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Gifted & Talented Faculty:

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Grade 1 & 2 Enrichment

First and second graders have been extremely busy in Enrichment class. Students were very excited about meeting, or being reintroduced, to our "thinking mascots" and trying to think in a variety of ways like our animal mascots.

First graders took on a variety of challenges using fairy tales and nursery rhymes. They were given the task to create a bridge for the Three Billy Goats Gruff so that they could safely cross the river. There were a variety of constraints put into place as they had limited supplies and time to complete it. Students had to think outside the box!

Second graders completed a variety of inventions with varying degrees of difficulty. Our most extensive project was an invention

that required the use of a cardboard tube as one of the materials. After bringing in hundreds of cardboard rolls, students got to work and were very clever with their blueprints and final products. Each student created an invention and explained how it worked, materials that were used and what problem it solved.

Second graders also participated in a project called *Voices of the Land*. They used digital 35mm cameras (bought with a grant from the REF) to take nature photos. These photos were used to create Google slideshows, which included haiku poetry inspired by the photos.

Grades 1, 2, and 3 participated in *The Hour of Code,* sponsored by code.org. Grade 1 students used a computer science fundamentals course first on paper, and later online. Grade 2 and Grade 3 Computer Skills students participated in *The Hour of Code* by using various online block coding activities, such as *The Grinch*, *Minecraft*, and *Dance Party* on code.org. As the year progressed, Grade 3 students implemented the skills they learned to use block coding on Kodable.com.

Grade 3 Discovery

Discovery Class at Lincoln and Washington Schools began the year with a unit on selfreflection and self-discovery. The students reflected on their lives and talents and created a personal shield in the heraldic style. Each student presented his/her shield so their peers could get to know them on a deeper level.

In the Fall, we were lucky to visit the Grounds for Sculpture (GFS) in Hamilton, NJ. Prior to the trip, each student chose a sculptor whose work was on display at GFS. Most students were able to find their sculptor's work at GFS, or they found the work of a sculptor that inspired them. The students researched the sculptor they chose and had the opportunity to create some very unique sculptures based on their sculptor's work. Using materials with some constraints put into place, students needed to make sure the sculpture was threedimensional and could stand alone. Projects came alive as students shared each one and gave detailed information about the inspiration for the project idea.

The Discovery students then learned about the Alaskan Iditarod dogsled race. Each student researched, made a poster of information about Alaska, and created a unique model of a dogsled using found or recycled materials. Each student presented their sled and explained its design. The sleds were then "raced," by using a string and cup attached to their sled. The sled that moved across a table using the least number of magnets put into the cup was the winner. The sleds were tested on a flat table, and then on the same table with paper "moguls." Students also voted on the most creative sled.

In the Spring, each Grade 3 Discovery class was put in charge of a garden plot. Students helped prep the plots for planting, researched what kind of plants would grow best in Rutherford, and planned a planting grid for the garden plot(s). The students visited Centre Ridge Garden Center in Nutley, NJ, to choose seedlings and seeds for the gardens.

The Discovery class also learned about the Mars rovers and their missions on Mars. In both schools the WeDo 2.0 app was downloaded. The students worked in partnerships, followed the procedures for building and coding the model, *Milo the Science Rover*. Finally, students synced their LEGO hubs to bluetooth, coded their models to move, and gave each of their rovers a unique twist. Some of the rovers even spoke! The Discovery Class, once again, hosted an Open House in June. Parents were invited into class so the children could showcase all of their projects from the entire year. Salad and peppermint iced tea, sourced from the Discovery gardens, were served. Everyone was excited to see what was accomplished and the growth that the class made in such a short time.



<u>Pierrepont School – Amanda Almaliah</u> <u>All Grades</u>

Didn't the 2024-2025 school year fly by? Maybe it's because time flies when you're having fun. Ever wonder who coined that phrase? Something new for this year was our weekly "Wonders Where." Every Monday morning students came into class and asked a question they wondered about (sometimes a theme was chosen and sometimes students asked freely). On Friday, Ms. Almaliah posted the favorite or most asked questions. Everyone from all the grades would spend a little time researching the questions. It became one of their favorite activities. Even if every theme wasn't a "hit," bringing curiosity back into the classroom was the biggest accomplishment.

