



Austintown Middle School STEM Newsletter



March 2017

Calendar

April 10-14- Spring Break

Apr. 24 & 25- 8th Grade Math
AIR Testing

Apr. 26 & 27- 8th Grade
Science AIR Testing

Apr. 26 & 27- 7th Grade Math
AIR Testing

Wednesday, April 27- Start of
Science AIR Testing (8th Grade)

Saturday, April 29- Soap Box
Derby Race in Cleveland

Wednesday, May 3- AMS
STEM Spring Showcase

Friday, May 5- Deadline to
apply for AMS STEM Program

Thursday, May 16- Field trip to
Derby Downs in Akron

Saturday, May 20- Soap Box
Derby STEM Race in Akron

Wednesday, May 31- Last day
for students



Students explore STEM stations

12:00 a.m. Fri. Austintown Intermediate School fourth-grade students had the opportunity to learn about the STEM program on March 7.

Sarah, Laura, and Bella pose with a Soap Box Derby stock car they used to show the building process at STEM Day. [Click here](#) to access the Austintown Neighbor's article featuring the AMS STEM students holding STEM Day at AIS on March 7th.

Greetings Families,

March was a busy month in the AMS STEM Program. Students held STEM Day at AIS for all of the 4th grade students. The STEM students taught their 4th grade peers many hands on labs and activities, such as, 3D printing, automation, windmill design, compound machines, Soap Box Derby car building, gear trains, microscopes, slime-making, and much more! It was an exciting day for both the AMS STEM students and the 4th graders.

Students started AIR testing and completed the Language Arts portion of the test. At the end of this month all students will complete the math portion and 8th graders will take the science portion of the test.

Seventh graders concluded the Automation & Robotics unit and have commenced into the Medical Detectives unit. They will be taking vital signs such as body temperature and blood pressure, investigating human senses, and performing dissections. The eighth graders concluded the Green Architecture unit and completed their final project. They designed and estimated the cost of their dream home. They have now begun the final unit on Flight and Space.

APPLY NOW

Applications for the AMS and Fitch STEM Program are being accepted for the 2017-2018 school year. Click on the link to access the applications. Seats are limited. Deadline is April 21st for incoming 9th grade and May 5 for AMS STEM.

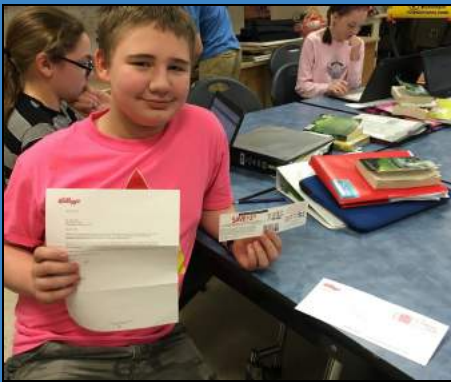
[STEM Applications](#)



Zachary displays his VEX clawbot he built and programmed as part of the Automation and Robotics unit. Great job buddy!



Colin shows 4th graders a student designed and 3D printed lightsaber.



Ryan wrote a persuasive letter to Kellogg's lobbying for the creation of a blue cheese flavored Cheez It. They wrote back and said they are considering it and running it through their research and development department. How cool is that!



Julia and Sydney demonstrate to 4th grade students the proper stance when driving a Soap Box Derby car.



Candice assists 4th grade students during AIS STEM with using microscopes to study slides of various plant and animal cells and tissue types.



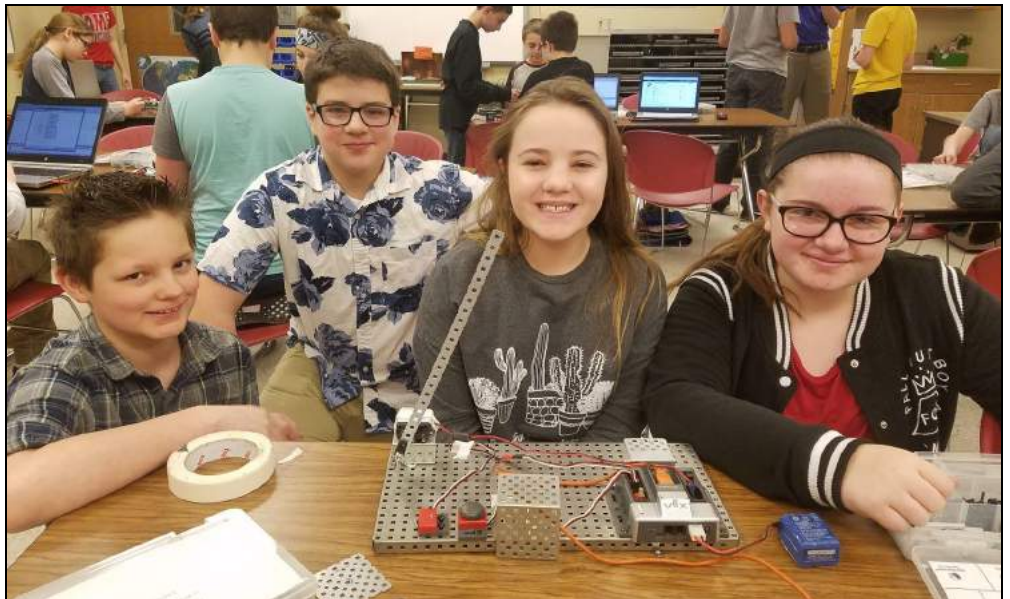
**Last day for students is
Wednesday, May 31st.**



