



# The Kennedy STEM Spotlight

December 8, 2015

## STEM Events at Kennedy Middle School

### Hour of Code

We know that our students' success rate in their future careers depends on their understanding of how technology works. There are only a few number of people who study computer science and not many are familiar with this field.

Our entire school is joining students across the world in The Hour of Code. This is taking place during Computer Science Education Week (Dec. 7-13). More than 100 million students worldwide have already tried an Hour of Code. Our Hour of Code is a statement that Kennedy Middle School is ready to teach these foundational 21st century skills.

Students are participating in an Hour of Code during one of their PL blocks. Students will then be entered in a drawing for a chance to win an iTunes gift card!

Interested in trying out an hour of code? Visit this site and choose a tutorial! <https://code.org/learn>



*Our female students about to watch the "Code Girl" documentary*



*A small group of students have been programming our Dash and Dot robots to solve various missions for a national contest.*

### "Code Girl" Documentary

There are very few females in the Informational Technology (IT) field. The majority of individuals with jobs in the IT field are male.

On November 4, we invited many of our female students to watch a free screening of the documentary, "Code Girl".

This documentary followed several groups of girls around the globe on their journey in developing a new App.

They had entered the Technovation challenge where they were to identify a local problem and develop an App to help solve this problem. Their App was made possible through group work and coding.

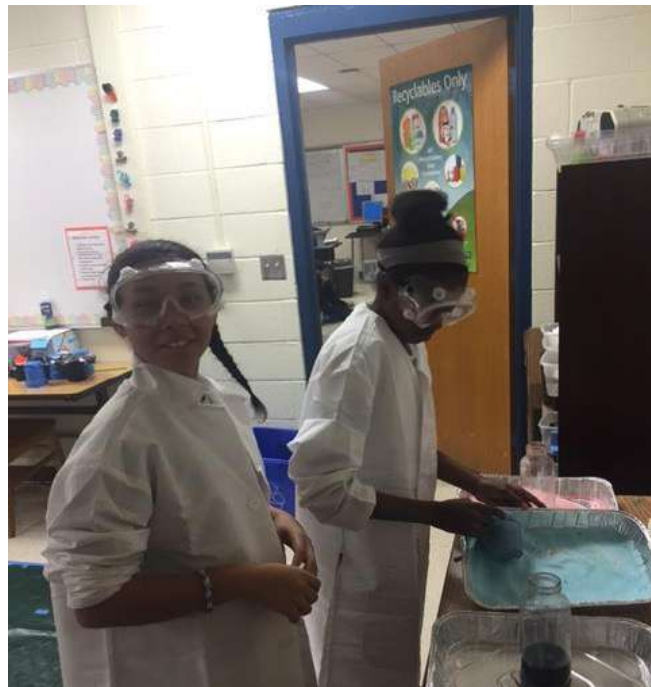
***Girl Power!***

## Science Olympiad and Science Fair



Students preparing for **Science Olympiad** challenge: *Picture This!*

**Science Fair:** Future scientists seeing which bran of yeast creates the largest amount of elephant toothpaste!



## Field Trip Time!

### NASCAR Hall of Fame:

Thanks to our last year's TSA students and their awesome job in the Pit Crew Challenge, they won free passes to the NASCAR Hall of Fame for 300 of our students! On December 4<sup>th</sup> and 7<sup>th</sup>, we took our TSA members, STEM students, and the entire 7<sup>th</sup> grade team to the museum. Students were able to tour the museum, watch a video on the history of NASCAR in the High Octane Theater, and explore many interactive exhibits.

### BASF Chemical Corporation:

Our 8<sup>th</sup> graders wrapped up their chemistry unit and what's a better way to culminate that than with a trip to the largest chemical companies in the world! On November 17<sup>th</sup> and 18<sup>th</sup>, we learned more about the company, explored polymers, toured the chemistry labs, and spoke with chemists. A few things students saw firsthand were how paper gets its color and how paint is tested for durability, fade, foam, and water run-off.



