

## **Aliquippa Elementary School STEAM Walk 2018**

**May 11, 2018**

**8:30-12:00**

The AES STEAM Walk began with 32 students from grades 4, 5, & 6 signing in and receiving AES STEAM Walk cinch sacks to carry their many gifts and projects they created throughout the day.

### **Soda Straw Rockets & Helicopters Ms. Clendennen**

Ms. Clendennen started her presentation with a Brain-Pop video Why Things Fly which discussed force and air lift. The students were then guided through creating rockets and helicopters using paper templates. While dropping their helicopters from the platform in the library one 6<sup>th</sup> grader Cristiano exclaimed "It's like helicopters that fall from the trees!" Way to make real-life connections with STEAM Cristiano!

### **Covestro**

Ben began the discussion with telling the students that Covestro is a company that creates polymers, such as plastic, foam, and rubber. He then told the students Covestro creates polymers to make items such as Alka-Seltzer tablets, Nerf footballs, and strong plastics to better protect our cell phones and tablets.

#### Experiment Putty:

Ben discussed the three states of matter with the students and informed them they would be working with liquids that would become a solid. Using glue and borax solution, Ben told the students they would be witnessing a chemical reaction due to the borax containing a 'cross-linking' polymer which grabs on to other polymers and then becomes a thicker substance.

The students truly enjoyed both experiments and appreciated the experience of hands-on science.

### **Carnegie Science Center Fruitvale-Modern Day Pollution**

Students were lead through a discussion on modern day water pollution. The presenter informed the students that all of the water they are drinking is contaminated in some way with things like pesticides. He then read the students a story about "Fruitvale", an imaginary town that has endured the effects of contaminated water. Using a map, the students made predictions of where the town's most contaminated water was located. Then they tested the 'wells' with a



try to increase the potential energy. This project proved to be a bit more challenging for the students, but they were truly engaged.

### **Spacewalking-Carnegie Science Center**

The students were engaged in six centers to experience life as an astronaut while in space.

#### **Station 1: Managing Mirror Images**

The students hung an instruction sheet around their neck and let their partner try to read it while angling a mirror. As an astronaut there are times when you need a mirror on your suit because some of the displays would be out of your vision range.

#### **Station 2: Mission Building Gloves**

Using long handled tong, the students were to place small rings in a clear plastic tube while wearing a large pair of gloves. Astronauts have to learn to work efficiently in gloves without dropping anything to complete tasks.

#### **Station 3: Nonverbal Construction Challenge**

One partner took blocks while the other takes the picture. Without using any words or showing the picture, the partners were to take turns instructing each other on how to duplicate the model using the blocks.

#### **Station 4: Nonvisual Communication and Construction**

Partner one was to construct a model with Legos while partner two instructed them verbally, without the use of any hand motions.

#### **Station 5: Maneuvering Wearing Microgravity Masks**

Putting on two eye masks, the students had to figure out their partner's location and toss the ball to them. Astronauts need to adjust to disorientation caused by the movement of the fluid in your inner ear. Microgravity takes away your sense of up and down.

#### **Station 6: Mounting Hoses in Microgravity**

While partner one was standing on a spinner, partner two held the sprinkler steady above the other's head, and partner one had to try to screw the hose into the sprinkler. As an astronaut you would have practiced this maneuver underwater until you were able to perform it with ease without getting dizzy or spinning your body around.

### **Closing Ceremony**

Ms. Sheppard addressed the students and gave out gifts to the volunteers who led the stations. A big 'thank you' went out to Highmark and Beaver County

Educational Trust for making this event possible. The Grand Prize was two passes to the Carnegie Science Center that was won by Phillip Byrd. A fun time was had by all who were involved. The students were engaged, focused, and given a chance to see the importance of STEAM.