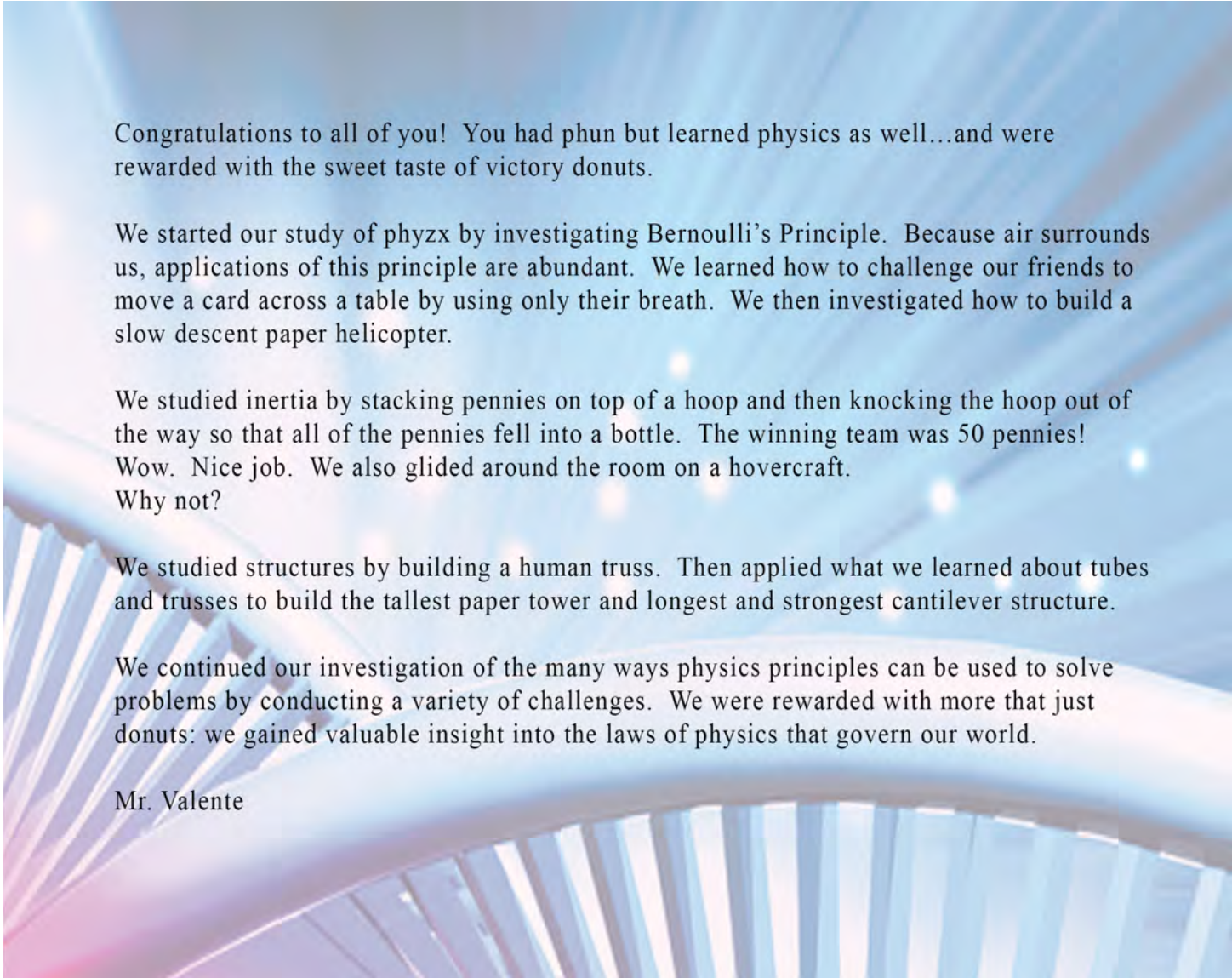




the stars
challenge

Olympics of the Mind
Fall 2018





Congratulations to all of you! You had fun but learned physics as well...and were rewarded with the sweet taste of victory donuts.

We started our study of physics by investigating Bernoulli's Principle. Because air surrounds us, applications of this principle are abundant. We learned how to challenge our friends to move a card across a table by using only their breath. We then investigated how to build a slow descent paper helicopter.

We studied inertia by stacking pennies on top of a hoop and then knocking the hoop out of the way so that all of the pennies fell into a bottle. The winning team was 50 pennies! Wow. Nice job. We also glided around the room on a hovercraft. Why not?

We studied structures by building a human truss. Then applied what we learned about tubes and trusses to build the tallest paper tower and longest and strongest cantilever structure.

We continued our investigation of the many ways physics principles can be used to solve problems by conducting a variety of challenges. We were rewarded with more than just donuts: we gained valuable insight into the laws of physics that govern our world.

Mr. Valente



The class tests their designs for the slow descending helicopter event.



The students proudly show off their paper helicopters.



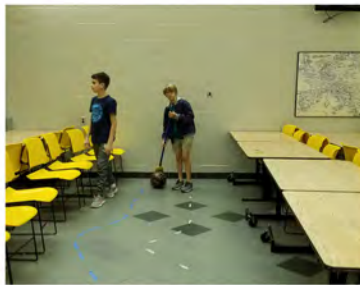
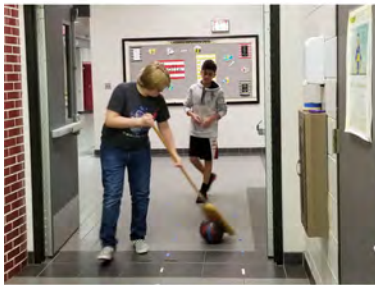
The challenge this week was to guide a ping pong ball through hoops.