In an attempt to keep trying new things, our students in 4th and 6th grades both competed in two different climate change competitions. The 4th graders hit it out of the park with their *Canva* videos. Everyone was so impressed with their research, creative solutions and storytelling skills. The 6th graders had the challenge of trying to make real world changes locally. This was much tougher, but what was found were some amazing ideas and persistence through struggle. That was a class win, even if any of the projects did not.

Speaking of winning, next came the *Noetic Math* competition. Students prepared weekly by solving math problems. The competition was tough, but everyone persevered and many students were awarded honorable mention. Four students even earned TOP HONORS! That was more than last year!

Every year, something new and exciting is introduced. Sometimes it works out great and sometimes it doesn't go over so well, as long as the students learn when mistakes are made.

4th Grade – Inquiry

Fourth grade started out with Kamishibai. The students first learned about Japanese culture and the art of storytelling. After reading some famous Kamishibai stories, students were grouped in teams of three to create and illustrate their own story. Once the groups completed this task, from rough draft to final, the stories were shared with their families. Students also shared their Kamishibai illustrated stories with some lucky Lincoln School classes via Google Meet.

Next, the fourth grade spent a little time practicing creativity, critical thinking and logical thinking -- skills that are the basis of much of what is done in class. In the Decathlon unit, the 10-week marking period was split into 2 weeks of practicing a variety of skills. Students tackled brain-busters ranging from *Sudoku*, to creative writing, magic squares, matrix logic puzzles, anagrams and rebus puzzles (just to name a few!)

Students then jumped right into the theme of ecology and became ecological engineers by learning about renewable and non-renewable resources. Students built windmills and a solar powered house. In doing so, students saw hands-on how making a positive change for our environment can be realized. The classes then turned from physical to technological with the same theme and purpose. Students embarked on the CAVU Climate Innovation Challenge where they had to create videos showcasing creative solutions to climate change problems. This was the first year students participated in the challenge and it was a lot of fun and hard work. Climate scientists learned how to use *Canva* software, researched both large scale and local climate change problems and created a story about a solution to a problem decided upon by each team. It was a lot of work, but it was an amazing experience and everyone learned something.

Lastly, students began to understand habitat and environmental problems that threaten animal species. They each researched food webs, habitats, and ecosystems. Students learned about how animals adapt to their environment. (Ask about the song, you won't regret it). Following this, students began reading Who Really Killed Cock Robin? by Jean Craighead George. Through reading the story, students continued to learn about human impact on the environment and thought about ways we all could make a difference. In this interdisciplinary unit, students learned about the chemicals used in our daily lives and how pesticides and insecticides affect an entire food chain. The highlight of our year was the field trip to Tenafly Nature Center where the students were able to see these habitats first hand and study with an environmentalist. Hopefully, they were inspired to be the change we need in the world.

5th Grade – Inquiry

Fifth graders worked cooperatively all year to learn, problem solve and brainstorm to generate ideas.

The classes started the year off with architecture and design. Working in small groups, students learned about the shapes involved in design and the differences in architectural styles. They then used this knowledge to design and build a home featuring that style and presented their designs in a small presentation. Thanks to volunteer chaperones, students were able to walk around town and find examples of architectural styles in our own backyard.

The fifth graders then moved onto *Finding Justice*, a law and mock trial unit, which found students immersed in law, ethics and what is

morally right or wrong. Completed in-class exercises asked students to think about scenarios through the lens of the law. Students finished the marking period with two large group jury trials in which students role played as lawyers, witnesses and juries. Parents were invited to watch a courtroom trial. We hope you were able to make the presentation. It was a great experience from start to finish and one of the students' favorite projects!

