

STEMULATING NEWS

Tulsa Public Schools STEM Happenings Newsletter

November 2015

TPS STEM Blueprint

In the 2014-15 school year, TPS partnered with TIES (Teaching Institute for Excellence in STEM) to develop a Blueprint for STEM in Tulsa Public Schools. Teachers, administrators, and community stakeholders met to design this plan. There are four Design Principles that serve as the foundation for this plan:

Equity: STEM for ALL

Pedagogy: Inquiry-based instruction across all subject areas

Workforce: Preparation for and alignment to workforce needs

Community Collaboration: All stakeholders are involved

STEM Definition

We are moving from “S.T.E.M.” to “STEM.” STEM is no longer simply Science, Technology, Engineering, and Math, but it is “Strategies That Engage Minds” and can be used when teaching any content. It is inquiry-based, uses problem-solving strategies and addresses real-world issues.

Blueprint Projects

Grade Level STEM Experiences: This year we will work with groups of teachers to develop a STEM experience for every grade level in grades K-8. This will take the form of a Project-Based Learning experience and partner with one of our community stakeholders for authentic learning.

Lead STEM Practitioner Program: Fifteen TPS teachers have been selected to participate in a year-long professional development experience to learn how to be stellar STEM teachers. They will be trained by TIES (Teaching Institute for Excellence in STEM) and serve as mentors for teachers in the district.

STEM Center: Plans are being developed to create a TPS STEM Center. This center will serve as a resource for the entire district with resources and equipment to do STEM . Some Grade Level STEM Experiences will take place at the STEM Center.

STEM Calendar

November 6th: Tulsa Research Kids, <http://tulsastem.org/tulsa-research-kids/>

November 7, 14, 21st: First Lego League Qualifiers: <http://oksef.org/>

November 12th: Junior Botball Challenge

November 19th: OK Women in STEM <http://tulsastem.org/event/oklahoma-women-in-stem-event/>

Coming Up: Gingerbread Contest: <http://tulsastem.org/gingerbread-building-competition/>



McLain Students and Teachers Pose With Award-Winning Roller Coaster

Memorial Robotics Students Volunteer at STEM Exploratorium

Memorial High School Robotics Students spent the day at the STEM Exploratorium hosting a booth and then staying after the event was over to put up tables and chairs. Children who stopped at their booth played with Snap Circuits and had a blast trying to catch the blue ball that their robot launched towards them!



Memorial High School Robotics

McLain 8th Graders Win Roller Coaster Contest at STEM Exploratorium

Eighth grade students at McLain entered the Roller Coaster Contest at the STEM Exploratorium in September and walked away with the Grand Prize. The Exploratorium is an annual event hosted by the Tulsa Regional STEM Alliance and Flight Night. It is an expo with booths from universities and businesses in the area to show students how STEM is used in their work. In order to attend the event, students were required to design a roller coaster for a marble. Students had to work within given constraints to construct their design. The McLain students led by their teachers Ms. Cephalus, Ms. Kirk, and Ms. Nuckels constructed a unique roller coaster with a Breast Cancer Awareness Month theme. Congratulations to these students and teachers!

Other TPS Schools Visit the Exploratorium

Besides McLain and Memorial, several other schools visited the STEM Exploratorium and entered the Roller Coaster Contest including: Hoover Elementary, Monroe, Whitman, Jones, Kendall-Whittier, Clinton, and Anderson.