AMS STEM alumni came to visit Mr. F and the 8th graders and discuss their Fitch STEM experience (from left, Jackson, Josh, Joe, and Tylor). Fitch juniors got out early after ACT testing and used that opportunity to visit their fellow classmates.



Junior STEM officers prepare for the next Jr. STEM meeting which will be held on Thursday, April 6th.



Jude, Jon, Bella, and Deanna display their toll booth, an automated arm designed to go up and down along with flashing lights.



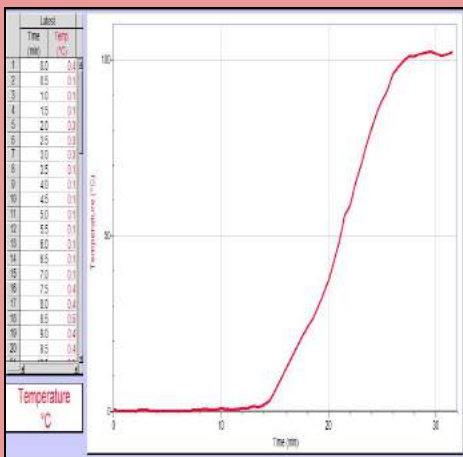
Chelsie shows 4th grade students how to use a microscope to get a close up view of many types of plant and animal cells.



Alivia, Emma, Jaymes, and Ethan demonstrated "Grandma's Chair", a model of an automated mechanism designed to get grandma up and down the stairs safely.

7th Grade

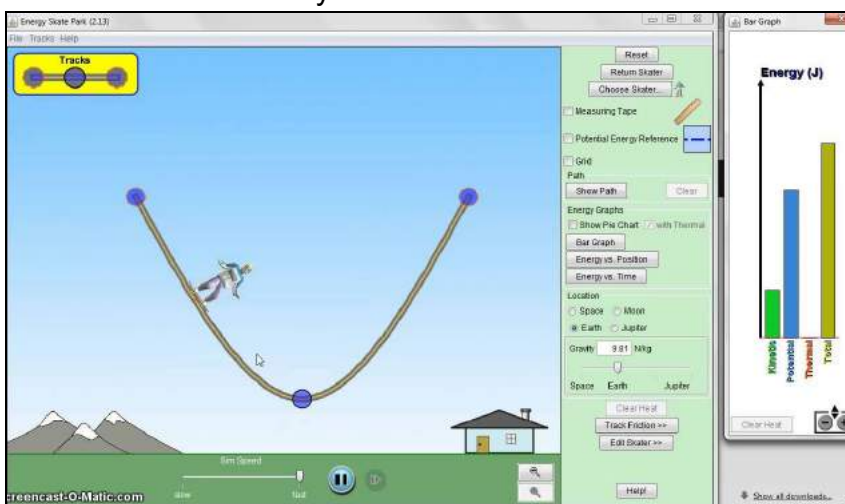
- ★ Students are currently learning concepts of surface area and volume of various 3D figures in the unit, *Filling and Wrapping*. We will be finishing this unit before Spring Break, so we can focus on reviewing for the Math AIR Test on April 24th.
- ★ Students concluded the Vex Robotics unit with the completion of "Your First Engineering Job". In this project students completed various missions such as building a tollbooth that the light turns green when the arm goes up and the light turns red when the arm goes down. We are just beginning our Medical Detectives unit.
- ★ In Science, students created energy pyramids based on an endangered species and their ecosystem. They had to research the producers, primary secondary, and tertiary consumers that were in the ecosystem with their endangered species. Students explained how a decreasing population of a species affects the rest of the ecosystem.



7th grade students used Vernier temperature probes to graph the warming of the probes by grasping it with their hands as part of the Medical Detectives unit. Then they analyzed the graphs and explained.



Alivia talked about ratios and states of matter when making slime with the 4th graders during STEM Day at AIS.



8th grade students investigated the reciprocal relationship between kinetic and potential energy using the simulated skate park.

Austintown Fitch High School STEM Program Pathway



2017-2018

"Ask not what I want to be
when I grow up, but what
problem do I want to solve!"



[Click here](#) to access an informational presentation regarding the Fitch STEM Program.



