

Principal’s Corner

**Welcome Students, Parents, Educators, and Community members** to the Spring newsletter for the Gifted and Talented program in the Orange Public School District. I truly hope that you are receiving this newsletter in good health and are staying safe. We are in challenging times and just like we tell our students, we will be persistent and keep moving forward with our problem solving skills!



Within these pages you will have the opportunity to see what the students were learning prior to school closing in March and what/how they continued their learning with our distance learning program. The Gifted and Talented staff didn’t miss a beat with lesson designing and making adjustments to our virtual platforms. In addition, they have been attending on average 2-3 professional development workshops or webinars a week! They are certainly taking advantage of the professional webinars that are being offered to educators during virtual learning. They have had the opportunity to hear from gifted education experts like Dr. Joseph Renzuli, Dr. Jim Delisle, Dr. Sally Reis, and Dr. Sandra Kaplan. Plus they have been attending webinars within their own content areas of Math, Science, or STEM. The staff have been utilizing the information they have received immediately into their lesson designs and activities. To see all this in action, students in grades 3-5 have google.meet classes each week and use google classroom for lessons. Students in grades 1-2 continue to use ClassDojo as their platform to get lessons and interact with the staff.

New

STATE NEWS UPDATE

After Governor Murphy signed the Strengthening Gifted and Talented Education Act (SGTEA) on January 13, 2020, the NJDOE sent out information to various educational groups seeking interested individuals who wanted to serve on the Strengthening Gifted and Talented Education Act committee (SGTEAC). I am honored to be part of the committee and representing the Orange School District. It is the expectation of this committee to support districts with the implementation of the SGTEA with supporting gifted programming for students. I encourage all parents and educators to follow NJAGC on Facebook or Twitter (@NJAGCgifted) to stay up to date with happenings with gifted education.

SUPPORT for FAMILIES and EDUCATORS

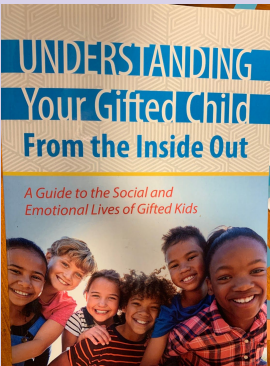
Distance learning has some unique challenges. Parents and educators of students in gifted programs may see a decline in student motivation or an increased anxiousness with distance learning and many other challenging emotions. There is support available! Parents and educators of students in the gifted and talented program are encouraged to follow any or all of the organizations listed below that support gifted education.

- NJAGC (NJ Association for Gifted Children) [www.njagc.org](http://www.njagc.org)
- SENG (Supporting Emotional Needs of the Gifted) [www.sengifted.org](http://www.sengifted.org)
- NAGC (National Association for Gifted Children) [www.nagc.org](http://www.nagc.org)



Recently, I completed reading Understanding Your Gifted Child From the Inside Out (2018) by Dr. James Delise. One of my takeaways is this quote: “If the gifted child feels that there is no one to talk to, to share fears and solutions, or to simply cry out in anger and frustration, the seeds for existential depression are sown.” (Delise, pg. 130). It is so critical at this time to really listen to what children are saying and doing as we often

know that actions speak louder than words. The world is quite different than it was 2 months ago and it can be very difficult to process this as adults so just imagine how a child is digesting all the changes that are happening. There are things that have not changed: The staff and administration at Scholars Academy and all throughout the Orange School District are dedicated and supportive of students learning and social and emotional well being. Reach out for support and resources at any time as no distance is too big or too small to keep our district moving from good to great! Orange Strong!




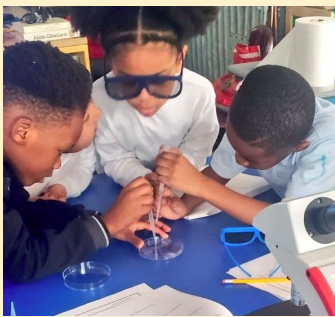

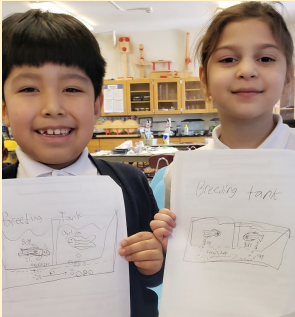
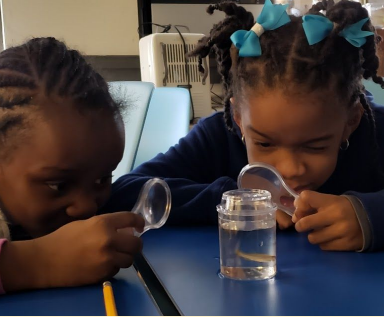
Wanting the Best for Your Child,  
Principal Machuca

