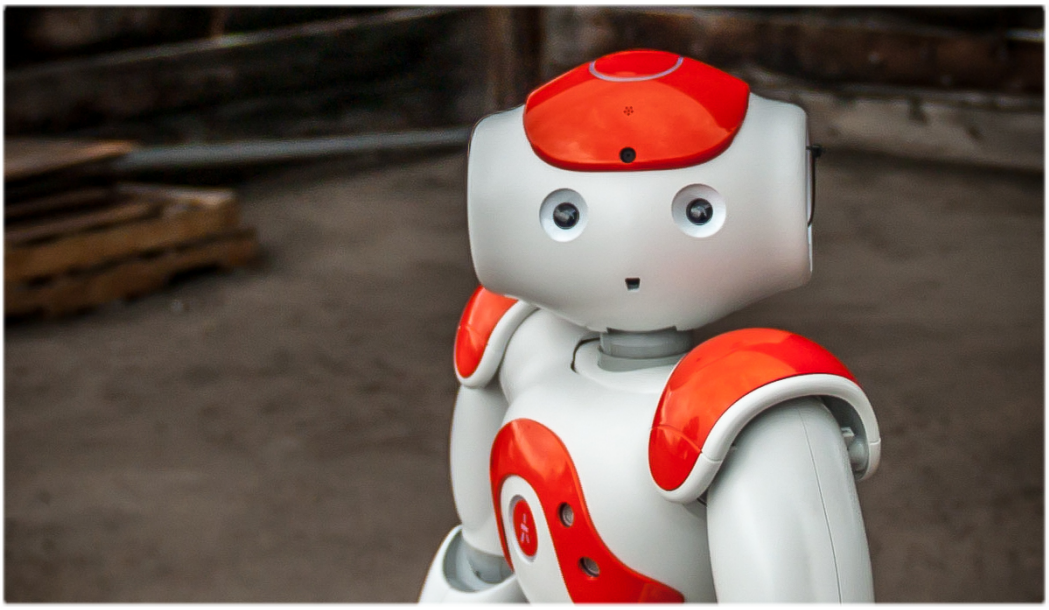
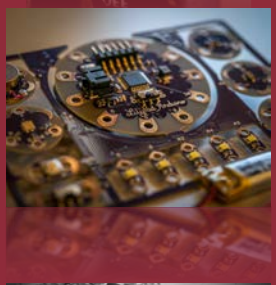
SUPERSTEM

SUMMER CAMP FOR KIDS AGES 8-14

JUNE 13-23 AND JULY 18-28, 2016





SUMMER

A FUN SUMMER LEARNING OPPORTUNITY FOR ALL STUDENTS AGES 8-14. EXPERIENCE AND EXPLORE DIFFERENT ASPECTS OF STEM!

OUR CLASSES WILL BE TAUGHT BY TEACHERS & STUDENT INSTRUCTORS FROM THE INNOVATION CENTER

- ROBOTICS
- ELECTRONICS
- FILM
- DESIGN THINKING

INNOVATION CENTER
of st. vrain valley schools

ST. VRAIN
academic excellence by design

Contact us: 720-494-3969

Register at: innovation.svvsd.org

1200 S. Sunset St.
Longmont, CO 80501

On-Line Registration Starts March 8, 2016

JUNE 13-23

If classes are on multiple consecutive days they are integrated based projects and for the entire block of days indicated.

EM (8-10) = Elementary Level Course

IPB = Integrated Project Based Multi-day Workshop

MS (11-14) = Middle School Level Course

E = Exploratory Single Day Workshop

	Monday	Tuesday	Wednesday	Thursday
Morning: 9-12	13 **EM(IPB):** Intro to competitive Robotics **MS(E):** Intro to movie making	14 **MS(E):** iPad Garage Band	15 **MS(E):** Program Basics	16 **MS(E):** CAD w/ Solid Works
Afternoon: 1-4	**MS(IPB):** "MAKEY MAKEY" **EM(E):** Cubelets World of Robotics	**EM(E):** Sphero World of Robotics	**EM(E):** Dash/Dot World of Robotics	**EM(E):** NAO Humanoid Robotics
Morning: 9-12	20 **MS(IPB):** Videography **EM(E):** TinkerCAD	21 **EM(E):** Intro to Electronics	22 **EM(E):** iPad Garage Band	23 **EM(E):** Claymation w/ iMovie
Afternoon: 1-4	**EM(IPB):** NAO Challenge **MS(IPB):** Build your own LED Display			

JULY 18 - 28

If classes are on multiple consecutive days they are integrated based projects and for the entire block of days indicated.

