

S.T.E.M. Chronicles

SGAET Monthly Newsletter

Volume I Issue 3

November 2018

SGAET S.T.E.M. News and Events

Z Space Bus Experience

On November 29th, SGAET 5th graders will be boarding a bus for a trip to their future. They will get to experience the amazing Z Space computers currently installed in our 6th grade *Design Challenge* classroom, our 6th/7th grade *Project Lead the Way* classroom and the *Maker Space lab* (launching next month).

Through the use of special glasses containing sensors that interact with the computer, the Z Space computer allows the user to see the images on the screen in 3D, visually pulling the items off the screen with a special cursor. The software currently installed allows students to explore, investigate, and build in a virtual simulation of the real world. Alternately, it allows students access to things that can not normally be seen in the real world by allowing students to investigate and explore at a microscopic level. Our SGAET 5th graders are in for an amazing journey!

Great Things Happening in the World of S.T.E.M. for Our 7th Grade ELA Colts!

Our very own Mrs. Hubbard is braving a new frontier in technology here at Gaines. She's trying her hand at piloting a great new feature available to us through one of our partners, Microsoft, Classroom Notebook. This feature allows Mrs. Hubbard to digitally connect with the students and essentially set up a virtual classroom. Students can do everything from follow along with PowerPoint presentations, complete assignments, participate in small group, etc. "This is a great way to interact with the kids and get the other grades involved with the magnet status of our school, it also saves paper and me from having to make copies." says Mrs. Hubbard when asked how effective this new resource is.

"The goal is to have the entire 7th grade ELA team to go live using classroom notebook in January of 2019," says Mrs. Thomas, 7th grade ELA Team Lead. "Mrs. Hubbard has eagerly agreed to pilot this mini project. We want to see and feel S.T.E.M. in action and get as many students involved in the movement as possible."

Engineering Quote of the Month

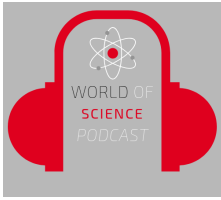
"Engineers are all too often unsung heroes; if we are ever, in truth, to travel between stars, it will be thanks to their aspirations and imagination... for they are the bridge builders."

— Janine Ellen Young

Maker Space Launch

The Countdown has begun...

On December 13th, SGAET, in partnership with Lego Education and Microsoft Corporation, will be hosting a launch event for our Maker Space lab. The Maker Space lab will contain a multitude of facilitated learning opportunities. These include engineering using Legos STEM Park, robotics and coding stations, Minecraft Education, 3D printers and more. Be on the lookout for more information about this exciting event.



Introducing the *World of Science Podcast Series*

Seventh and eighth grade students in Mr. Stover's *Information and Communications Technology* class are finishing up their scripts for the newly-developed *World of Science Podcast Show*. The *World of Science* is a podcast series for 5th graders centered around real-world stories, incorporating 5th grade science standards.

To record the podcast, Mr. Stover's students will use professional USB microphones and edit each episode in Adobe Audition. Recording starts the last week of November and will extend to the rest of the semester.

6th Grade Innovations First Stepping Stone to the Real World

Sixth grade teachers are taking their instruction to the next step by using a *Swivl* Camera in the classroom. The *Swivl* allows teachers to monitor their teaching strategies and film student conversations, catching accountable talk in action. When used throughout the day, students can build on each other's conversations, even when they are not in the same class.

Furthermore, teachers can post their filmed lessons on their Canvas course, allowing students who are absent access to valuable instruction from their teacher. The *Swivl* truly supports the next level of instruction by taking learning beyond the classroom.

Save the Date!

Title1/S.T.E.M. Night

On December 4th, from 6:00 –7:30 p.m., SGAET will be hosting a parent educational meeting and spaghetti dinner.

Families will learn about Title 1 and how S.T.E.M. is currently integrated throughout the school. This will be followed by an example of a hands-on STEM activity.

Kindergarten S.T.E.M. Our Youngest Engineers

Students in Kindergarten read the book, *Goldilocks and the Three Bears*. They were then given the task of building a chair for Goldilocks that would not break when she sat in it.

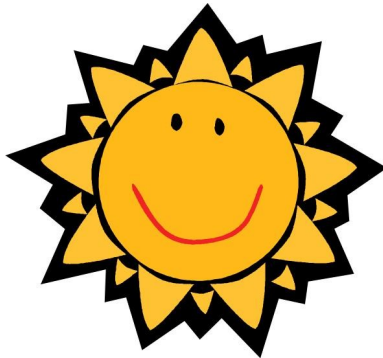


In conjunction with their Motion Unit, students were given the task of constructing a functioning race track.

SGAET Colts are Making History!

Turn Up the Heat! 5th Grade Solar Oven S.T.E.M. Challenge

During the Energy Unit, 5th graders participated in a S.T.E.M. Challenge to design an oven that could cook a s'more using only the energy from the Sun. Using what they learned throughout the *Energy Unit* about solar, heat, and light energy, students harnessed the sun's energy to reach temperatures up to 130 degrees Fahrenheit! From designing their solar oven, to collecting data, and finally enjoying their s'mores, students proved that this S.T.E.M. Challenge was no match for them.



Heating Things Up!

Fourth grade explored solar energy this month with their own solar ovens. They investigated temperature changes caused by the Sun's heat energy and observed how that energy changed a solid to a liquid in the melting process. Students were both surprised and excited to see that the solar oven really worked!

S.T.E.M. Around Our School



More Popcorn Please

Students worked together in Ms. Calixto's Pre-Algebra class to derive the formula for the volume of two different cylinders. They created the cylinders using the same sheet of paper. They then filled each cylinder with popcorn to find out if there was a difference in volume. What a yummy way to combine math and engineering!



5th Graders

Make Their Words Count

Students in 5th grade collaborated to make "Dollar Words". The way it works: Each letter in the alphabet has a value. The letter a is worth 1 cent, b is worth 2 cents, c is worth 3 cents and so on. Students quickly made a table chart with every letters value and tried to come up with words that were worth a dollar.

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