Follow us on Twitter: Principal\_KM or SAcademy268 #GoScholarsNJ #GoodtoGreat






1st & 2nd Grade Geneticists

Geneticists investigated genetic phenomena! They discovered why children look similar, but not identical, to their parents. They used live Zebrafish to find similarities and differences within a species. We bred Zebrafish and successfully grew their embryos. During the embryo development we were able to see how they grow through their transparent eggs!




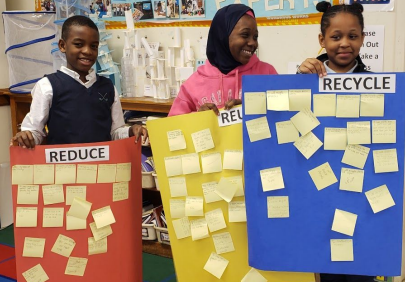
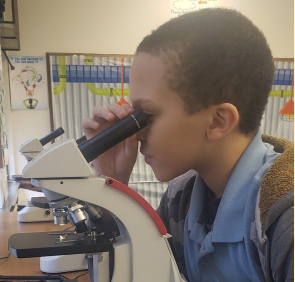

3rd Grade Hydrologists

Hydrologists studied our local watershed. They completed investigations into the different types of green infrastructure that could benefit the city of Orange. They planned and executed labs testing the effectiveness of each Green Infrastructure. Once they had tested all of the different GIs, we teamed up with our local Watershed Ambassadors who came in and ran simulations of how our watershed works. Moving forward, we will work with our Watershed Ambassadors and the Orange DPW to build a rain garden in our city!




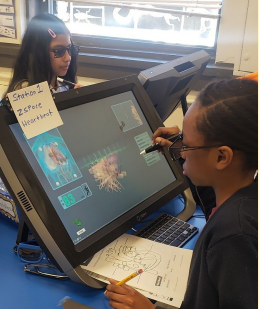
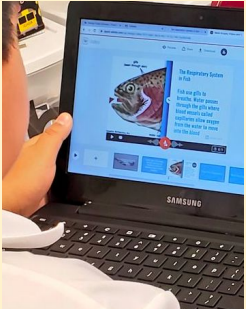


4th Grade Activists

Activists dove deeper into each of the UN's Global Goals. They completed investigations into World Hunger, the Global Water Crisis, Life on Land, Life Below Water, Climate Change, Responsible Consumption, and Sustainability. Their investigations included Augmented Reality, Virtual Reality, Research, Virtual Field Trips and Skyping with Experts. Students were able to see how humans are negatively impacting these areas and brainstorm ways to solve these problems! Students became passionate about these projects. Their dedication to making the world a better place is inspiring!



5th Grade Anatomists

Anatomists had the opportunity to dissect different species of fish. The fish included Ratfish, Catfish, Sea Robins, Perch, Menhaden, Dogfish Sharks, Stingrays, Skates, and Lampreys. They used these dissections to compare fish anatomy to human anatomy on their blogs. Then, created videos on what they learned! Once they completed their dissections, they continued their studies using living fish. They studied Zebrafish to observe how their respiratory and circulatory systems compared to humans. Using Zebrafish eggs, they were able to observe a zebrafish heart beating in the transparent embryo.






**Gifted and Talented Program at Scholars Academy**  
**Orange Township Public School District      Spring 2020      Superintendent Dr. Gerald Fitzhugh, II**  
**Distance Learning with Mrs Dormann**

**Scientists have participated in a wide range of activities while learning remotely that they should be very proud of!**