EM (8-10) = Elementary Level Course

MS (11-14) = Middle School Level Course

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E = Exploratory Single Day Workshop

	Monday	Tuesday	Wednesday	Thursday
Morning: 9-12	18 **EM(IPB):** Build your own LED Display **MS(IPB):** NAO Challenge	19	20	21
Afternoon: 1-4	**MS(IPB):** Underwater Robotics **EM(IPB):** Documentary Film production at Sandstone Ranch			
Morning: 9-12	25 **MS(IPB):** Home Automation w/ PC Duino **EM(IPB):** Super VEX Robotics Challenge	26	27	28
Afternoon: 1-4	**EM(IPB):** Silent Film Festival **MS(IPB):** Underwater Robotics			

Course Descriptions

Elementary (8-10)

see calendar for available dates

***IPB = Integrated Project Based Multi-day Workshop*

***E = Exploratory Single Day Workshop*

Intro to Competitive Robotics (IPB - $140): Learn the basics of competitive robotics using the VEX IQ robotics system. You'll build the basic claw-bot, use it to participate in the bank shot game, and make some simple changes to make your robot perform better.

Super VEX Robotics Challenge (IPB - $140): Take your VEX IQ skills to a whole new level! Work with a team to design and build an original robot for the Innovation Center Robotics Challenge. To successfully complete this challenge, designed by Innovation Center students, you'll use CAD, programming and other skills. You will combine VEX IQ parts like the brain, sensors and motors with materials like wood, plastic and metal. You'll use various tools along the way, like TinkerCAD, bandsaws, and drills (don't worry parents - safety first! All work with tools will be supervised). You and your team will then show off your robot in head-to-head competition against other teams.

Cubelets World of Robotics (E- $35): Did you watch Big Hero 6? Do you find robots cool? Learn robot basics by building robots using Cubelets! Cubelets is a hands-on robot construction kit that lets you explore your imagination.

Sphero World of Robotics (E - $35): If you know BB-8, you know Sphero! Test out your driving and programming skills with Sphero. Start with mastering your driving skills: How many mazes can you complete? How many mazes can you design? Then learn to be the Boss of your Sphero by programming it to get through various maze challenges. Earn a badge for each level.

Dash/Dot World of Robotics (E - $35): Come make friends with our new robots, Dash and Dot. You'll have a lot of fun exploring the worlds of robots and programming together with them. You'll write an original story, then program Dash and Dot to perform your story to others.

NAO Humanoid Robotics (IPB - $140): Have fun working with our humanoid NAO robots and get a taste of the future. Program one of our five NAOs (Caroline, Steve, Sophie, Optimus and Phineas) using Choregraphe, an easy-to-use drag-and-drop programming language. You'll make your NAO walk, talk, dance and more!

TinkerCAD (E - $35): This class will introduce you to the world of computer-aided design (CAD), a drafting software engineers use to design products before they build or 3-D print them. We will use TinkerCAD to design and 3-D print simple toys or jewelry you'll be able to take home with you. ****Please Note: Prints will not be completed by the end of class and will have to be picked up at a later date.*

iPad Garage Band – Ages 8-10 (E - $35): Learn to mix and produce your own music tracks using the Garage Band app. You'll learn about the different instruments and beats you can use and how to mix and match them in an original song you write.

Intro to Electronics (E - $35): Learn the basics of electronics in this class. You'll learn how electricity works and build circuits that light up LEDs.

Claymation with iMovie (E - $35): Make your own Wallace and Gromit or Rudolph the Red-nosed Reindeer movies! You'll use an iPad app, clay and other materials to make stop motion movies, and be the writer, director and sound editor for your own original film!