## STEM Spotlight in the classroom

### Ms. Kelly's 6<sup>th</sup> Grade Class Design Penguin Dwellings

One of the 6<sup>th</sup> grade energy standards is heat transfer and the suitability of materials for use in technological design. Students were given an engineering design challenge to create a heat proof penguin dwelling. Students used all steps of the engineering design process and their scientific knowledge to create and test materials that would save a penguin shaped ice cube from melting. The dwellings were such good insulators that they ran out of class time before the penguins melted.

### Ms. Case's 7<sup>th</sup> Grade Class Investigate and Design Rube Goldberg Contraptions

In 7<sup>th</sup> grade, students learn about simple machines. Ms. Case's students took their knowledge one step further. To dive deeper into simple machines, students learned about Rube Goldberg and his silly contraptions. They then identified an everyday problem (closing book, shut door, ring bell, etc.) and devised a solution by creating their own Rube Goldberg contraption. These contraptions included the various simple machines using everyday items.

### 6<sup>th</sup> Grade Cow Eye Dissection

Another 6<sup>th</sup> grade science objective is for students to understand the parts of the eye and each part's function. To help students have a clearer understanding of this, they will be dissecting a cow eye ball on Friday, December 11. The cow eye is perfect because it is a similar version to our eyes and is larger.

*Teachers have sent home permission forms if families chose to opt out.*

Week of December 7-11: Hour of Code:

December 11: Charlotte Ear, Nose, and Throat doctor presentation to the sixth grade

December 16: Science and Engineering Fair, 5:00-7:00 pm

December 21-January 3: Winter Break

## Kennedy's STEM Habits of Thinking

We encourage our students to apply these habits of thinking in all of their classrooms.

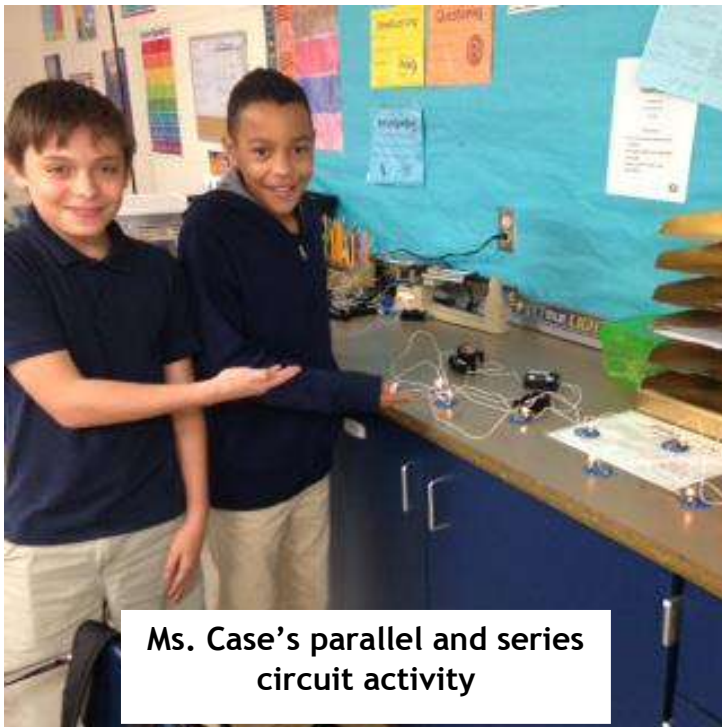
These are also skills and habits that people from a variety of careers exhibit on a daily basis.