- Scientists conducted research into the COVID19 virus. They reviewed CDC guidelines and created PSA videos on how to stay safe during quarantine.
- They took a virtual field trip to Yellowstone National Park where they viewed a Live Stream of wolves in the park. They used their knowledge from their phenomena investigation to make a claim about whether or not humans should interfere with the wolf population.
- Scientists explored NASA's Langley Base via a Virtual Tour on Google Maps. They learned about what is currently being studied and discussed what they would research if they were astronauts!
- For Women's History Month, students shared who their heroines were. They discussed what attributes make that person unique and shared how they were similar to their heroine.
- For Earth Day, students took part in a variety of explorations into recycling, climate change, water conservation, and more. They brainstormed different technologies they would create to solve a problem in the world and created diagrams of their prototypes. They shared their ideas and we discussed how to improve them.
- Scientists explored a phenomena we observe every winter! Do you know why we salt the roads? Scientists conducted experiments to discover the relationship between salt and water. They used this evidence to support their claims. We discussed where else we use salt with water and planned future experiments to test our claims.
- Students took a virtual field trip to SeaQuest aquarium where the resident experts introduced them to the different animals. They compiled a list of questions and sent them to the aquarium. We can't wait to hear back from them!
- Students found backyard phenomena and conducted investigations to explain nature's mysteries.
- We've been playing Disruptus on Flipgrid. A game that encourages creative and divergent thinking!
- Students and I post read alouds on Flipgrid <https://flipgrid.com/7c09aed6>, Password: " *science!* ". Check them out!






**1 week** of **shared learning** across your Grids!


That's how long it takes to drive from Flipgrid HQ, in Minneapolis, to Panama City and back!

[f Share](#)
[Tweet](#)




**12**

Grids launched




**67**

Topics created




**788**

Total videos



**30**

Videos this week



**8,040**

Video views



**We got new class pets!**  
We are anxiously awaiting for our egg case of 50-200 Praying Mantises to hatch! Five very hungry caterpillars and 3 Leopard Frog tadpoles also joined us.



## Extended Learning Science Resources

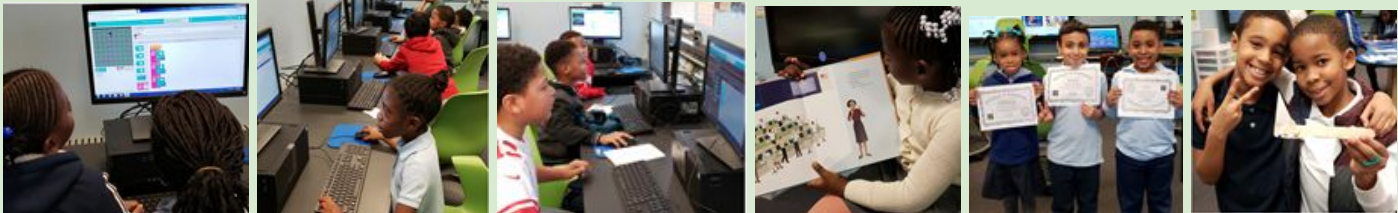
Here are some fun ways to continue growing as a scientist from home.

- Here is a link for virtual field trips you can do at home: [Click Here!](#)
- Headsprout is an online K-5 reading program that adapts to the needs of each student. It is self-paced. They are currently offering a free subscription through the end of the school year. <https://www.headsprout.com/>
- Experience the best museums from London to Seoul in the comfort of your own home.: [Click Here](#)
- Want to hear a story? [CLICK HERE](#) and use the password: " *science!* " Twitter : [@DormannKate](#)



1st & 2nd Grade Coders

Students learned about sequences, loops, variables and conditional statements while learning how to code. Each student has their own account on code.org and completed Course C (2nd grade) and Course B (1st grade). We also celebrated Black History Month learning about Dorothy Vaughan, Mary Jackson, Katherine Johnson and Christine Darden who were human “computers” for NASA. We also discussed the accomplishments of Mae Jemison. Celebrating Women’s History Month we discussed Ada Lovelace who is considered the first computer programmer. Students learned about Amelia Earhart and the four forces of how airplanes fly. They made their own airplanes with limited materials and improved their designs after testing them.



3rd Grade Engineers

Students learned about the six types of simple machines and how they make work easier. Students built levers, wheels and axles, pulleys, inclined planes, wedges and screws using a variety of material including K’nex, Engino, Brackitz and more. They also explored what gears are and how they are used. They took apart 3D gears on zSpace. Students created their own brochures to explain simple machines. They created presentations as well as their own quiz using Google Forms and had fun quizzing each other!