Documentary Film at Sandstone Ranch (IPB - $140): Apply your iMovie and Garage Band skills in a real-world project. We'll visit Sandstone Ranch, a 313-acre historic homestead with lots of historic and natural things to explore. You'll work on a team to interview the staff at Sandstone Ranch, take footage of the home and property, then produce an original documentary film that will be aired on Longmont's Channel 8 cable station. **** Note: Field Trip Permission Form will be required for this class*

Silent Film Festival (IPB - $140): Let's take a blast to the past and look at the world of silent films, the very first films ever to have been made. You'll write and film original scripts, learn to use silent film techniques, and create your own costumes and sets. You'll then share this movie at our very own Silent Film Festival.

NAO Challenge – Ages 8-10 (IPB - $140): Have fun working with our humanoid NAO robots and program them using Choregraphe, an easy-to-use drag-and-drop programming language. **Prizes for challenge*

Build Your Own LED Board – Ages 8-10 (IPB - $140): Take what you learned in our electronics and TinkerCAD classes and design your own, cool LED board. You'll be able to take this board home and put it in your room, plus you'll be able to say that you built it all yourself! ****Note: Material fee of $20*

Middle School (11-14)

see calendar for available dates

IPB = Integrated Project Based Multi-day Workshop

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Intro to Movie Making/iMovie (E - $35): Do you want to be a famous actor or director? If you like movies or videos, this class is for you. You will learn about the basics of making good movies, and work with a team to write, direct and produce an original movie.

iPad Garage Band – Ages 11-14 (E - $35): Learn to mix and produce your own music tracks using the Garage Band app. You'll learn about the different instruments and beats you can use and how to mix and match them in an original song you write.

Programming Basics (E - $35): How do computers 'think'? We program them using software, of course. Explore what it takes to be a programmer using two fun and easy tools: Arduino and the Digital Sandbox. You'll make things blink, beep and spin in no time at all!

CAD with Solid Works (E - $35): This class will introduce you to the world of computer-aided design (CAD), a drafting software engineers use to design products before they build or 3-D print them. We will use the industry-standard software Solidworks to design and 3-D print simple toys or jewelry you'll be able to take home with you. *****Please Note: Prints will not be completed by the end of class and will have to be picked up at a later date.***

"MAKEY MAKEY" (IPB - $140): See how electronics and programming can turn everyday objects into musical instruments, video game controllers and more. This is a fun, hands-on class that has something for everyone.

Videography (IPB - $140): Did you like using iMovie and Garage Band? Do you want to be a famous actor or director? If yes, you'll definitely want to take this class. You will learn about the basics of making good movies, and work with a team to write, direct and produce an original movie, and share your film at our very own Film Festival!

Underwater Robotics at Union Reservoir (IPB - $280): Have you ever wondered what happens under the surface at Union Reservoir? Do fish sleep? Are there any buildings? Imagine building an aquatic robot that can find answers to these questions. In this class, we'll use the basics of robotics and engineering to build original, water-based robots. We then will use our OPEN ROV robot to explore and learn about Union Reservoir. We will use various tools to design, build and operate robotic crafts as well as to identify and study specific aspects of the Union Reservoir ecosystem. You will get to be creative, work in teams and have a lot of hands-on fun. Captain Nemo, here we come! *** *Note: Field Trip Permission Form will be required for this class*

Home Automation with PC Duino (IPB - $140): Have you ever dreamed of making a burglar alarm to keep a pesky brother or sister out of your room? Well, dream no longer! In this class, you'll learn how to automate your room and home using the PC Duino. You'll use sensors, cameras, wi-fi and more to design and build your own system. You will program this system using the Python programming language.

NAO Challenge – Ages 11-14 (IPB - $140): Have fun working with our humanoid NAO robots and program them using Choregraphe, an easy-to-use drag-and-drop programming language.
**Prizes for Challenge*

Build Your Own LED Board – Ages 11-14 (IPB - $140): Take what you learned in our electronics and TinkerCAD classes and design your own, cool LED board. You'll be able to take this board home and put it in your room, plus you'll be able to say that you built it all yourself!
*** *Note: Material fee of $20*