



### NEWSFLASH!

Did you know that on January 13, 2020, the “*Strengthening Gifted and Talented Education Act*” was signed by Governor Murphy for the 2020-2021 school year? The Orange Township Public School District is ahead of the process supporting students’ academic needs with gifted educational programming. Guidance from the state department is forthcoming.

**A4710 (Lampitt, Zwicker, Vainieri Huttle/Beach, Turner)** - "Strengthening Gifted and Talented Education Act"; establishes school district responsibilities in educating gifted and talented students.

Welcome to the Winter Edition of the Gifted and Talented Newsletter! If you have been following us on Twitter @SAcademy268 #goodtogreat #goscholarsnj, you have seen the weekly pictures and videos of what Scholars Academy students are doing above and beyond the walls of Scholars Academy! In the pages that follow are just a few highlights of how we, as a school community, are moving from good to great!  
~Principal Karen Machuca



*Congratulations to Mrs. Kate Dormann for being nominated for the Governor’s Educator of the Year award representing Scholars Academy and the Orange School District. We are excited to see her move into the next phase of the nomination process and cheer her on 110%! Follow Mrs. Dormann on Twitter to see the dedication she puts into her classroom and you’ll see why she was nominated for this outstanding recognition! Twitter @DormannKate*

### Calendar Check!

- ✓ District Strategic Planning Roundtable Mtg: Jan. 30, 2020 @ 5:30-8:00 p.m. at Lincoln Avenue School, 216 Lincoln Ave.
- ✓ GT Progress Reports Go Home: Feb 3-7, 2020
- ✓ March 1-31, 2020: NJ’s Gifted and Talented Month
- ✓ Applications for 2020-2021 GT Program open: April 1-30, 2020
- ✓ Gifted/Talented Expo: June 17, 2020 @6:00 pm--Scholars Academy



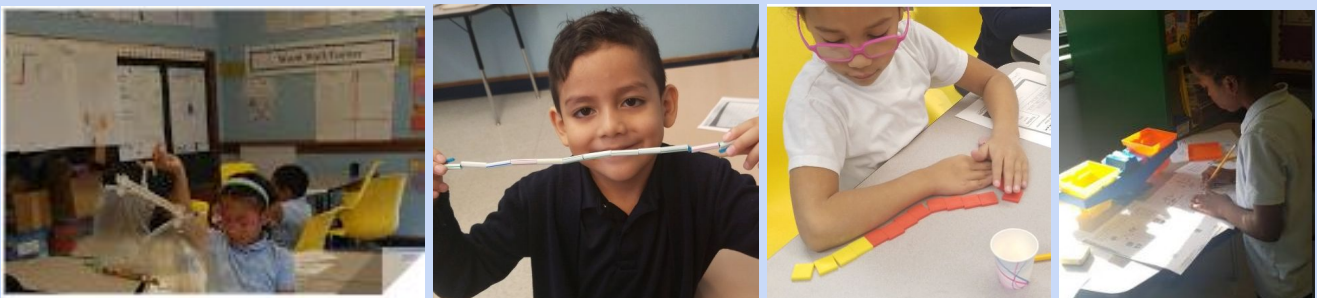
Parent Information Corner  
Stay informed and become members of [NJAGC](#)  
[National Association for Gifted Children](#)  
[Supporting Emotional Needs of the Gifted](#)  
[Gifted Children’s Bill of Rights](#)  
[Twice Exceptional Students](#)

**1st Grade Science**

First graders have been studying animal adaptations. They have been skyping with experts around the country to gain knowledge on different species and structures those species have to survive. We have skyped with Yellowstone National Park, an Elephant Sanctuary, and an aquarium in North Carolina.

**1st Grade STEM**

1st graders have been building simple machines with Legos. They have been exploring energy and matter, cause and effect. They are also exploring forces and friction, push and pulls as well as wind energy. They have built pinwheels, spinning tops, rafts, car launchers, measuring cars and ice hockey players. They made predictions of how far their car or puck would travel and tested their predictions. They also predicted whether the small sail or big sail would make their raft go faster and why. After making predictions they test their hypothesis. They are also testing and improving their objects.