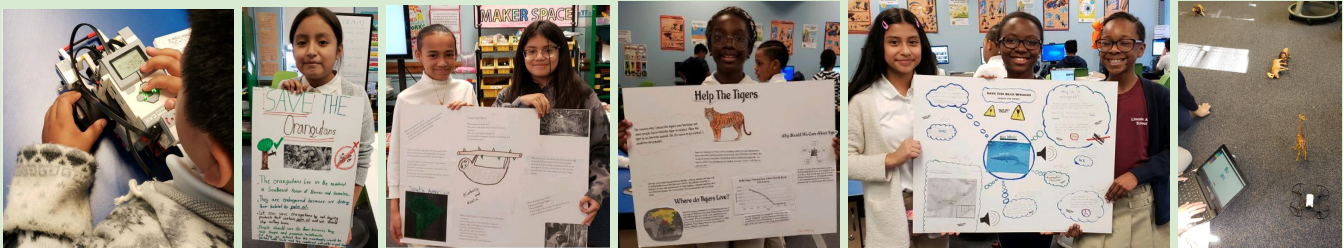
4th Grade Coders

Students coded algorithms, nested loops, conditional statements, events, variables and functions as they progressed through Course E in code.org. They were also debugging their code. They collaborated as they helped each other code. We discussed the accomplishments of Dorothy Vaughan, Mary Jackson, Katherine Johnson and Christine Darden. They were mathematicians who calculated the trajectories for NASA to put the first astronauts into space. We also discussed the accomplishments of Ada Lovelace, the first computer programmer in the 1800s. We discussed Grace Hopper who was a computer programmer in the Navy from 1943 to 1986 retiring at the age of 79. She created the first functions in coding and took binary code and created a computer language.



5th Grade Coders, Inventors, Engineers, Robotics

Students learned how to code their own apps in Javascript. They created and printed 3D objects using Tinkercad. Students built and programmed Lego EV3 robots and they completed circuits using littleBits. They used our Makerspace tools to build their own creations. They researched endangered and threatened animals on National Geographic and created posters or persuasive essays about why we should save these animals and how they affect the ecosystem. We explored ways that drones are used to save these animals and how they are used in search and rescue missions. Students learned about safety when flying drones and coded drones to fly using DroneBlocks. As one of only four IgniteSTEM grant winners, I was able to fund our project to bring drones and accessories to the STEAM lab!





Our students have been doing a great job persevering while we are distance learning.

- Students have continued to code in their code.org accounts and Scratch accounts
- They continued to explore endangered and threatened animals like the sloths and red pandas
- For Earth day students learned about reducing, reusing and recycling as well as global climate change and what we can do to help our environment
- Students learned about water usage and how we can conserve water
- Students continued to learn about simple machines and were able to identify examples of each type at home
- They learned about Energy from the sun moving through ecosystems
- Students are also learning about Life Cycles of a butterfly, chicken, flower, frog and human
- We have also used flipgrid to discuss what happens to trash, invent a toy for a hedgehog, and create your own version of the Three Little Pigs after comparing and contrasting two versions
- We started using PowerMyLearning which enables students to teach a family member what they learned by leading a collaborative learning activity

Student responses:

- “Buying filters will help protect Earth’s resources by making people use filters instead of buying bottles of water. Using reusable grocery bags will tell people to reuse them so we can stop using plastic bags.”
- “We can walk or cycle to move in our neighborhood instead of driving cars. This will help reduce the CO2 emissions in the environment, thus reducing global warming and having better air quality to breathe.”
- “I learned about how much gallons of water I use when I brush my teeth. It’s important to save gallons of water to help the environment. We can help our Earth by not wasting water on purpose.”
- “Plants get energy from the sun, by photosynthesis. They store the energy in the leaves, roots and fruit. Animals get energy by eating the plants. They use the energy to move and to do other activities. People get energy by eating plants and animals (meat). They use the energy to move, to survive and to do plenty of other things.”

Feedback from our parents:

- “Matthew and I learned a lot about saving water and how much gallons of water we use when we are brushing our teeth. Also in this activity my husband was interested about it too. Thank you Mrs. Nadbielny”
- “This is a very interesting topic to work on. This helps students and families to understand the concept of climate change, how it will impact our life. It also brings awareness that climate change is real by analyzing the facts, and we can take actions now to at least control it.”
- “This activity was one the whole family was able to participate in. We learned a lot about recycling and even thought of some great ideas for more things we can do around the house to help conserve energy. Thank you.”
- “Understanding where we get our energy from is very important. That gives us an idea of how everything in our environment is important to survive. Great subject!!!”
- “The project is very interesting as it teaches children the cycle of life that is being born, growing, reproducing and dying in plants, animals and humans, and they learn how everything has a beginning, an objective and an end in this life.”

