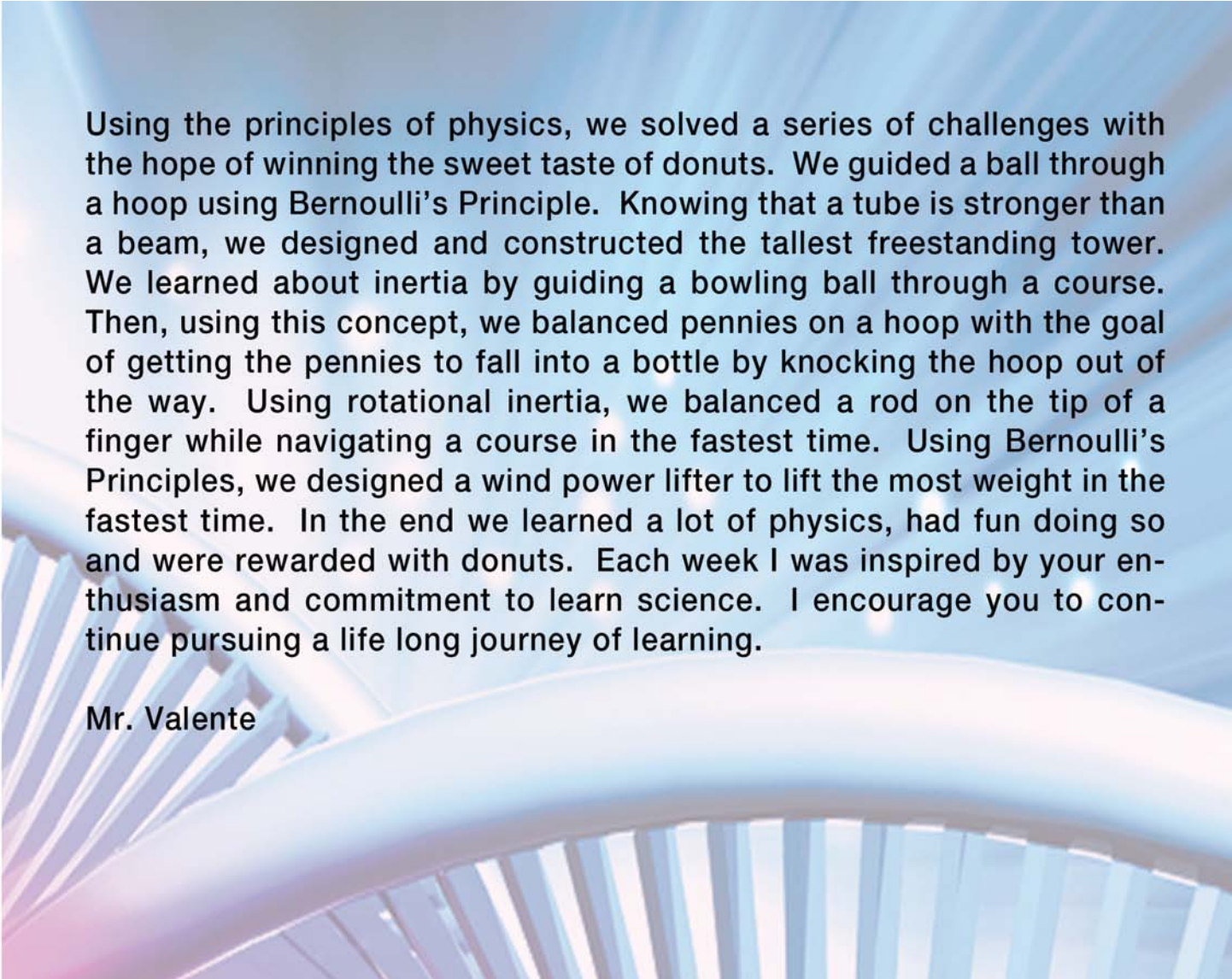




the stars
challenge

Olympics of the Mind
Fall 2012





Using the principles of physics, we solved a series of challenges with the hope of winning the sweet taste of donuts. We guided a ball through a hoop using Bernoulli's Principle. Knowing that a tube is stronger than a beam, we designed and constructed the tallest freestanding tower. We learned about inertia by guiding a bowling ball through a course. Then, using this concept, we balanced pennies on a hoop with the goal of getting the pennies to fall into a bottle by knocking the hoop out of the way. Using rotational inertia, we balanced a rod on the tip of a finger while navigating a course in the fastest time. Using Bernoulli's Principles, we designed a wind power lifter to lift the most weight in the fastest time. In the end we learned a lot of physics, had fun doing so and were rewarded with donuts. Each week I was inspired by your enthusiasm and commitment to learn science. I encourage you to continue pursuing a life long journey of learning.