**Inquire**  
**Collaborate**  
**Investigate**  
**Innovate**  
**Design**  
**Reflect**

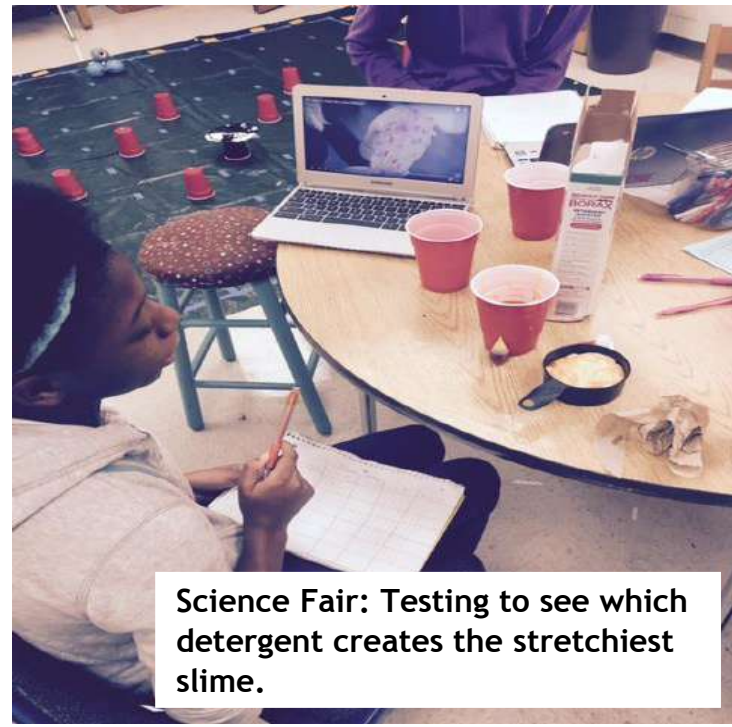




## Photo Gallery



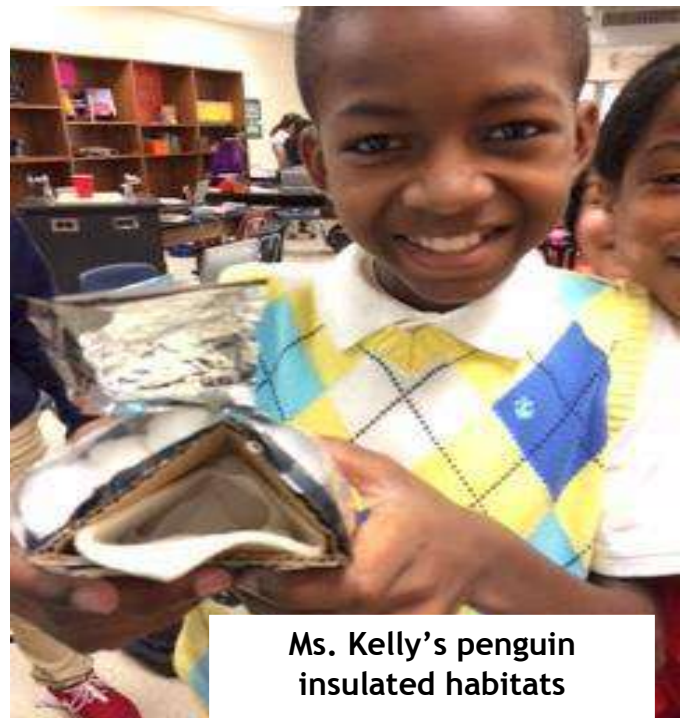
**Ms. Case's parallel and series circuit activity**



