



Austintown Fitch High School

STEM Newsletter



February 2018

Calendar

March 6 & 7- Fitch STEM students to AIS STEM Days

March 15- Field Trip to [MAPS](#) air museum in Akron

March 23- Ends 3rd nine weeks and NHS Induction 9 am

March 26-April 2- Spring Break

April 12- Phantoms Hockey Game field trip

Tues. May 29- Last day for students



Team Cosmic Guardians qualified for the 2018 Ohio Vex Robotics Competition (VRC) High School State Championship being held in Columbus on March 9th and 10th. Pictured (from left) Hannah Harris, Tre Moore, Sam Maguire, Isaac Robbins, Robert Malizia, and Erica Ramirez (not shown). Good luck!

Greetings STEM Families,

February was a short and fast month but we accomplished so much! STEM students in all grades have been working on many various projects and collaborative assignments. Two teams of 10th graders competed at the [Mahoning Valley Miniature Bridge Building Competition](#) at YSU on February 24th. Students raced against the clock to build a balsa bridge capable of holding increasing weight. They did a wonderful job representing the Fitch STEM Program. In addition, all middle and high school STEM students will be presenting station activities at the AIS STEM Days on March 6th and 7th. This is an excellent example of peer instruction and mentorship in the STEM Program. Lastly, on March 15th all students will be touring the MAPS Air Museum in North Canton. This is one of the most well received field trips students participate in while enrolled in the STEM Program.

APPLY NOW

Applications for the Fitch STEM Program are being accepted for the 2018-2019 school year. The link to access the application is below. Seats are limited.

[Fitch STEM Application Link](#)



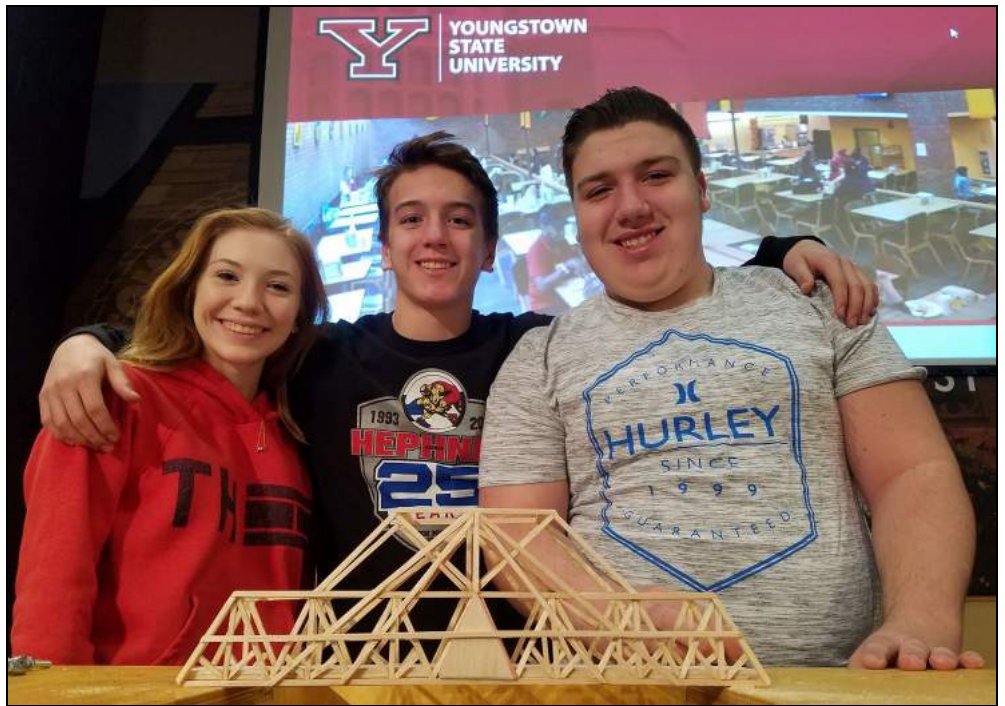
March 6th & 7th, students will be hosting STEM Day at AIS. Students will receive hands on, engaging lessons from experienced STEM students.



Robert manipulated and tested several gear trains while building the VEX Robot for competition on February 3rd at the MCCTC.