Mr. Valente



Nora enjoys the sweet taste of victory donuts! Jane and Eli plan their helicopter design.





Ryan, the class teaching assistant, gives advice to Steven and Milton about their plan for the Bernoulli's Principle challenge.



Jane is very confident that she has the winning method to win the Bernoulli's Principle challenge while Luis assists Aneesha as they perfect their strategy.



Arnold and Maya get ready to cause pennies balanced on a hoop to fall into a bottle by knocking the hoop out of the way. Did Aneesha accomplish this task?



Kevin, perfecting his method, removes the dollar bill from between the bottles - nice! Mr. Valente shows Luis some techniques to solve this challenge. Look carefully. Did Milton get the pennies into the bottle?



Assisted by Mr. Valente, Eli and Maya get ready to be human hockey pucks!



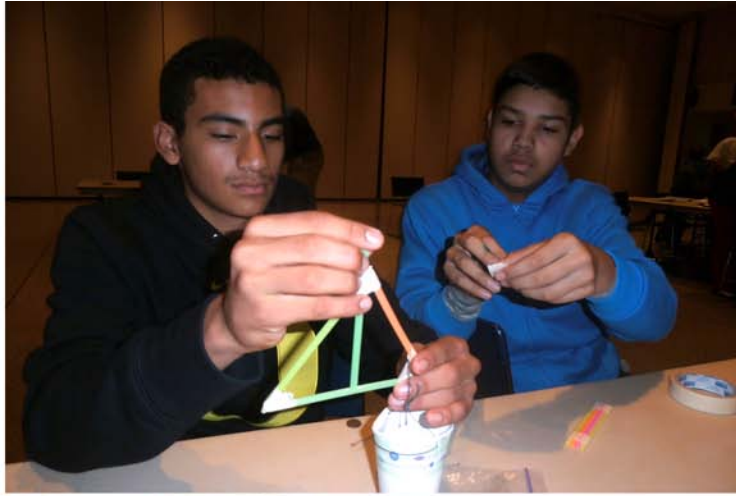
Maya guides her teammate Steven as he navigates the inertia bowling ball course. Ryan and Nikhil watch as Luis tries to keep the bowling ball within the boundaries of the course. Eli practices his technique to complete the course in the shortest time.



Milton cheers the class on as they practice the rotational inertia challenge. It looks as if Aneasha, Kevin and Steven have this challenge solved.



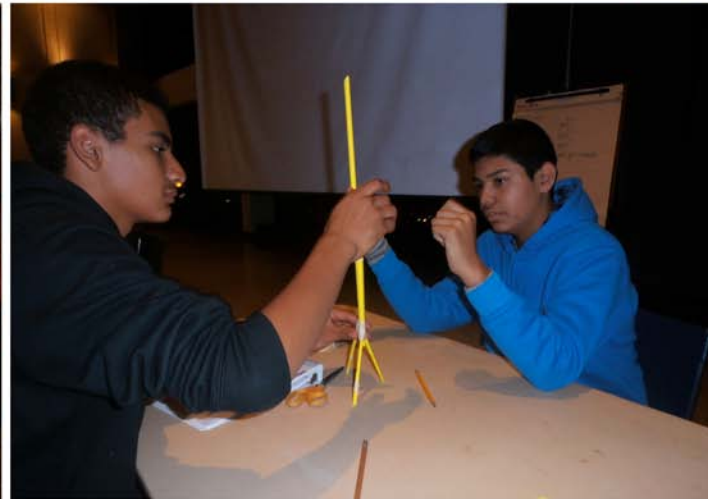
Jane, Nora and Maya determine which structure, a beam or a tube, holds the most pennies.