**1st Grade Math**

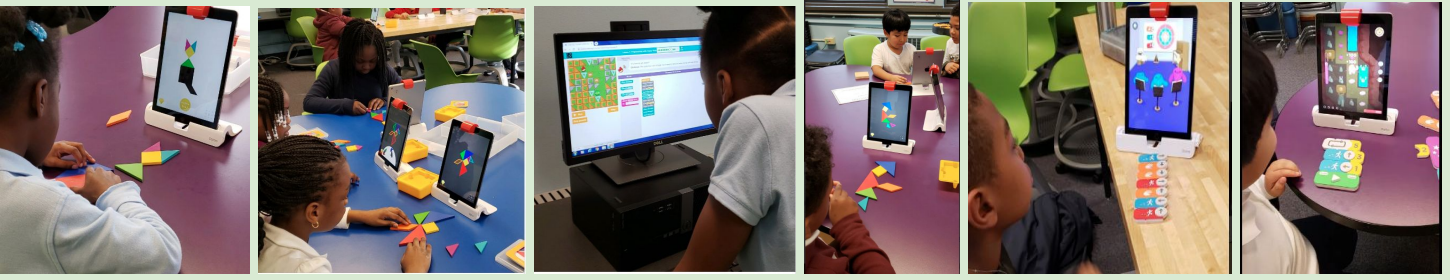
First grade began using their critical reasoning in math comparing weights of objects and comparing the weights using words such as “heavy,” “heavier than,” and as the “heaviest” and also as “light,” “lighter than,” and as the “lightest.” We used square units to find area and began measuring in non-standard units focusing on not overlapping units and making sure units were repeated end to end when measuring. Later, first grade moved into measuring with the standard unit of inches.

## 2nd Grade Science



Second graders became engineers. They helped two children from Thailand develop aid drop packages to provide relief to victims stranded due to flooding. Students first studied which packaging was most effective. Then they tested ways to slow the packages fall. Next, they studied how to design a package so that it could be seen in different environments. Finally, they combined all their data to create the perfect aid drop package and we tested them with water balloons. Guess what?? EVERY SINGLE package landed successfully without the balloon popping!

## 2nd Grade STEM



2nd graders read “Grandfather Tang’s Story: A Tale Told with Tangrams”. We discussed the shapes including a parallelogram. Students had fun building animals, shapes, people and other objects using Osmos and Tangrams. They are testing their spatial relationship knowledge as well as perseverance. We also read “How to Code a Sandcastle” and “How to Code a Rollercoaster” by Josh Funk and discussed coding vocabulary words and what they mean. We discussed sequence, loops, conditional statements, and variables. Students coded with physical blocks and Osmo using either Coding Awbie or Coding Jam. They were so engaged with the interactive coding platform and learning how to code! We have also been coding on Code.org

## 2nd Grade Math



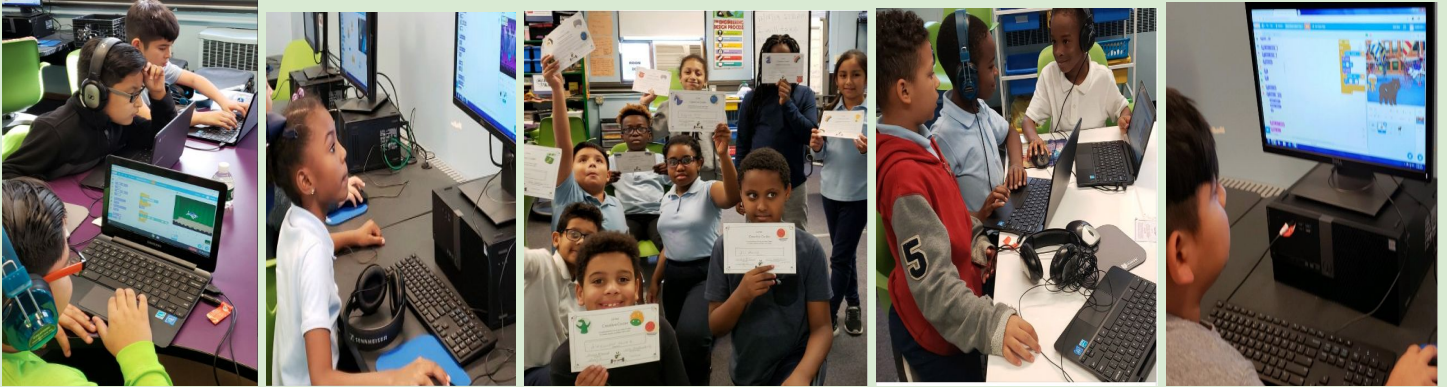
Second grade used their critical reasoning and thinking to explain the relationship between the number and size of units when measuring. We used centimeter cubes to measure length and later used that knowledge of measuring in centimeters to create and test a car seat with specific criteria. We tested the safety of our car seat using plastic eggs in a truck on an incline in a crash test. We later began working with square feet to estimate the space of the classroom and space of specific items on the floor using square units. We are now using rectangles to calculate area using length and width, but with repeated addition of rows or columns of an array for that length and width. Second grade also used their reasoning skills in reading about math and problem solving open ended questions from math stories.

