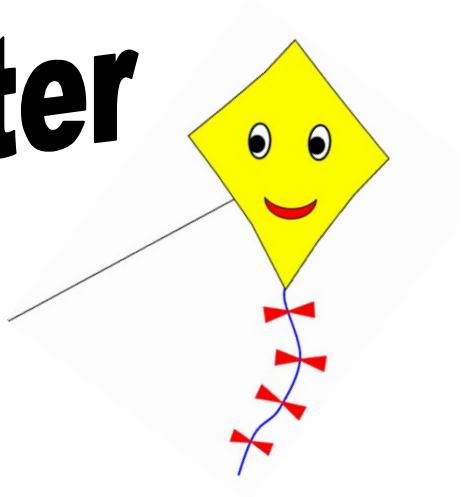
K.I.T.E. Newsletter



2018

Hello K.I.T.E. Families,

The curious minds of your wonderful children have been moving at "full speed" this week. It was obvious the children had a lot of fun with the theme, **Rollercoaster and Carousels: Full STEAM Ahead.** There has been so much learning going on you would be astonished! Here are some things the groups want to share about the week!

After discussing the facts they found about their group name **Carousel**, the group looked at some of the oldest, largest, the ways which carousels are powered, and even learned about double-decker carousels. It was neat to hear where everyone wanted to ride a carousel and why! That inspired them to create their own carousels using recycled paper goods and adding horses or other creatures to them. Reading, *If I Ran the Circus*, got them thinking all about what types of acts they would have at their circus. They created a big top circus along with a 3D-circus tent, shared what types of performances they would see within including animal acts, and made their own Model Magic animals that were part of the big show! They enjoyed a variety of books about carousels and carnivals, and then the group used those ideas to create their own mini carnival. They brainstormed how much the tickets would cost, how many tickets would be needed to play each game, and how each game was to be played. They also came up with concessions and the costs as well. Lastly, they constructed they own 3D-carousel horse to become part of their own life-sized carousel!!!

Ahoy Matey! The **Pirate Ship** classroom learned all about pirates! They studied famous pirates from years past and learned about pirate culture and verbiage. They then moved their attention to the pirate ship ride, learning about the physics of the pendulum. Lastly, they

worked on a project where they created a boat using regular materials that could float in water, hold a treasure of ten coins, and move across the 'sea' without capsizing.

While discussing their task sheets, **the Caterpillars** found that almost everyone was interested in the fact that the caterpillar ride debuted in the 1920s. The children decided to transform the room into a 1920's carnival. They created everything from food to rides. To enter the carnival, the guest entered a time machine and was transported to nearly 100 years ago, compete with popular names of the day, slang, and a ride. Not only did they incorporate the carnival and STEAM themes, they changed the room the way a "caterpillar changes into a butterfly." Lots of laughter arose from 1920 terms like 'bee's knees' and 'upchuck!' The 'trick' they built in the domino chain to knock over a balancing caterpillar car was a huge success.

Log Flume explored the science behind log flumes by discussing concepts like force, motion, gravity, and acceleration. They used Google Slides to create an advertisement for their log flume. They practiced scientific processing by reflecting on what they learned each day and making notes on the experiments they did. They made predictions and recorded data on different surface area and inclines on their toy car experiment. After participating in the design thinking process, defining ideation (drafting, drawing and planning), and prototyping (building), they engineered their own log flume using household items, testing and changing as needed. It was fun to display understanding of friction, mass, and force through marble painting.

In **Bumper Cars**, the children explored how theme park rides use energy to function. They tested a variety of electrical schemes by completing a series of hands-on challenges, like using electric circuits. They also investigated how force is transferred through the parts of the ride using pendulums and tested the efficiency of various designs for battery powered cars.

The **Roller Coaster** group learned about the history of roller coasters and the physics involved in designing and creating them. They used hands-on investigations to understand how angles affect the speed and distance of roller coasters and then collaboratively created many different types of roller coasters using everyday materials. The children used their creativity and innovative ideas to create roller coasters from paper plates and marble cars, drinking straws and ping pong ball cars, and foam pipe insulation and marble cars. They even made a roller coaster art project made of paper. Finally, they turned their simple roller coasters into more advanced versions with loops and twists, which resulted in lots of problem solving and teamwork.

The students' minds have been spinning and twirling in the **Tilt-a-Whirl** group. They have started each morning with a STEM engineering challenge in order to think creatively and to exercise their problem-solving abilities. After sharing their task sheets about Tilt-a-Whirls, students were inspired to design their own amusement park ride using some of the engineering aspects of the original Tilt-a-Whirl. All of this creative thinking has led each individual student to target a topic that is of interest to them. Throughout the week, they researched and explored

the many aspects of their topic. They then created a 3D-project of their own design that presents their knowledge.

The **Ferris Wheel** group has been on top of the world this week! They started the week brainstorming about amusement parks and agreed that all the rides have fun, power, and motion! Each of the children contributed to the class amusement park poem. In order to delve deeply into their understanding of motion, the children examined toys that move to figure out how they move and what makes them move. Armed with a new understanding of motion, the children created their own toy that moves. Next, the children learned about Isaac Newton, his three laws of motion and the law of universal gravitation. It was time to apply all of these understandings to circular motion and Ferris wheels. Inspired by learning about the invention of the first Ferris wheel, the children compared Ferris wheels and painted their own Ferris wheel. Just as Newton made models of things that made him curious, the children made models of Ferris wheels. This week of fun, friends, and learning was quite a ride!