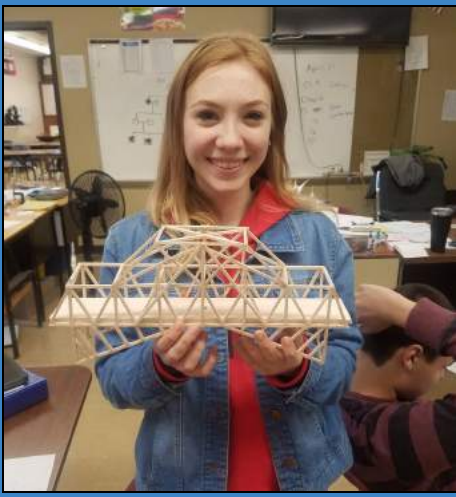
All students will tour MAPS Air Museum on March 15th. This is one of the most anticipated field trips and an engaging way of learning about the rich aviation history in Northeast, Ohio.



Jamie, Zack, and Payton showcased their bridge during the Mahoning Valley Bridge Building Competition at YSU on Feb. 24.



Zack, Squire, and Brett displayed their bridge during the Mahoning Valley Bridge Building Competition. #FalconPride



Jamie proudly displays a practice balsa wood bridge she created in preparation for the Mahoning Valley Bridge Building Competition held at YSU on February 24th.



Hannah, Robert, and Sam ate a delicious catered lunch at the MCCTC during the last VEX League Play on February 12th. They secured a seat at the VEX Robotics Competition (VRC) Ohio State Championship on March 9th and 10th by winning the Design Award for documentation of their robot design.

“It does not matter
how slowly you go
as long as you do not
stop”

Confucius



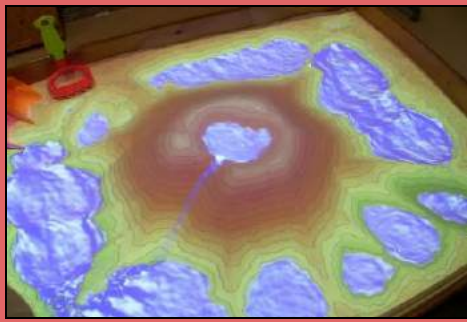
Mr. Folkwein got inspired while visiting [InventionLand](#), the world's largest invention factory on January 31st. It was like touring Willy Wonka's chocolate factory!



Ms. Chine conversed with YSU President Jim Tressel during the Mahoning Valley Bridge Competition. They discussed the importance of STEM and undergraduate research.

9th Grade

- ★ Engineering Design students have perfected the use of geometric and dimensional constraints to create work planes, axes, and points to create 3D designs and creations. They will use this knowledge to test their reverse engineering skills by creating Automoblox. They will perform a structural analysis in order to determine the materials used and the form of the components. Students will create a portfolio documenting their



The augmented reality sandbox created by students last year will be showcased on STEM Days at AIS on March 6th and 7th.



Click here to take a brief survey regarding you and your child's STEM experience. [Click here to take the survey!](#)



Ms. Sroka displays her inner STEM with her watch featuring square roots for the hours.

reverse engineering process.

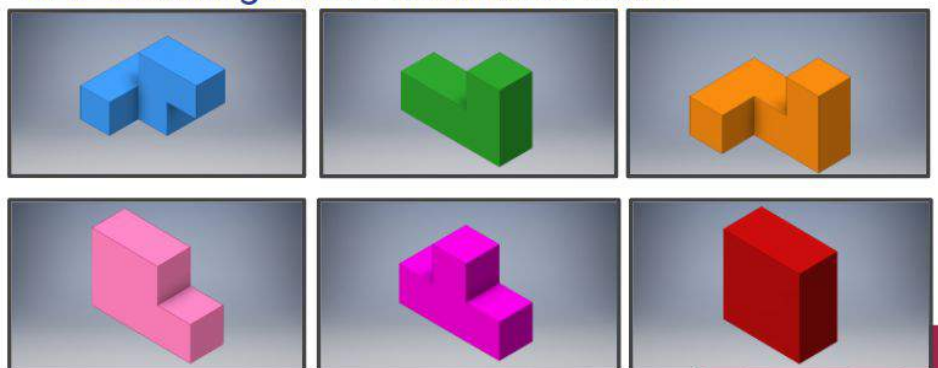
- ★ Technology project students are working on a cross curricular project based off the book they are reading in English called Fire and Flood. They must create five different stages in AutoCAD mimicking the biomes showcased in the book. Each stage must contain three different obstacles that parallel themes from the book. This is a great example of using interdisciplinary skills in the STEM Program!