### 3rd Grade Science



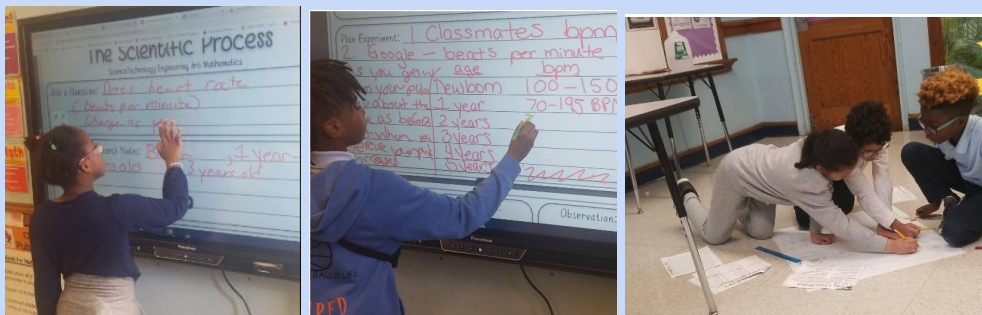
Third graders began their own investigations into the phenomena following the reintroduction of wolves into Yellowstone National Park. They developed questions, conducted research, created models, and formed conclusions based on their evidence. They skyped with an expert in the species at Yellowstone National Park and got to see the different species that live there up close. We even got to see a wolf skull! We also skyped with a teacher from Bangladesh and she taught us about water quality there.

### 3rd Grade STEM



3rd graders spent eight classes using Google CS First to code a Music and Sound unit in Scratch. They learned block based coding to have the computer play musical notes, create a music video and build an interactive music display while creating their own characters, backgrounds and selecting their own musical sounds. Students learned how to use loops in coding, as well as conditional statements “if-then” blocks. Students also learned about the x and y coordinates on the coordinate grid as this is essential to understand when coding in Scratch. They did a great job coding and they helped each other. Each program was unique to their style. Please have them continue coding at home at [scratch.mit.edu](http://scratch.mit.edu) and [g.co/csfirst](http://g.co/csfirst).

### 3rd Grade Math



Third graders used arrays to calculate area using the formula length times width. Third grade learned how to calculate area using the length and width of a rectangle. They began by using rows and columns of an array. They first counted their square units on a grid, and then discussed different ways they could find the area of a rectangle using square units besides just counting the squares. We used pentomino puzzles to create specific rectangles and discussed our different strategies such as using rows and columns, repeated addition, and multiplication. Third graders also began collecting and analyzing data and began using words such as average, median, range, mode, and outlier when describing a data set.