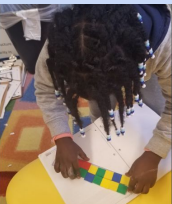


Extended Learning STEAM Resources

Here are some fun ways to continue growing as experts from home.

- [code.org/break](https://code.org/break)
- [Scratch.mit.edu](https://scratch.mit.edu) along with [g.co/csfirst](https://g.co/csfirst)
- <https://www.stemfinity.com/Free-STEM-Education-Resources>
- <https://www.nationalgeographic.org/media/careers-renewable-energy/>
- <https://artsandculture.withgoogle.com/en-us/national-parks-service>
- <https://fun-a-day.com/14-fun-engineering-activities-for-kids/>
- Twitter: @reginamck

Some learning objectives that 2nd grade scholars worked on were:  
I can use my critical thinking skills to solve math problems. I can use my critical thinking skills to solve for an unknown number. I can identify, describe, and explore lines of symmetry. I can compose and decompose 2-dimensional shapes in different orientations.



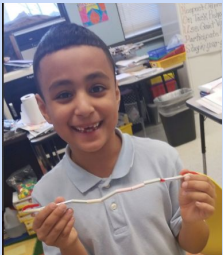
Such critical thinking problems were -

- I have a 7 in the one’s place. I am greater than 12. I am less than 25. What’s my number?
- I am less than 46. I am greater than 39. I have no ones. What’s my number?
- I have more ones than tens. I am greater than 28. I am less than 34. What number am I?

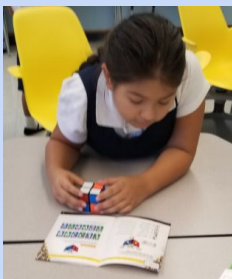
We also discussed square units and arrays. We used rows and columns to begin thinking about using length and width to find the area of a rectangle..

We shared our thoughts on the following questions:

- What is a unit of measure? How are units used to measure length?
- What do you think it means to be symmetrical?
- How does folding a shape in half help us with checking a shape for symmetry?
- What does it mean to find a “line of symmetry”?
- How can we decompose squares into triangles?
- What does it mean to use square units?

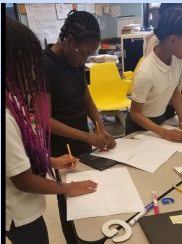


Our 3rd grade critical thinker used their visual spatial talents to solve parts of our 2 by 2 Rubik’s Cubes in Math Class with Mrs. White.



We also worked on the following learning targets:

- I can draw a scaled bar graph to represent a data set with several categories.
- I can analyze the data on a bar graph and create a question that relates to the data of that graph.

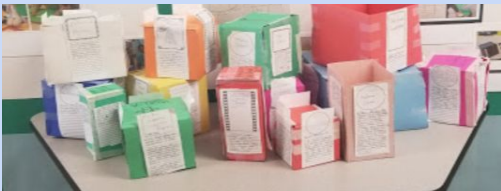
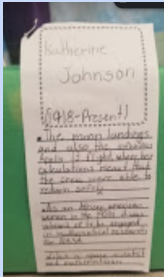
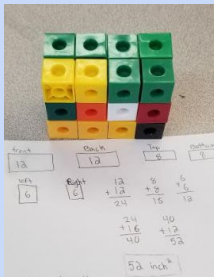
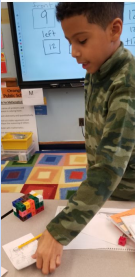


Transforming Shapes in Class with Mrs. White

Our fourth grade transformers worked on, “How can I use rotations, reflections, and translations to transform geometrical shapes?” We used our transformation words such as rotation, reflection, line of reflection, mirror image, translation, slide, and dilation to explain the effects of each change