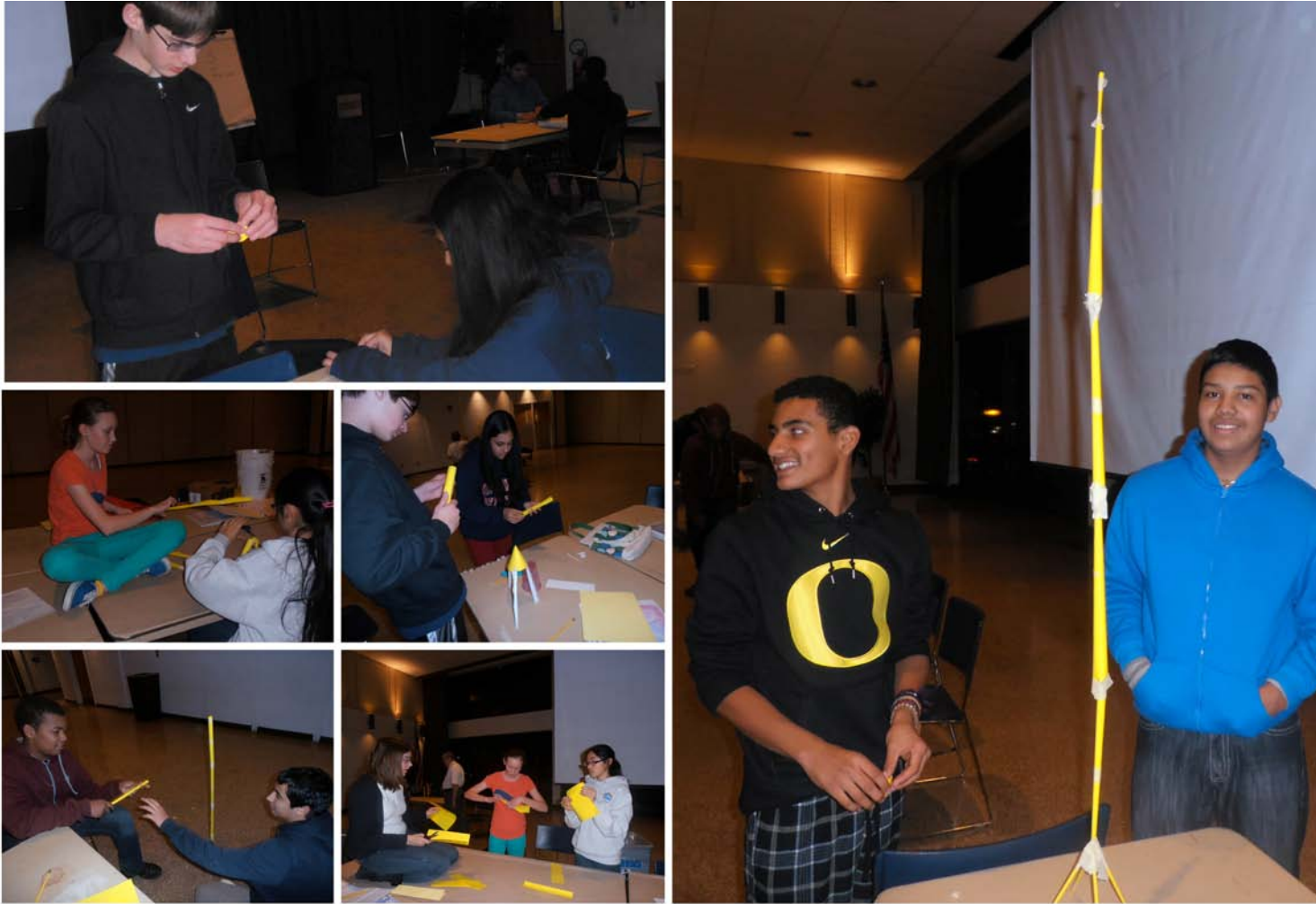
Nikhil and Milton test a beam for holding strength. While Kevin and Luis construct a triangle to determine its holding strength.



The class continues testing different shapes for strength.



Applying what they learned about the strength of different shapes, the class tries to build the tallest freestanding tower. It looks like the team of Eli and Arnold are in the lead. Wait! Kevin and Luis are catching up.



Kevin and Luis take the lead and win the event and the sweet taste of victory donuts!



Aneesha and Eli construct their wind power lifter while Kevin and Luis use a hairdryer to test their design.



Ryan, risking bodily harm continues testing a wind power lifter.





Olympics of the Mind

The Stars Challenge at Monmouth University