Cliffhanger took a cross-curricular flight this week incorporating science, technology, engineering, art, and literature. On Monday, they read When Amelia Earhart Built a Roller Coaster. Students were then inspired to build their own roller coasters out of straws with a ping pong ball as the rider. Scientists were called to the task as they learned about how gravity, friction, and motion are important parts of amusement parks rides through many fun lab activities. Examples of experiments included how gravity influences a marble on a track and what happens to coins as the card its sitting on is forced away. Students also created and performed an original Readers' Theater entitled, "If This Carousel Could Talk." They researched the history of carousels and animal figures, wrote the script, and created songs and dances for the performance. Finally, students were given a choice to create their own 3D-Ferris wheels with toothpicks or write their own cliffhanger about a day at an amusement park. It was a fun week that left them hanging for more!

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Fascinating things have been happening in **SPECIAL INTEREST GROUPS** in THE K.I.T.E. halls as well!

Code Talkers combined a bit of history while learning the differences between a code and a cipher. The group was very impressed to learn the original Code Talkers were Navajo Indians who helped to win World War II using the Navajo language which, even though not really secret, was not understood by anyone other than the Navajos. The children set up their own code-breaking book with the keys to decoding the Number Code, Morse Code, and the Masonic Cipher. Then they practiced encoding and decoding messages to each other. They created their

own secret code to share with classmates. Lastly, they learned about Invisible Ink and wrote messages with it to friends.

The stars in **Actor's Theater** improvised, acted, and performed their unique work with items from glittering gowns to 3-D props. The room was abuzz with enthusiasm as they designed costumes from tablecloths, feathers, fabric, and a big bag of 'stuff' to represent their hero or heroine, creating their own original play. They also had the privilege of having an expert with makeup design demonstrate her skills.

The week for **Creative Construction** began with a trail walk to collect objects for fairy and gnome houses. The children were so involved in this project and kept adding features and creating Model Magic figures to live in them. The results were truly beautiful and unique! They then switched to more traditional art by studying pointillism. They found that trying to construct something larger out of smaller dots proved to be both stimulating and challenging. It was great fun to create something beautiful from seemingly useless objects like recycled materials

The children in **Outdoor Art** stained fabric with leaves and berries to produce colorful artwork. They also made mosaics from different kinds of leaves and mimicked famous paintings using natural materials that they found on the school grounds.

The **Science in Motion** group created a Ball Wall to help students discover and experiment with force and motion. Starting with a cardboard panel with a small tube in the top left and bottom right corners, students designed a ball track that incorporated three simple machines as it moves the ball from one corner to another. There was great teamwork as fellow students helped each other with construction and design suggestions. They then incorporated the design into a shoe box to demonstrate design techniques, simple machine concepts, and engineering principals.

Trail Investigations explored geography, the science of Global Positioning System (GPS), and how to find an exact location on Earth. They learned about the imaginary lines of longitude and latitude that make up our geographic coordinate system. Additionally, they spent time learning more about the natural environment and how animals survive in the food chain.

The active **Mathercise** group incorporated movement and exercise to strengthen their math skills. Students grew their math muscles as they lunged, stretched, jumped, and pumped their way to greater understanding of place value and multiples. They enjoyed a "Math is all around us" scavenger hunt. They raced their way to a dollar in a game that tested their knowledge of money. They created their own human number line as they learned about fractions and twisted and turned their feet and hands as they played fraction Twister! They even created their own fraction pizza and measured ingredients to make fresh lemonade. Students also took the fun outside for math games in nature. They practiced telling time with hula hoops, had a number

line run, played memory matching using paper plates, and enjoyed using sidewalk chalk to engage in rock addition.

The **Tech Talk** group brainstormed and debated how all areas of STEAM have technology incorporated in their essence and then designed posters to show the connections. They then defined and modeled tech vocabulary like vlogs, blogs, tutorials, Google tools, navigation panes, and drop-down menus through a pretend YouTube tutorial. Everyone loved the STEAM design challenges of: creating a path for a ball to travel from one side of the screen to the other, creating music with predetermined challenges using different online tools, and finally creating their own challenges for each other to solve digitally.

Ask. Imagine. Plan. Create. Improve. This was the challenge given to the **Engineering** group each day. The tasks required students to consider all they knew about force, mass, acceleration, and gravity. Isaac Newton would have been proud to see these young engineers designing marshmallow poppers with accuracy, boats with the ability to harness the force of the wind, balloon rockets that could travel long distances, pinball machines that put gravity to good use, and hovercrafts that tried to defy gravity. Students marked their progress using charts and graphs. They reveled in their victories and learned from mistakes. These engineers gave new meaning to the word “perseverance”.

It has been an amazing week at K.I.T.E. What better way is there to spend time in the summer than by learning, creating, and smiling with a whole class of motivated learners? Thank you for sharing your capable and enthusiastic children with us! See you next summer!

Janis and Ethel and the KITE 2018 teachers and aides