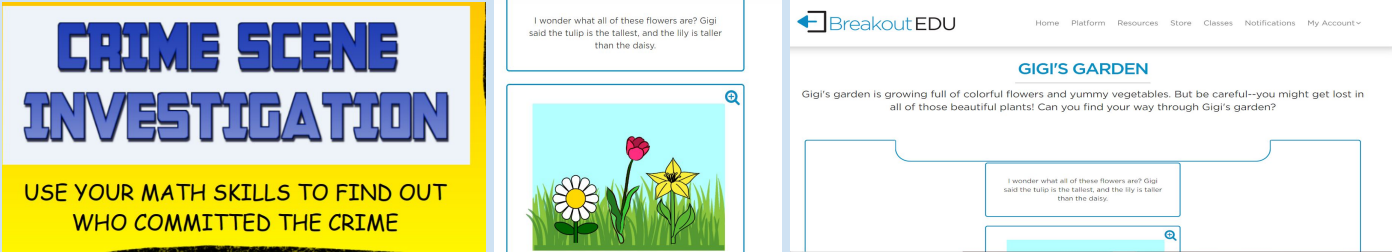
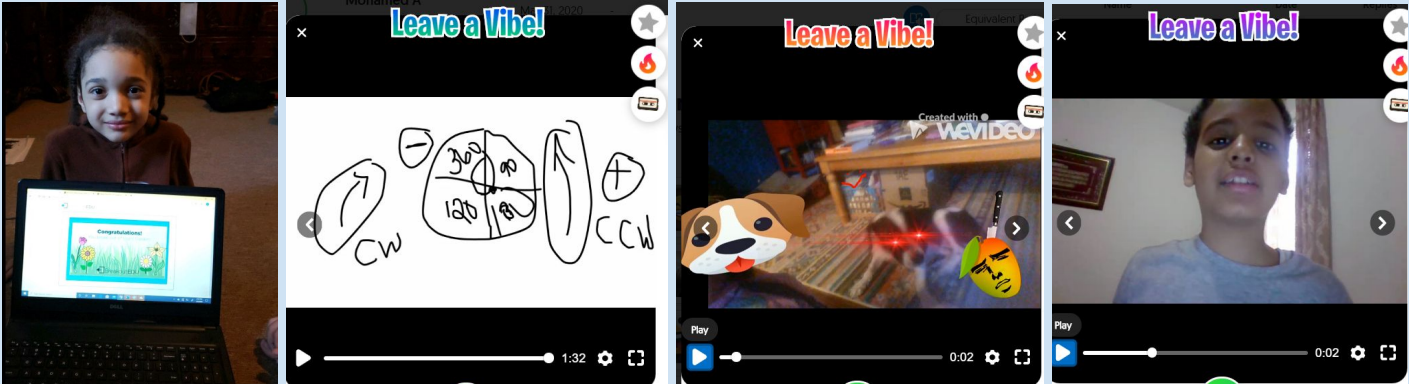
Our fifth grade architects and historians used their skills on surface area and volume to design, measure, and create their own nets where they drew the net of a cube or a rectangular prism out of cardboard and then folded it together to create their own box. They later calculated the surface area and volume of their boxes and then added their researched African American mathematician history on the boxes that they created for African American History month.





Our students have been doing a great job persevering while we are distance learning.

- First grade worked on comparing measurements of height and/or lengths to solve codes on BreakoutEdu.com.
- Third grade went on a crime scene investigation and used their math skills to find out who committed a crime.
- Third grade helped Farmer John on Barns, Barns, Barns, and more Barns... on BreakoutEdu.com where they had to help Farmer John check out his area and perimeter of his barns as he had to prove that he used his space wisely!
- Fourth grade discussed how shapes rotate clockwise or counterclockwise and how many degrees each rotation was on Flipgrid.
- Fourth grade watched different transformations that are used in the game of Pac Man on youtube and compared each geometric transformation that they saw in regards to translations, rotations, and/or reflections used in the game..
- Fourth grade wrote RAFT letters. In these letters, a student must consider their role as the writer, their target audience, the format in which they want to write (narrative or in dialogue), and the topic in which they would write. Students wrote letters taking on the role of a shape that was reflecting to other shapes that were either rotating and/or translating. In the letters, they used their knowledge of geometric transformations to write dialogue or narratives between each.
- Fifth graders used their knowledge of equivalent ratios to reason whether Max was fed the correct amount of dog food using the ratio of 1 cup of food every 8 hours when the morning feeding was missed.



Dear Transformations,

I have an appreciation for all of the translations, but I must point out that there are many differences between each. For example, since I am reflecting, I have a mirror effect, but comparing me to, say Phosfer, he is rotated, meaning he is constantly tilted instead of having a mirror effect, like I do. Another example of this difference can be shown with Clobther, he has the translation effect, meaning he is always slide in a different direction, which is way more different than

my mirror effect. And lastly, Carl, the lonely one. He has the dilation effect, meaning that he is changing sizes often. I remember when he almost destroyed a McDonalds with his sudden size change, what goods times. But the point is, that every transformation is different, because even when not comparing with me, but with each other, Phosphor is still different than Clobther, and Carl can be different with Phosfer, and this is all not counting shapewise, only transformation-wise.