10th Grade

- ★ Principles of Engineering students have begun focusing on material properties by investigating the manufacturing process used to create component utilized in prior units focusing on product analysis. Students are performing various materials testing methods, such as, scratch, conductivity, and continuity testing. These testing methods are used in the engineering field to test the strength and other properties of bridges, roads, cement, joints, and other mechanical machines.
- ★ Students have been working on several station activities for STEM Days AIS from AutoCAD and 3D printing, bridge construction and design, and robotics. Students will teach their younger colleagues these powerful STEM skills.

CAD Drawings and Assembled Cube



Austintown Fitch High School
STEM Program
Pathway

2018-2019

"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.



Mr. Wyant, Ms. Sroka, Mr. Folkwein, and Ms. Chine all pose at [InventionLand](#), the world's largest invention factory on January 31st. During the training, teachers learned more ways of engaging students and how to inspire innovations in the classroom!

Change begins with a whisper.

the
Help

Based on the #1 New York Times Bestseller
by Kathryn Stockett

In Theaters This August

Juniors are reading about the Civil Rights Movement and examining the genre of Southern Gothic while reading, *The Help* by Kathryn Stockett.

repl.it

Untitled Session

languages examples Log in

share save run

```

1 # Import the modules
2 import sys
3 import random
4
5 ans = True
6
7 while ans:
8     question = input("Ask the magic 8 ball a question about the future!\n")
9
10    answers = random.randint(1,8)
11
12    if question == "":
13        sys.exit()
14
15    elif answers == 1:
16        print ("It is certain")
17
18    elif answers == 2:
19        print ("Outlook good")
20
21    elif answers == 3:
22        print ("You may rely on it")
23

```

Python 3.5.1 (default, Dec 2015, 13:05:11)
[GCC 4.8.2] on linux

terms privacy about us blog feedback help api teachers

Junior STEM students are using Repl.It and Project Lead the Way to learn the fundamentals of Python, a high level all-purpose programming language.

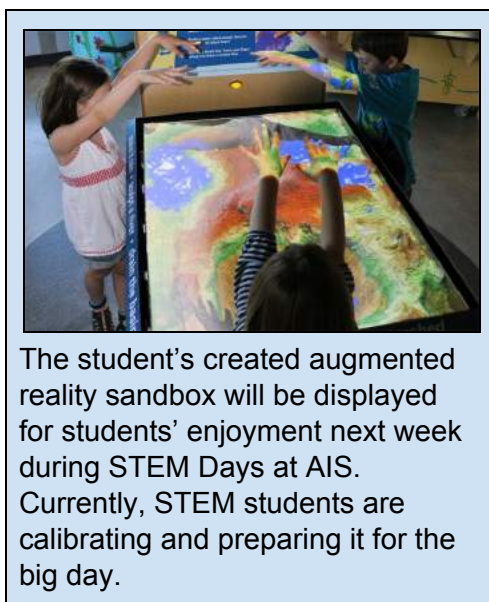
11th Grade

- ★ Computer Science 1 students are using strings and conditional statements to create Python programming commands. These commands will be used to create computer programs to create games and internet shopping carts like used when purchasing items on Amazon and other internet shopping websites.
- ★ Students are preparing for STEM Days AIS by creating station activities from the augmented reality sandbox, automatic

Puzzle Cube Presentation

By Joey Hughes

Freshman students have completed their puzzle cube projects showcasing the design process using isometric sketching and AutoDesk computer modeling techniques.



robotics arms, VEX competition robots, and the basics of circuitry. Students will teach their younger colleagues these powerful STEM skills.



Tre, Sam, and Erica powered through a long day of competing during the VEX Robotics Mahoning Valley Qualifier on February 3rd at the Mahoning County Career & Technical Center.

12th Grade

- ★ Engineering Design & Development students are completing Element D in their portfolio which is evaluating their project and adjusting their timeline. This mimics what students will be doing as a real-life engineer on a project. Soon they will begin putting together their portfolio and assembling all the elements.



Ms. Smith co-taught with Mr. Folkwein to facilitate a "line dance" modeling

chromosomes during meiosis.

Teachers:

Josh Folkwein jfolkwein@austintownschoools.org

Celia Sroka csroka@austintownschoools.org

Ashley Smith asmith@austintownschoools.org

Brian Umstead bumstead@austintownschoools.org

Robert Wyant rwyant@austintownschoools.org

Danielle Chine- K-12 STEM Instructional Coach

Email: dchine@austintownschoools.org

Austintown Fitch High School

4560 Falcon Dr.

Youngstown, OH 44515

www.austintownschoools.org

330-797-3900

[Austintown STEM Website](#)

[AMS STEM Student Website](#)

[Fitch STEM Student Website](#)