8th Grade

- ★ The 8th graders have finally wrapped up the Green Architecture unit last week. The final project had them design and build a home within a budget that was based on their last report card grades. They had to purchase a lot and design the house within their budgets using a building cost estimator. Then, they had to create a set of real scaled blueprint drawings along with their digital floor plans using Autodesk Homestyler. It was a lot of work and fun.



Two beautiful smiling faces were seen at AIS while learning about elements of architecture during STEM Day at AIS.



[Click here](#) to access the Austintown Neighbor's article featuring the AMS STEM students during STEM Day at AIS.



- ★ This past week we began our Flight and Space unit. We are learning about the forces of flight and will be designing flying machines over the next week. We will then design and test airfoil designs on NASA Folsim simulator to create on CAD and transfer to testable foam foils in our Wing Tester.



Austintown trustee, Jim Davis came to speak to the 8th grade students about local government. He answered all their questions about how the township is run and the aspects of implementing change.

- ★ In science, students have been studying forces and motion with an emphasis on gravity. Students designed models to demonstrate the benefits of seatbelts using Newton's first law of motion. They used their models to compare the effectiveness of shoulder and lap belts vs lap belts only.



Main Floor homestyler

The main floor consists of 1 full bath, living area, kitchen, a 2 car garage, and character to the basement and second floor.

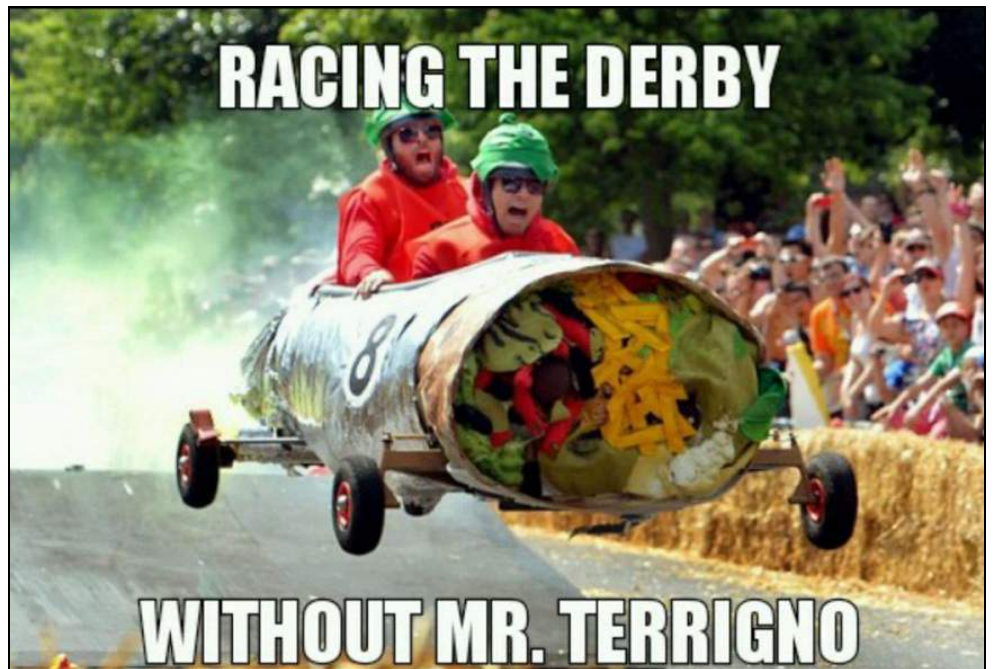


Cost estimator

Item	Quantity	Unit	Price	Total
Foundation	1	Sq. Ft.	\$10.00	\$10.00
Framing	1	Sq. Ft.	\$15.00	\$15.00
Roofing	1	Sq. Ft.	\$20.00	\$20.00
Exterior Siding	1	Sq. Ft.	\$30.00	\$30.00
Interior Siding	1	Sq. Ft.	\$25.00	\$25.00
Windows	1	Sq. Ft.	\$10.00	\$10.00
Doors	1	Sq. Ft.	\$15.00	\$15.00
Basement	1	Sq. Ft.	\$10.00	\$10.00
Second Floor	1	Sq. Ft.	\$15.00	\$15.00
Garage	1	Sq. Ft.	\$20.00	\$20.00
Land	1	Sq. Ft.	\$10.00	\$10.00
Utilities	1	Sq. Ft.	\$15.00	\$15.00
Home Building	1	Sq. Ft.	\$10.00	\$10.00
Other Add Ons	1	Sq. Ft.	\$15.00	\$15.00
Total				\$415.780

With all of the features that are in the home, the home estimate is \$324,282. When adding in the price of the moving and utility costs up to \$10,000 and the cost of the lot, \$11,500. The grand total of this house would be about \$415,780.

8th grade students completed their Green Architecture final project. They had to design their dream home by making scaled drawings and then using Autodesk Homestyler. Then they estimated the cost for the land, utilities, home building, and other add ons.



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[Austintown STEM Website](#)

[AMS STEM Student Website](#)