Sincerely, Chotsgur

Dear rotation, translation, and dilation.

I am different from you because. I am a reflection of a shape which is the shape but flipped backward. A rotation is a turn and I am not. A translation is a turn to a different square unit or number of square units. Dilation is when you take something and change it.

From your friend reflection

Extended Learning Math Resources

Here are some fun ways to continue growing as experts from home.

- [Mr. R's World of Math - Math Stories](#)
- [Breakout EDU](#)
- [RAFT - Transformations Letter](#)

## Summer Learning Opportunities

- **Institute for Educational Advancement Scholarships and Competitions** - The Institute for Educational Advancement (IEA) is dedicated to the intellectual, creative and personal growth of our nation's gifted and advanced youth through providing resources, scholarships, and competitions.
- **CK-12 Brain Flex** - A free and self-paced online summer program that has students working on the subjects of math and science.
- **Connections Learning** - A nice collection of technology related online courses for math and reading grades K-8.
- **DimensionU Summer Chill** - A fun online competition that has students of all ages working in the subjects math and literacy in DimensionU's innovative 3D virtual worlds, with the chance to win prizes.
- **PBS Kids for Parents**. Free; age 3-9. The PBS Parents' site offers a variety of practical, step-by-step plans to incorporate learning and playing into the dog days of summer. You can search by age and topic to find tons of age-appropriate ideas to keep kids active and engaged.
- **DIY**. Free and fee-based; age 7 and up. This site offers online courses in areas such as drawing, photography, animation, inventing, and science, plus more than 1,000 additional activities (many of which can be completed offline). You can try out the site for 14 days before committing to a monthly subscription.
- **Make: Online**. Free, but materials cost extra; age 12 and up. The folks behind the maker movement offer weekly camps based on themes such as Far Out Future and Flight. You get a PDF with daily activities that support the theme, such as making slime and designing and flying kites.
- **Made with Code from Google**. Free; age 12 and up. A wide range of projects, including making emojis, animating GIFs, and composing music, is designed to ignite a passion for coding in teen girls. (There's no stopping boys from doing these projects, though.) The site offers inspiration stories from female tech mentors as well as ideas to make coding social, such as a coding party kit.
- **Camp Wonderopolis**. Free for campers; optional instruction guide for parents; age 7 and up. Sponsored by the National Center for Families Learning (NCFL), this online camp lets kids explore topics such as weather, food, and technology. Each topic includes lessons, outdoor activities, videos, and additional reading suggestions for all ages.
- **Connected Camps**. Price varies; age 8-13. For tech-curious kids, check out Connected Camps, which offers week-long, instructor-led, Minecraft-based camps including coding, game design, and engineering. There are also courses in Minecraft and the Scratch programming language just for girls.
- **TechRocket**. Free for a course sampling; price varies; age 10 and up. Launched by iDTechCamp (the popular -- and pricey -- computer day and overnight camps), TechRocket offers online instruction in coding, game design, and graphic design. Each camp offers a variety of levels and challenges as well as a dedicated instructor.
- **Challenge Math Problem Solving for the Gifted** - provides challenges beyond regular school curriculum, strengthens creative [problem solving](#), and logical reasoning skills, further develops gifted students' intellect in math, and helps students excel in national math competitions. Detailed step-by-step instructions and solutions are provided for all assignments. Type <https://www.noetic-learning.com/gifted/index.jsp> in your url to sign up.
- **Art of Problem Solving Summer Camps** - Virtual Summer Camps for Math & Language Arts  
Grades 3-12. Help your child prepare for success in school and beyond with our small, interactive virtual math and language arts classes. Children will master key skills such as communication, creativity, and critical thinking.

### For Parents:

**NJAGC Parent Resources**. As you get to know your sensitive, energetic toddler, watch your 10 year old struggle to fit in at school, or agonize with your high schooler about multiple college choices, you may wonder why your child seems different from other children. Is your child gifted? Educate yourself with resources from the NJAGC. (Twitter: [@NJAGCgifted](#))

**Hoagie's Gifted Education Parent Page**