**Science Fair: Testing to see which detergent creates the stretchiest slime.**



**Ms. Kelly's penguin insulated habitats**

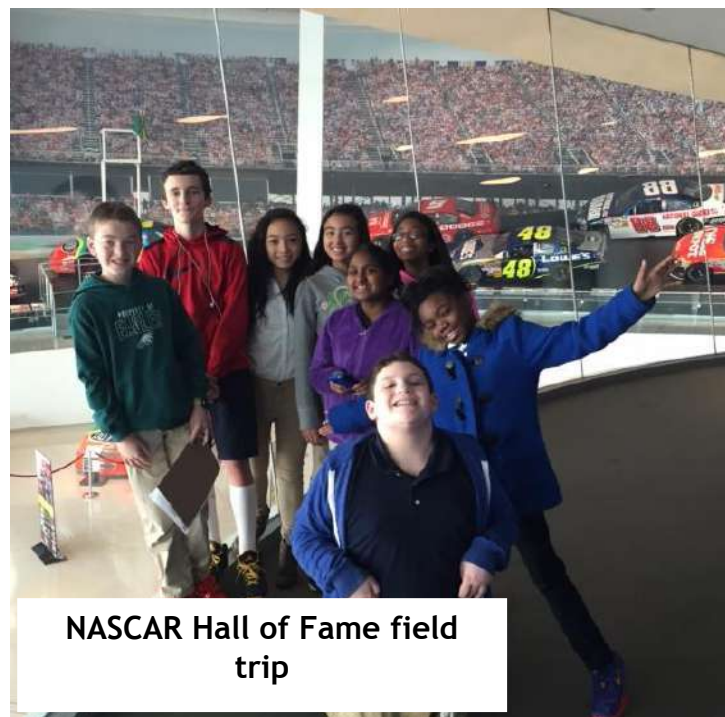


**Ms. Kelly's penguin insulated habitats**

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Ms. Kelly's penguin insulated habitats



NASCAR Hall of Fame field trip



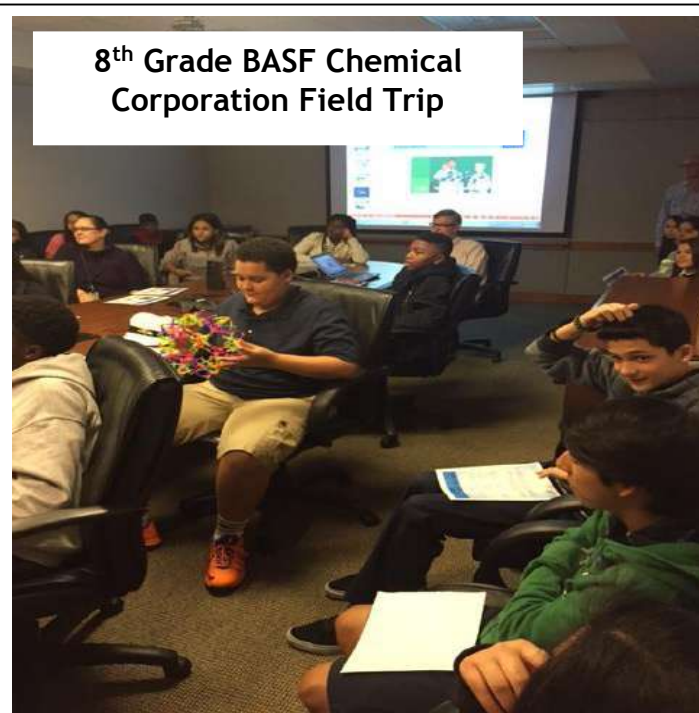
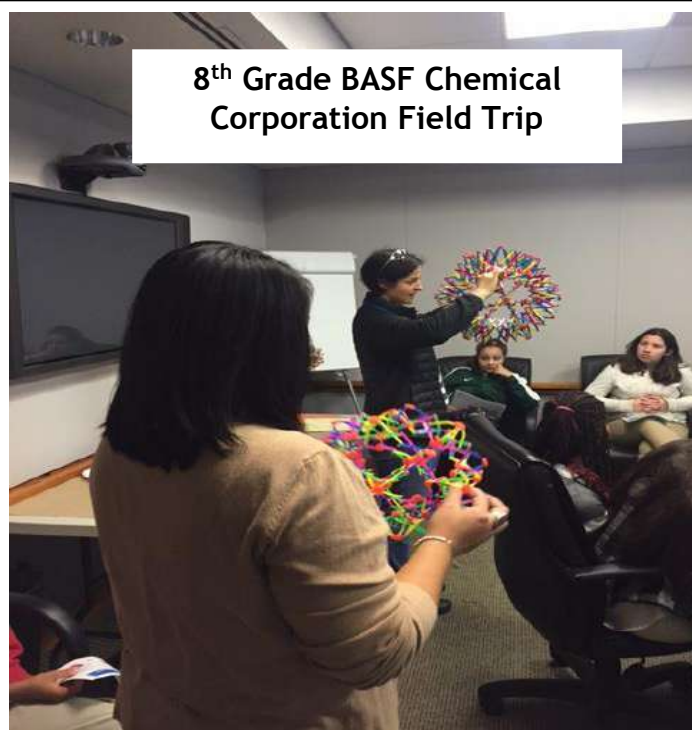
NASCAR Hall of Fame field trip



