

# GATEWAY

April, 2017

**Mrs. Dunn &  
Mrs. Marks  
Gateway Teachers  
Grades 4-5**

## **Newsletter Highlights:**

- **Mission**
- **Tier 3 Intensive Support**

### **MISSION**

To support **ALL** students through talent development. To identify, challenge and encourage academically advanced and creative thinkers.



## **STEM**

**4<sup>th</sup> grade** Our young civil engineers put their engineering design process skills to work completing the Bridge Unit. The National Railroad Company is adding a new fleet of trains to transport goods across the country. A narrow river runs through a deep valley in one section of the railroad plan and a new bridge needed to be constructed. Their challenge was to design a model of a truss bridge that will be stable enough to keep the train level as it crosses the valley. They had a \$100,000 budget to buy beams (\$1,000 each) and iron joints (\$5,000 for all). I'm happy to report that all engineers made plans, stayed within the budget, and built truss bridges that were strong enough to support the required load. Not all the bridges were as level as they should have been, but after reflecting on their work, all the engineers came up with ideas to make the bridges more stable. Their next challenge is to apply what they know about area, perimeter, and geometry to design and build a model of a Tiny House.

**5<sup>th</sup> graders** did their first Project Based Research of the year. Students researched different types of engineers and completed a project to present their findings. Among the types of engineers they researched were Biomedical Engineers, Nuclear Engineers, Mechanical Engineers, Marine Engineers, Aerospace Engineers, Agricultural Engineers, and Electrical Engineers. They researched what the different engineers do, how they're making a difference in the world, what type of education is needed, salary ranges and much more. They even researched an actual engineer working in the field. After they completed their research, they chose how they were going to present their findings to class. Students made colorful and informative posters, Google Slides, or Keynote Presentations. This was a very engaging research project and students shared a wealth of information with their classmates. Next up, using volume to design a water park.



## **Barnstable Gateway Program**

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## Advanced Math

**4<sup>th</sup> Grade:** We're just completing *At the Mall with Algebra: Working with Variables and Equations*. This is an engaging unit focused on critical and creative problem solving and reasoning. Students learned to work with variables, write expressions and equations, and solve problems using inverse operations. They analyzed number tricks and learned to write an equation that would represent the rule of the trick. They explored the idea that variables can have a specific value rather than a changing value and used that knowledge to solve variable puzzles involving addition and multiplication. A variety of problem solving methods to determine unknowns were introduced and practiced. Among them were guess-and-test methods, organized lists, drawing diagrams and the substitution method. They are becoming great problem solvers. Next, we will be extending their knowledge of decimals and fractions to percent.



## 5<sup>th</sup> Grade Math

After wrapping up the fraction problem solving unit, students began a challenging decimal division project. They were given a list with several multi-step decimal division problems. Students worked together to solve a minimum of two of the problems. Once they correctly solved the problems, they chose a problem to present to the class. Students presented their solutions using posters, Google Slides, or Keynote. They did a great job analyzing the problems, sharing the information they needed to use to solve the problem, outlining each step, and revealing their solutions. For the remainder of the year, we will be working with Order of Operations, Integers, and Combining Like Terms.



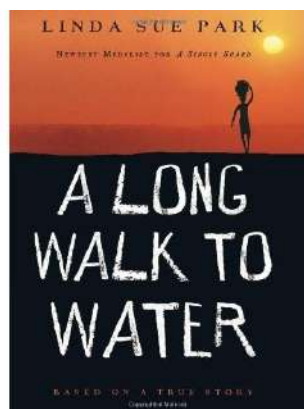
## Advanced Writing

**Grade 4 Writing:** Students are currently wrapping up their author's study. April is National Poetry month and in honor of that, fourth graders will be composing a variety of poems. Some of the less common forms of poetry will be introduced such as septet, quinzaine, clerihew, and pensee. Our poetry unit will include having some fun sharing poetic voices by reading the completed poems aloud to classmates.

**Grade 5 Writing:** Fifth grade writers have finished up their anthology of poems, and we hope to share some of these during B.U.E morning announcements during the last week of April. Our next piece of writing is an imaginative narrative. Students will write a story about a well known character from a story they have read. But that character has been 'beamed' to another place and/or time period. Narratives will include an explanation of a problem that the character has to overcome in this new place. Writers will focus on including an engaging beginning that leads into an organized development of experiences and events, ending with a satisfying conclusion that solves the problem. It promises to be a wonderful experience discovering what settings story characters will 'visit'.



## Advanced ELA



**Grade 4 Reading:** Fourth graders will be finishing the year with two units. Having finished the mystery novel, *Capture the Flag*, they will be having some fun using logic puzzles to help solve mysteries. Also students will be reading The New York Times bestseller *A Long Walk to Water* by Linda Sue Park. This novel is told as two stories in alternating sections. It is about two eleven-year-olds in Sudan, a girl in 2008 and a boy in 1985. The girl, Nya, makes two trips every day, walking two hours to the pond to fetch water. The boy, Salva, becomes one of the "lost boys" of Sudan, refugees who covered the African continent on foot as they searched for their families and for a safe place to stay. Enduring every hardship from loneliness, to attack by armed rebels, to contact with killer lions and crocodiles, Salva is a survivor. His story goes on to intersect with Nya's in an astonishing and moving way. Readers figuratively step into the shoes of these two characters' challenging daily lives in Sudan, and in so doing- they discover knowledge and understanding about civil war and hardship in another part of the world. After reading this amazing story, students will learn more about the true story of Salva Dut, and his ongoing mission to help others through his nonprofit organization, Water for South Sudan.

**Grade 5 Reading:** Fifth graders will be reading *The View from Saturday* by E.L. Konigsburg. How did Mrs. Olinski, returning to teaching ten years after being paralyzed in an automobile accident, choose four particular students to be her sixth-grade Academic Bowl team? Students meet the Souls: Noah, Nadia, Ethan, and Julian, and it presents a perfect opportunity for character analysis... how did this unlikely foursome become even unlikelier champions in far more than just the state middle school competition? This novel is a rich and rewarding journey that answers these questions and raises many more. The story provides a great opportunity to explore point of view as each character sees all the others from his /her own perspective. Our deep thinking fifth graders will be doing plenty of higher order thinking as they explore a variety of themes including choices, friendship, competition, principles, courage, perseverance, and identity.