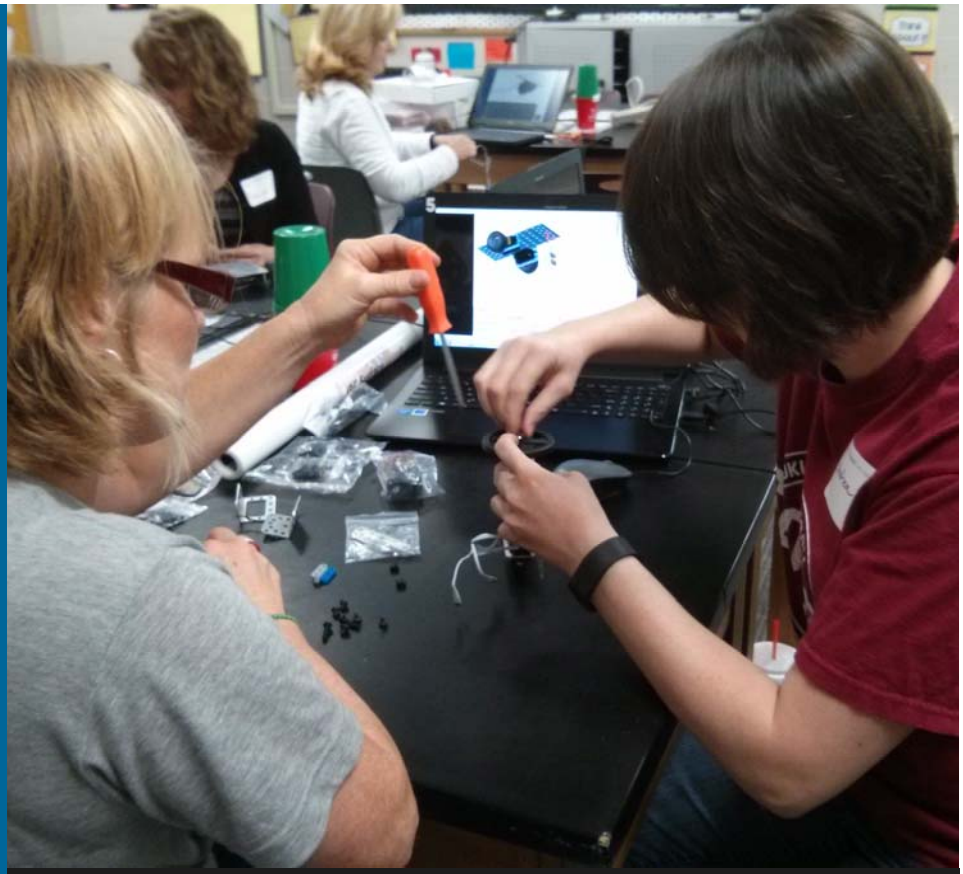
Students from Kendall-Whittier Visit the Exploratorium

November 12th Junior Botball Challenge

Schedule:

- 8:00—9am – Team Check In
- 9:00 am – Tournament Begins
- 11:30 pm – Lunch Break
- 2:00 pm – Tournament Concludes

The Tournament is FREE to attend.



Cathy Essley, 4th grade Carnegie and Andrea Bengé, 5th grade Kerr, build a robot

Junior Botball Takes Off in TPS

Thanks to a grant from the Oklahoma State Department of Education, several TPS elementary and middle school teachers were able to start Junior Botball programs at their school. In September, they attended the training and learned how to program the robot using “C” language. Their student teams will attend the Junior Botball Challenge on November 12th at Expo square to demonstrate how they can program their robot to complete different courses.

Updates for Junior Botball Participants: If you were not able to make it to the November 12th event, that’s okay. We are planning on having a TPS event sometime this winter and will keep you updated. Also, if anyone is still having trouble getting the software loaded onto computers, please contact me: hasfjju@tulsaschools.org.

Want to know more about Junior Botball? Go to www.kipr.org



Ms. Fischer’s students build a robot at Hamilton Elementary for Junior Botball



Project Lead the Way, a STEM coursework program, is now at 5 TPS elementary schools (called Launch) and have received materials. PLTW courses are also at 5 TPS middle schools.

PLTW Gateway is beginning a year-long process of rewriting and redeveloping the design and modeling unit.

What's Your Story?

There is SOOO much going on in STEM in TPS! I want to document the great work you are doing! Do you have a Science Club or Robotics Team and I haven't been in touch with you yet? E-mail me and let me know. Are you teaching a cool STEM lesson and need an extra set of hands? I'd love to help out! Or maybe you just want me to come take some pictures to document your project. If you are doing STEM, I want to know about it!

Contact

Julie Hasfjord
Academic Coordinator
for STEM

**College and Career
Readiness Office**
Tulsa Public Schools

Education Service Center

3027 S. New Haven Ave
Tulsa, OK 74114

(918) 746-6986

hasfju@tulsaschools.org

Twitter: @TPSSTEM



“Hour of Code” is Coming Dec 7-11

Hour of Code is a national movement to get students doing computer programming at school. During the week of December 7-11, teachers spend at least one hour in that week letting students explore coding activities. Have no clue where to start? No problem! Go to My Learning Plan and sign up for a one hour session that will teach you everything you need to know to engage students in coding for one hour that week (and probably much longer!) There are two sessions:

“Get Ready for Hour of Code K-5”: December 3, 4:00-5:00

“Get Ready for Hour of Code 6-8”; December 3, 3:45-4:45

Be sure to sign up and Bring Your Own Device to the training!



STEM Expo Coming December 4

The STEM Expo is the innovative alternative to the typical science fair. This exciting, free, one day event features educational opportunities and viable career paths – showcasing elementary through high school student-generated work – connecting students with their community. There are opportunities for your students to present at the Expo or to take a field trip there to tour other projects.

www.okstemexpo.com/tulsa Contact stemexpo@doveschools.org