Parents and Guardians,

February is upon us! We have so many varied items going on, we wanted to share some of them with you.

PBLs

Ninth grade students are working on a PBL about energy. The PBL on energy will introduce students to the essential concepts of the design thinking process and energy efficiency through the research and design of a cost-effective, energy efficient house model. Based on a given environment location, students will apply research, creativity, and critical thinking to collaboratively plan, build, and design a model of a cost effective, energy efficient house. Within the house, students will develop energy efficient systems for electricity, water, heating, cooling, and other systems. Students will also present their house model, justifying the energy efficient choices based on costs and research.

Tenth grade students are multitasking. Their main focus is on their current business partner PBL with Unum about coding. Students will use the LRN application to learn HTML, CSS, and JavaScript with varied coding logic principles. Students will apply their foundational computer language skills to create and build a web based application for each content area. Students will work with identified student coding experts throughout the unit instead of technical expertise coming from the faculty. The unit will conclude with groups participating in a coding challenge competition at the school created by Unum staff and student experts. The top groups in the school-based competition will then be invited to compete in a similar coding challenge against Unum employees at Unum's headquarters for viewing by all Unum employees.

Tenth grade students are also teaching their previous PBL unit STEM elementary lessons over the next two months to elementary students across the district. Ten student teams were chosen by the Creative Discovery Museum to lead the STEM lessons with elementary students. The student teams will teach approximately 2000 elementary students over the next two months. We are so proud of our students for their efforts in providing quality STEM experiences to younger children throughout our community.

Eleventh grade students are participating in a choice of PBL opportunities this quarter. The opportunities include:
--Challenger Center Micronaut Space Station project where student teams will produce a space-station themed environment for the Micronaut program suitable for use by Challenger Centers around the world.
--Automated Aquaponics project where student teams will prototype an easy to operate aquaponics farm system for home-based users.
--Assistive Technology project where student teams will create assistive technology solutions to improve life for a young woman with disabilities.

--Miller Park Interactive Experience project where student teams will create innovative interactive experiences for the new Miller Park and develop executable plans so the River City Company can transform them into reality.
--STEM Math Hallway project where student teams will design and build out an inspiring STEM math hallway to motivate and excite students about the power and possibilities of math.
--Barcode Scanner project where student teams will create an affordable and improved attendance tracking system to replace the current system.
--Phase II Management Tool project where student teams will create a streamlined solution to automate management of Phase II interventions.

As for **twelve grade** students, they just completed our annual SURGE entrepreneurial showcase. This year we even had the honor of one judge flying to Chattanooga for the event. The judge was the Executive Director for MIT's entrepreneurial program – Dr. Stephanie Couch (https://lemelson.mit.edu/bio/stephanie-couch). Dr. Couch shared with me that STEM School Chattanooga is her favorite high school in the United States! If you want to be blown away by what a STEM School student can do, take some time to watch these showcase student presentations. Truly amazing. Link - https://sites.google.com/hcde.org/surge/previous-work?authuser=0

Fab Foundation Leadership Cohort

STEM School Chattanooga has begun its work with the Fab Foundation on the SCOPES DF project – Scaling a Community of Practice for Education in STEM through Digital Fabrication. Faculty collaborated with some of the best digital fabricators in the world in Boston, MA this past December as we work to grow out the vertical alignment opportunities for students in digital fabrication and computational literacy learning. For more information, you can visit the SCOPES DF website (www.scopesdf.org) and read the press release from this past month (http://www.prweb.com/releases/2017/12/prweb15041927.htm).

House Competition

February's house competition is a community service project, donating to the WINGS group, an organization that helps women and children who are homeless. The collection drive has already started and ends on Monday, February 12. House points will be awarded for first, second, third and fourth place depending on the total number of items donated. Bins are located near Ms. Price-Gray's room and the list of items being collected include paper towels, laundry detergent, toilet paper, soap/body wash, toothpaste, toothbrush, tampons/pads, brush/combs, deodorant, socks, conditioner/shampoo, and lotion.

Upcoming Dates

--Monday, February 12: STEM Parent Leadership Team meeting (PLT) at 6:30pm
--Monday, February 19: Presidents Day (No classes at STEM School; Chattanooga State classes are in session)

--Monday, March 5 thru Friday, March 9: Chattanooga State Spring Break (STEM School classes are in session; No classes for Chattanooga State college classes)
--Tuesday, March 6: National Honor Society Induction Ceremony in Bond Auditorium on Chatt State campus. Time is TBD.
--Tuesday, March 13: Rising 11th Grade Parent Night in Health Science Center on Chatt State campus. Time is TBD.
--Friday, March 16: Teacher Professional Development Day (No classes at STEM School; Chattanooga State classes are in session)

Thank you for your support!

Dr. Tony Donen
Principal