Bernoulli's principle in action!



Demonstrating inertia by hovering around the room....



... and pushing bowling balls around a course. Why not?



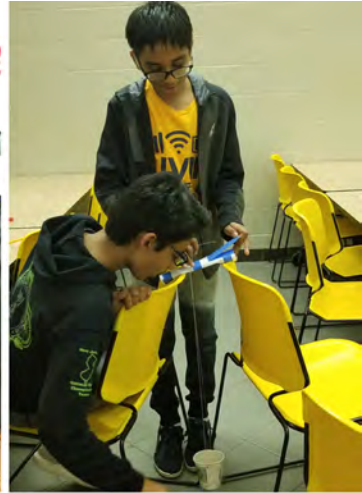
Continuing to study inertia, the class attempts to remove a hoop from under stacked pennies and get the pennies to fall into a bottle.



Are those pennies floating in mid-air or is it just inertia in action?



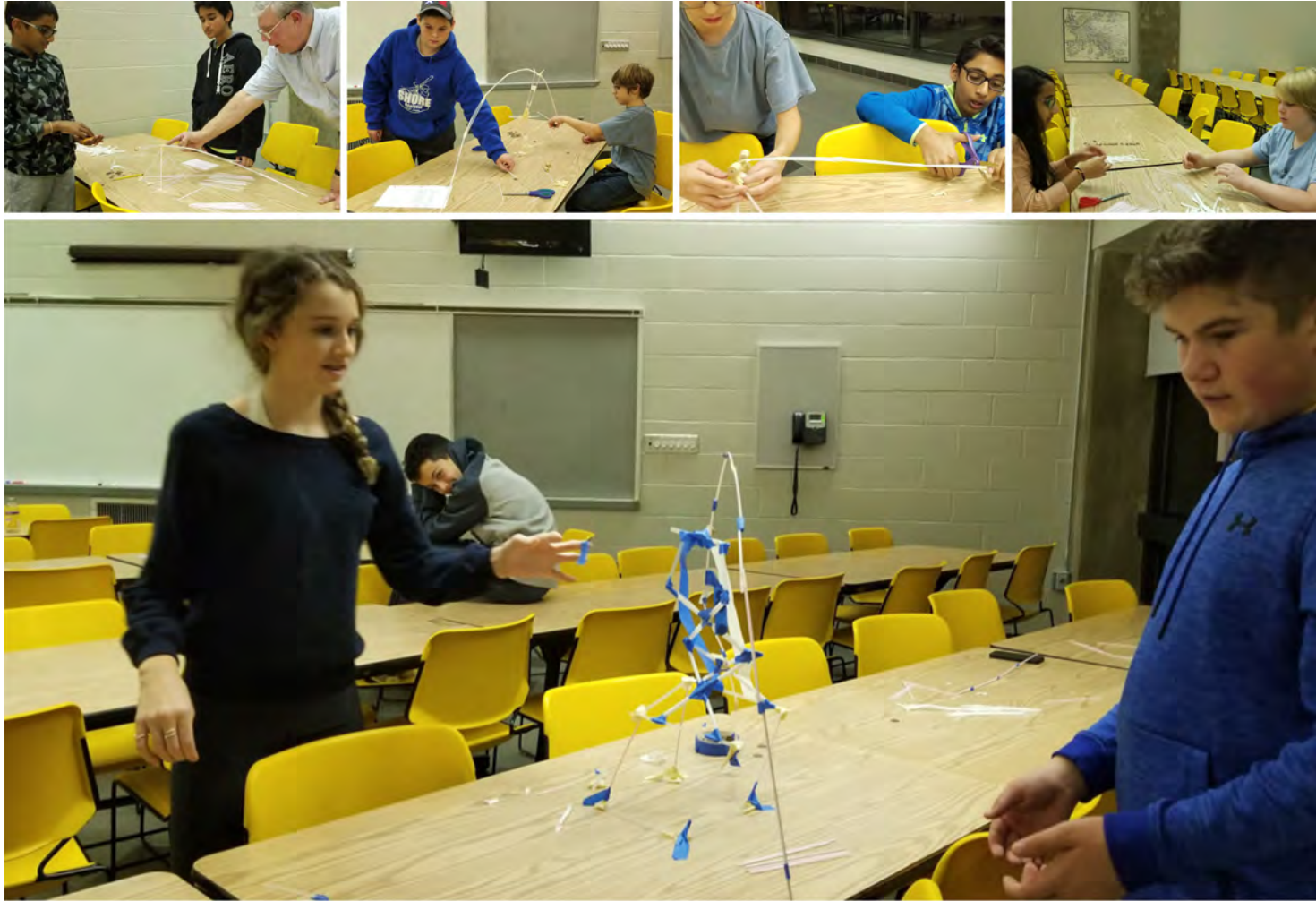
The class investigates ways to build a wind powered device that will lift the most pennies.



Wow! How TALL is that paper tower?



The students construct a human truss.



By understanding trusses, which team can build the longest free-standing cantilever arm...



...and the strongest cantilever arm?



Six grams of straws and some tape holding all those pennies? It's just physics!



The students experiment to determine the angle of maximum range — 45 degrees..



...and then try to catapult marshmallows into a cup to score points and win doughnuts.



