

STEM

Science Technology Engineering Mathematics

What will you create?

News

August 2016
Volume I, Issue II

2016 STEM Summer Camps

During Summer 2016, over 1,400 Dallas ISD students participated in engaging, STEM-focused activities at our STEM camps held at twenty-five (25) elementary campuses and ten (10) middle school campuses.



Students creating and discovering at the STEM camps

STEM Camp Locations	
Biology Camp	Mount Auburn, J. L. Long, Seagoville
Chemistry Camp	J.N. Ervin, Edna Rowe, Dallas Environmental Science Academy (DESA)
Coding and Robotics Camp	Charles Rice Learning Center, Lorenzo De Zavala, Jerry R. Junkins, J. P. Starks
STEM Electricity Camp	Whitney M. Young, Mark Twain Leadership Vanguard
Forensic Science Camp	Raul Quintanilla, Edward H. Cary
Inventors Camp	John Quincy Adams, Felix G. Botello, Frederick Douglass, H. I. Holland, Clara Oliver, Thelma Elizabeth Page Richardson, Oran M. Roberts, Clinton P. Russell, Urban Park, Ignacio Zaragoza, Rosemont Elementary and International Preparatory Language Academy, Zan Wesley Holmes
Mathematics Camp	Edwin J. Kiest, James S. Hogg
STEM Physics Camp	Anson Jones, Elisha Pease
Robotics Camp	Lee A. McShan, Harrell Budd
STEM Rockets Camp	L. V. Stockard, William H. Atwell Law Academy, Sarah Zumwalt

University-Based Camps

Over twenty-five (25) students from Fred F. Florence Middle School, Judge Barefoot Sanders Law Magnet, Skyline High School, and L. V. Stockard Middle School participated in university-based, STEM summer camp programs at Rice University, Texas A&M University, and Texas Tech University.



Coming Soon
2017 STEM EXPO!
(formerly STEM Day)
Saturday, February 4, 2017

Upcoming Fall 2016 STEM Events
Campus-level Science and STEM Fairs
Vex IQ Robotics Competitions
Mathematics Bridge Building Contests
...and many more!

Stay tuned for more STEM-TASTIC news in our Fall 2016 December newsletter!

STEM Department

- Oswaldo Alvarenga
STEM Executive Director
- Crystal Alexander
STEM Manager
- Jenny Christian
STEM Science Director
- Jeff Marx
STEM Computer Science and Technology (CST) Director
- Stej Sanchez
STEM Mathematics Director
- Barbara Johnson
STEM Health and Physical Education Director
- Lance Johanson
STEM Health and Physical Education Manager
- Nestor Restrepo
STEM Online Professional Learning (OPL) Director
- Mark Broughton
STEM Environmental Education Center (EEC) Manager

Please visit the Dallas ISD STEM Department at www.dallasisd.org/STEM for more information.

Stanley Graff Partnership

In collaboration with Stanley Graff Chevrolet, the Mathematics Department created student videos focused on sparking student interests in STEM and engineering careers by detailing the construction on the second arch of the Margaret McDermott Bridge. For more insight, please visit <http://tiny.cc/UsingSTEMtoBuildBridges>

Do you sometimes think it's hard to get kids motivated in math? You can use the bridge building video to begin a bridge building club!



Model Bridges

The construction and testing of model bridges sets the foundation for advanced mathematics as well as physics by helping students develop process skills through the construction of bridges. Contact Lucy Ford at luford@dallasisd.org or call (972) 925-6785 for more information.

Competitive Robotics



Competitive Field

DISD's VEX IQ competitive robotics league is a great way for students to learn STEM concepts while strengthening their problem-solving skills. Building on our success from last year, elementary and middle school teams will design robots to balance their robot on a bridge and manipulate 'hexballs' into scoring zones. High school teams will also be able to participate this year in the VEX Robotics Competition, Starstruck, by getting their robots to move objects and hang off a bar.

In addition to competitive robotics, thirty-four middle school campuses will be offering the robotics elective course during the 2016-2017 school year.

All-Girl Robotics Camp

In partnership with Texas A&M University, Balch Springs Middle School hosted an all-girl Zero Robotics camp this summer. During the five-week camp, students learned to control zero gravity satellites known as "SPHERES"



Robotics Camp Participants

aboard the International Space Station through computer programming and simulations. The finalists went head-to-head against teams from across the country while astronauts refereed the final competition *live* from space using the SPHERES. Congratulations to the Balch Springs team for placing second in the state of Texas!

Science Enrichment

This summer, 120 Dallas ISD students experienced the great outdoors and connected with nature while participating in a 3-week summer science enrichment program at the Dallas ISD Environmental Education Center (EEC). The program, offered to students entering the 5th grade, gave students an opportunity to use science skills in a real world setting.

Students rotated through classes focusing on entomology, limnology, ecology, geology and botany. Students caught and collected insects, seined and canoed the EEC ponds, hiked the EEC trails, and hunted for fossils. The EEC also offers free field trips for DISD schools. The reservation window opens August 10 for the 2016-2017 school year. Please make your reservations as soon as possible to book the **NEW, FREE EEC bus!**



Students experiencing the great outdoors

PE 3: PE for the Mind, Body, and Spirit



This summer high school students in Dallas ISD had the opportunity to participate in a physical education course designed to work with each individual in the context of their life – physically, nutritionally, psychologically, and socially. The classes utilized IHT Spirit System technology heart rate monitors to provide instant and accurate feedback on daily workout results. Students participated in mind and emotional well-being aerobics by completing a student journal. The results enabled each individual to strive for and reach the full potential of the human spirit.

STEM Professional Development (PD)



STEM teachers participated in learning opportunities during Summer 2016:

- Four teachers attended a one-week, 3D printing workshop at Texas A&M University.
- Middle school robotics teachers received PD from the Carnegie Mellon Robotics Academy.
- Over 1,200 mathematics teachers received personalized PD.
- Middle school science teachers participated in inquiry-based PD at the Dallas Arboretum.
- Elementary school science teachers participated in Hot Wheels Speedometry PD facilitated by Dr. Morgan Polikoff from the Rossier School of Education at USC.
- Secondary science teachers learned strategies to help students succeed at all levels of the science fair.
- Science teachers attended a two-day workshop with Code.org.
- All mathematics and science teachers had opportunities for online professional learning opportunities.