduate. If you don't know your student's ID Number, the best place to find it is on their report card or to call their school who can help look it up for you.

### WEEK 2 - JULY 17-20

#### Garry

G2R1 - Robotics 1  
 G2R2 - Robotics 2  
 G2R3 - Robotics 3  
 G2R4 - Advanced Robotics  
 G2GL - Girls Love Legos + Code  
 G2C1 - Make My Game  
 G2C2 - Coding  
 G2V1 - Video Construction  
 G2V2 - Stop Animation  
 G23D - 3D Design/Print  
 G2RC - Kids Love Biology  
 G2SC - LED Squishy Circuits  
 G2WT - LED Wearable Tech  
 G2FS - Flashy Sassy Science  
 G2AR - Augmented Reality  
 G2VR - Virtual Reality  
 G2GG - Gadget Galaxy

#### Sacajawea

S2R1 - Robotics 1  
 S2R2 - Robotics 2  
 S2R3 - Robotics 3  
 S2R4 - Advanced Robotics  
 S2GL - Girls Love Legos + Code  
 S2C1 - Make My Game  
 S2C2 - Coding  
 S2V1 - Video Construction  
 S2V2 - Stop Animation  
 S23D - 3D Design/Print  
 S2RC - Kids Love Biology  
 S2SC - LED Squishy Circuits  
 S2WT - LED Wearable Tech  
 S2FS - Flashy Sassy Science  
 S2AR - Augmented Reality  
 S2VR - Virtual Reality  
 S2GG - Gadget Galaxy  
 S2SL - STEM Leadership

#### Montessori

M2R1 - Robotics 1  
 M2R2 - Robotics 2  
 M2R3 - Robotics 3  
 M2R4 - Advanced Robotics  
 M2GL - Girls Love Legos + Code  
 M2C1 - Make My Game  
 M2C2 - Coding  
 M2V1 - Video Construction  
 M2V2 - Stop Animation  
 M23D - 3D Design/Print  
 M2RC - Kids Love Biology  
 M2SC - LED Squishy Circuits  
 M2WT - LED Wearable Tech  
 M2FS - Flashy Sassy Science  
 M2AR - Augmented Reality  
 M2VR - Virtual Reality  
 M2GG - Gadget Galaxy

### WEEK 3 - JULY 24-27

#### Garry

G3R1 - Robotics 1  
 G3R2 - Robotics 2  
 G3R3 - Robotics 3  
 G3R4 - Advanced Robotics  
 G3GL - Girls Love Legos + Code  
 G3C1 - Make My Game  
 G3C2 - Coding  
 G3C3 - Raspberry Pi (2 wk camp)  
 G3C4 - Arduino (2 wk camp)  
 G3V1 - Video Construction  
 G3V2 - Stop Animation  
 G33D - 3D Design/Print  
 G3RC - Kids Love Chemistry  
 G3SC - LED Squishy Circuits  
 G3WT - LED Wearable Tech  
 G3FS - Flashy Sassy Science  
 G3AR - Augmented Reality  
 G3VR - Virtual Reality  
 G3GG - Gadget Galaxy

#### Sacajawea

S3R1 - Robotics 1  
 S3R2 - Robotics 2  
 S3R3 - Robotics 3  
 S3R4 - Advanced Robotics  
 S3GL - Girls Love Legos + Code  
 S3C1 - Make My Game  
 S3C2 - Coding  
 S3C3 - Raspberry Pi (2 wk camp)  
 S3C4 - Arduino (2 wk camp)  
 S3V1 - Video Construction  
 S3V2 - Stop Animation  
 S33D - 3D Design/Print  
 S3RC - Kids Love Chemistry  
 S3SC - LED Squishy Circuits  
 S3WT - LED Wearable Tech  
 S3FS - Flashy Sassy Science  
 S3AR - Augmented Reality  
 S3VR - Virtual Reality  
 S3GG - Gadget Galaxy  
 S3SL - STEM Leadership  
 S3CP - CyberCamp (2 wk camp)  
 S3CS - Camp Crime Scene NEW (2 wk camp)

#### Montessori

M3R1 - Robotics 1  
 M3R2 - Robotics 2  
 M3R3 - Robotics 3  
 M3R4 - Advanced Robotics  
 M3GL - Girls Love Legos + Code  
 M3C1 - Make My Game  
 M3C2 - Coding  
 M3C3 - Raspberry Pi (2 wk camp)  
 M3C4 - Arduino (2 wk camp)  
 M3V1 - Video Construction  
 M3V2 - Stop Animation  
 M33D - 3D Design/Print  
 M3RC - Kids Love Chemistry  
 M3SC - LED Squishy Circuits  
 M3WT - LED Wearable Tech  
 M3FS - Flashy Sassy Science  
 M3AR - Augmented Reality  
 M3VR - Virtual Reality  
 M3GG - Gadget Galaxy

**If your camper is not a Spokane Public School student** or a recently enrolled SPS student who has yet to be given an ID Number, just click on "Guest User" and follow the instructions to set up an account.

Once in, click on your child's name (if an SPS student), then click on **"Items at All Schools"** then **"Central Cashier"** then **"District/Finance Office"** then **"STEM Summer Camps."** From here, just shop for the 'item' which is listed on the registration flier (For Example: "S2L4 - Advanced Robotics"). Once done shopping, it will prompt you to a few questions we need to gather, then will get you to the payment portion.

### WEEK 4 - JULY 31-AUG 3

#### Garry

G4R1 - Robotics 1  
 G4R2 - Robotics 2  
 G4R3 - Robotics 3  
 G4R4 - Advanced Robotics  
 G4GL - Girls Love Legos + Code  
 G4C1 - Make My Game  
 G4C2 - Coding  
 G4V1 - Video Construction  
 G4V2 - Stop Animation  
 G43D - 3D Design/Print  
 G4RC - Kids Love Biomed  
 G4SC - LED Squishy Circuits  
 G4WT - LED Wearable Tech  
 G4FS - Flashy Sassy Science  
 G4AR - Augmented Reality  
 G4VR - Virtual Reality  
 G4GG - Gadget Galaxy

#### Sacajawea

S4R1 - Robotics 1  
 S4R2 - Robotics 2  
 S4R3 - Robotics 3  
 S4R4 - Advanced Robotics  
 S4GL - Girls Love Legos + Code  
 S4C1 - Make My Game  
 S4C2 - Coding  
 S4V1 - Video Construction  
 S4V2 - Stop Animation  
 S43D - 3D Design/Print  
 S4RC - Kids Love Biomed  
 S4SC - LED Squishy Circuits  
 S4WT - LED Wearable Tech  
 S4FS - Flashy Sassy Science  
 S4AR - Augmented Reality  
 S4VR - Virtual Reality  
 S4GG - Gadget Galaxy  
 S4SL - STEM Leadership

#### Montessori

M4R1 - Robotics 1  
 M4R2 - Robotics 2  
 M4R3 - Robotics 3  
 M4R4 - Advanced Robotics  
 M4GL - Girls Love Legos + Code  
 M4C1 - Make My Game  
 M4C2 - Coding  
 M4V1 - Video Construction  
 M4V2 - Stop Animation  
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# 2017 Summer STEM Camps

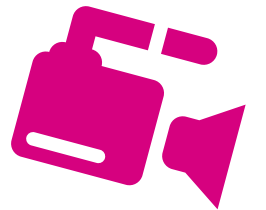
## Build



## Investigate



## Create



# Make your summer count!

## K - 10th grade



Spokane Public Schools  
*excellence for everyone*