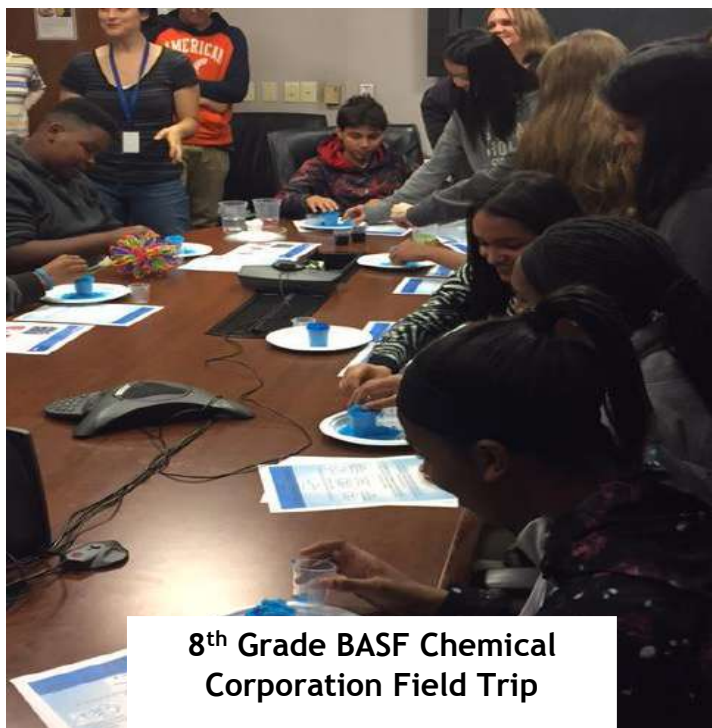
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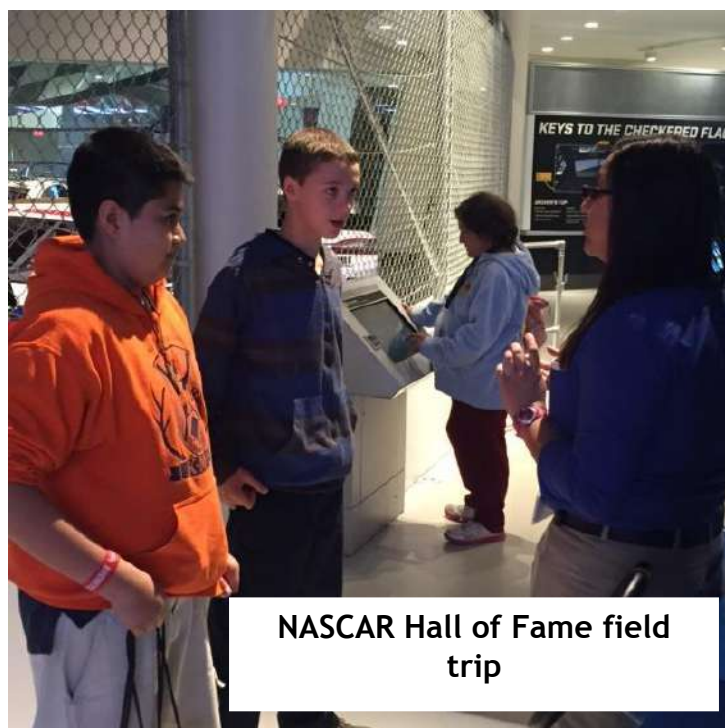
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