### 4th Grade Science



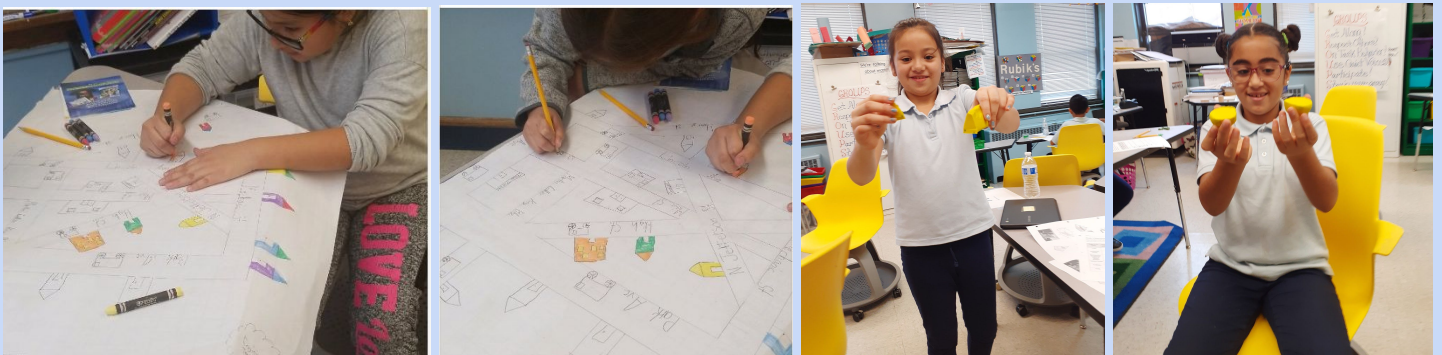
Fourth graders continued their work as climate scientists and global citizens. They used virtual reality, 3D computers, Skype, and other technologies to explore problems around the world. We learned about the different sustainable development goals related to these problems. Now it is time to choose their goal they are going to focus on. The options are: Zero Hunger, Clean Water, Clean Energy, Sustainable Cities, Responsible Consumption, Climate Action, Life Below Water, and Life on Land. Which is most important to you?

### 4th Grade STEM



4th graders read “Doll-E 1.0” by Shanda McCloskey and learned about circuits, how to complete a circuit and what is an open and closed circuit. They worked with a partner to create their own robo-doll. They used washers, copper tape or aluminum foil as their conductive material and then hooked it up to a Makey Makey which takes the place of the keyboard when the circuit is complete. They coded in Scratch, recording their own script to have their robo-doll speak. We had a Live Q&A session with the author and two of the Makey Makey experts. We were so excited to have two of our questions answered live! The author was so impressed with their creativity of their robo-dolls. We recently started our coding unit and students are learning about sequencing, events, nested loops, conditionals and binary code.

### 4th Grade Math



Fourth graders explained the difference between a set of parallel and perpendicular lines and the difference between an obtuse, acute, and right angle. They learned about degrees in geometrical shapes and began using protractors to measure angles. They created their own town maps following specified criteria which included their town having intersecting, parallel, and perpendicular lines and used those lines to identify what types of angles those roads (lines) created. We are now categorizing, and decomposing three dimensional shapes.

### 5th Grade Science



Fifth graders continued their dissections. So far, they have dissected sea cucumbers, sea stars, clams, squid, crayfish, crabs, stingrays, skates, and sharks. Our sharks were pregnant so we got to see baby sharks as well! Next up, students will dissect different species of fish and lampreys. Each dissection, students take on different leadership roles. Students become directors, facilitators, managers, quality control officers, and technicians.

### 5th Grade STEM



5th graders learned how to code apps in JavaScript using Bitsbox. They learned how to program variables and functions and how to move objects around on the screen. Students also worked with littleBits or Makey Makey, completing a circuit and programming a game with a controller. A few students are creating basketball courts and programming Dash robots to launch the ball into the hoop. Some students are building and coding robots with Lego EV3 and Sony Koov. Students have been given a choice each week to create with technology or build with materials in our MakerSpace. Students have built a hydraulic arm, projectile launcher, and a rubber band car racer. Several students are using Tinkercad 3D modeling software to design a keychain and we are 3D printing their creations. Students have been very creative with their open ended projects, putting their engineering and technology skills to the test!

### 5th Grade Math



Fifth graders identified and labeled the dimensions of rectangular prisms, discussed how volume is measured using unit cubes, explained and demonstrated using snap cubes that the formula for volume of rectangular prisms is  $\text{volume} = \text{length} \times \text{width} \times \text{height}$  using a layering approach, explained the relationship between nets and solids, are currently working on describing rectangular prisms by examining their nets, drawing a net by looking at a rectangular prism, and can now find the surface area of the net of a rectangular prism.