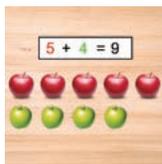


# UC Davis Center for Integrated Computing and STEM Education (C-STEM) Transforming Math and CS Education with Coding and Robotics



*"We are very excited about our experiences and the successes we are having with C-STEM. C-STEM is a "game-changer"... I really mean it."*

Mauricio Arellano  
Superintendent, Redlands USD, CA



## Engaged Distance Learning

The exciting hands-on computing and robotics classroom activities help students make meaningful connections between abstract math concepts and real-life applications.



## Life Skills

Both personalized and collaborative learning, and teamwork build students' confidence in learning by developing their abilities to think critically through real-world problem solving.



## Career and College Ready

The rigorous curriculum teaches student's real-world problem solving using the most widely used programming language and Make technology in colleges and industry for integrated learning of math with computational thinking, science, engineering, and art. C-STEM is a UC Approved Educational Preparation Program for Undergraduate Admission for all UC campuses.

## UC Davis C-STEM Center

Engaging students through integrated learning of math and science with hands-on coding, making, and robotics. The C-STEM Center works to empower educators to confidently integrate technology into their classroom while maintaining focus on the objectives and standards that they currently teach. Through the C-STEM program and curriculum, teachers use technology to extend learning as well as provide alternative experiences for students who do not flourish in a regular textbook classroom. Technology is used as a tool to help students expand their critical thinking skills and their ability to apply STEM concepts to real-world situations.

## For at-risk and gifted students alike, C-STEM program can significantly increase their math performance



*"Our math scores in SBAC increase every year since we adopted the C-STEM Robotics in 2016. This year, we saw that 88% of our students met or exceeded the math standards in 3rd grade, in comparison with 51% in 2015. This is 72% increase in four years."*

Joe Erven, Principal, McPherson Magnet K-8 School  
Orange USD, CA



*"84% 'at-risk' students where all students previously struggled in math, the class finished with a 96% daily homework completion rate and an average grade of 84%. All students passed subsequent Geometry and Algebra 2 Classes."*

Susan Johnston, Livermore HS

# UC DAVIS C-STEM Center

(510) 732-9082

[info@c-stem.ucdavis.edu](mailto:info@c-stem.ucdavis.edu)

<http://c-stem.ucdavis.edu>



@ucdcstem

# Professional Development

No prior coding or robotics experience is necessary. C-STEM will provide all of the professional development needed to engage student learning seamlessly with hands-on hardware and/or virtual robots.

*"I really loved this training. In over 20 years of teaching I can't remember another one I enjoyed so much."*

**Sandy Anderson**, Math Teacher, La Sierra High School, CA



# RoboPlay Competition

RoboPlay is an annual culminating event for the C-STEM Program featuring two separate competitions for students in grades 5-12, RoboPlay Challenge Competition and RoboPlay Video Competition.

**RoboPlay**<sup>TM</sup>

## Challenge Competition

A theme-based level-playing-field robotics competition for students to showcase their real-world math problem solving skills in a competitive environment. The competition arena and specific challenges will be unknown to participants until the day of the competition.

## Video Competition

A robotics-centric video competition for students to explore their creativity in writing, storytelling, art, music choreography, design, video editing, and film production.



# GIRL/GIRL+ Camp

GIRL/GIRL+ Camps in different regions inspire primarily girls to learn leadership and STEM concepts through peer mentoring and an exciting robotics-based curriculum.



## GIRL Camp

The 1-week GIRL Camps motivate primarily girls in middle school, through peer mentoring by college and high school students, to learn leadership and STEM concepts through a fun and exciting robotics-based curriculum.

## GIRL+ Camp

The 1-week GIRL+ Camps motivate primarily girls in high school, through peer mentoring by college students, to learn leadership and STEM concepts through a fun and exciting sensor-based robotics curriculum.