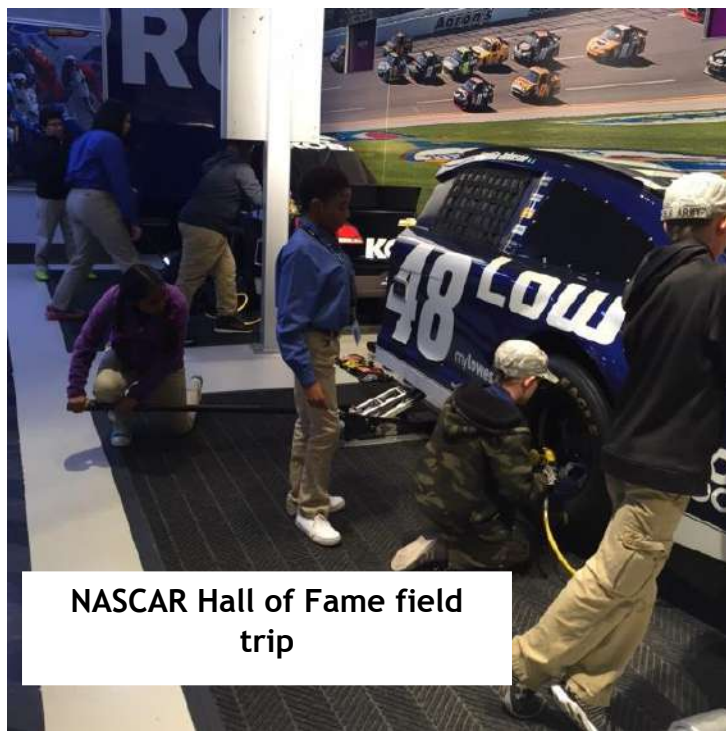
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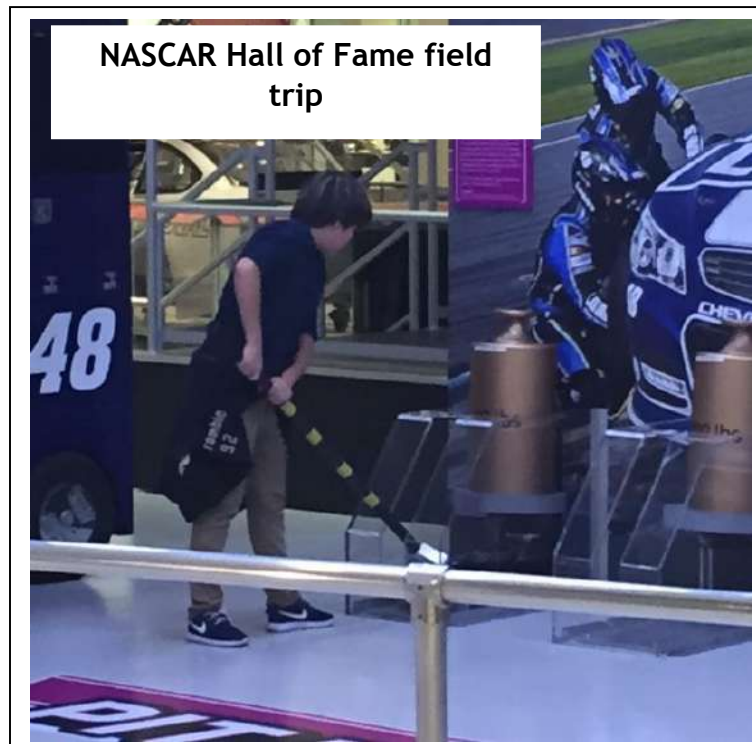
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