Next, fifth graders moved to space; figuratively, of course. Students learned about the Race to Space and why the United States started NASA. A different topic related to space was chosen by each student and presented to the class. Lessons were taught through many creative means, such as videos, interviews, dioramas, games and slideshows. Participants learned facts about the moon, the International Space Station, black holes and how astronauts function in space. Students visited Buehler Challenger and Space Center in Paramus and worked together in a simulation to find a spot to build on Mars. Difficult decisions had to be made, but ultimately everyone made it back to Earth (no children actually left the atmosphere in this simulation)!

After studying the forces of flight, students worked in small groups to create a glider and learn about aerodynamics. While seemingly easy, this difficult challenge required students to construct a glider that actually glided. The best part of this challenge was not in the design, but in the problem solving when almost every team realized there was something that needed improvement and to be redone. Students followed the design process and quickly began to understand why there was learning in making mistakes. The last test run was in the multipurpose room and all analyzed what could be done better if students had time to continue to redesign.

Switching gears, students brought their sights down to Earth for the next unit on the ins and outs of game creation. The first adventure was a problem-based learning group project where students worked in small teams to create a board

game after learning the different mechanics of board games and what makes them challenging and age appropriate. The requirement was to develop themes, rules and pieces. To present the games, class members played with their classmates and critiqued. Next, everyone learned about digital escape rooms. In small groups (or alone), students created an online escape room using Breakoutedu.com. These self-created escape rooms were tons of fun and challenging as they utilized codes, ciphers, and red herrings to get the solver off the trail. Lastly, students worked as a whole group to create a classroom-style escape room. After creating the online version, students were aware of the complexities of not only "getting out," but also how many pieces of a puzzle are needed to create one. Together students created a theme, figured out puzzles and created an escape room to challenge other students and parents!

<u>6th Grade – Inquiry</u>

Sixth graders started off the year questioning everything in our Philosophy unit. Things were never as easy as they seemed, as we dove deep into ethical and moral situations, probed dilemmas with critical thinking, and persevered to explain our views to others. Students had their questioning and inquiry skills sharpened and practiced deductive reasoning all through classroom activities that seemed more like games than hard work as we read through a philosophical story, *The Tao of Pooh*. Class members learned about the Tao through the lovable childhood characters.

Continuing on in the year, classes started *Challenge Math.* In this unit, students had to "see" what math was all about as they developed problem-solving, visual-motor, and creative thinking skills with this series of challenging and fun projects. Using ordinary classroom materials, students worked alone or in small groups to design flat patterns that folded into every day three-dimensional objects such as a house, bookcase, or chair. Each project grew in complexity from basic to advanced, and built on one another as they progressed. Students

finished this off by building a huge castle that took many hands and cooperation.

Next was the most physically challenging and complex unit, *Engineering Everywhere*. This unit offered increasing engineering challenges to students, including an elevator and arcade game that was featured at the REA March Madness day. These open-ended challenges employed the engineering design process with a purpose of attaining a goal.

Students then moved on to the culminating engineering challenge, a Rube Goldberg Machine. After the class was split in half, each group decided on the task it would accomplish to use as many steps as possible to build the machine. Students first had to learn about the five simple machines. Groups then incorporated those simple machines as a basis when they created more-complex machines. The goal was to use as many steps as possible to cause a chain reaction to achieve the end result.

Lastly, students grouped together to participate in a multi-school business competition run by the Bergen County Consortium for Teachers of the Gifted (BCCTG). The multi-step, small group task was to design a toy, create a marketing plan, prototype, budget, social media, etc. to market a well-rounded business suitable to procure a "loan" from the judges. On June 13th, students met at Bergen Catholic High School to compete against other GT teams from Bergen County. Although our teams did not place in the competition, they gained experience and enjoyed the day. Next year, we know we can bring parents along to watch.

Note from Dr. Velechko <u>G&T Coordinator</u>

Even though formal education concludes in June, G&T students should be encouraged to read, visit museums, play games and create!

Have a great summer!!

