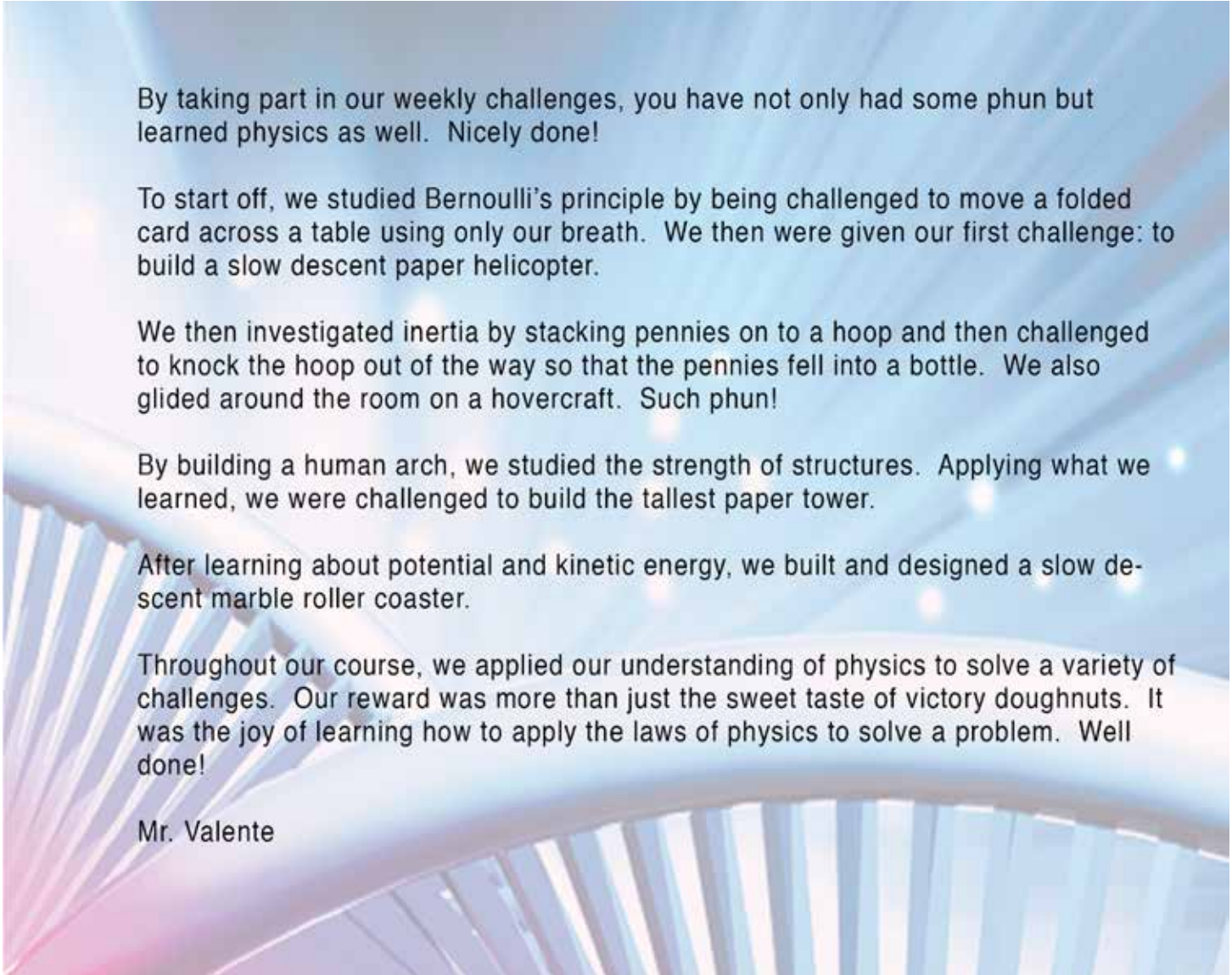




the stars
challenge

Olympics of the Mind
Fall 2019





By taking part in our weekly challenges, you have not only had some phun but learned physics as well. Nicely done!

To start off, we studied Bernoulli's principle by being challenged to move a folded card across a table using only our breath. We then were given our first challenge: to build a slow descent paper helicopter.

We then investigated inertia by stacking pennies on to a hoop and then challenged to knock the hoop out of the way so that the pennies fell into a bottle. We also glided around the room on a hovercraft. Such phun!

By building a human arch, we studied the strength of structures. Applying what we learned, we were challenged to build the tallest paper tower.

After learning about potential and kinetic energy, we built and designed a slow descent marble roller coaster.

Throughout our course, we applied our understanding of physics to solve a variety of challenges. Our reward was more than just the sweet taste of victory doughnuts. It was the joy of learning how to apply the laws of physics to solve a problem. Well done!

Mr. Valente



Building and testing our slow-descent paper helicopters



The class proudly shows of their paper helicopter designs



Using Bernoulli's principle, we were challenged to guide a ping pong ball through obstacles...



...only using the air flow from a hair dryer.



By applying the law of inertia, we were challenged to get the most pennies to fall into a bottle.



Class record for this challenge: 45 pennies, Nice!



To study inertia, we glided around the room on a hovercraft



Continuing our study of inertia, we pushed a bowling ball around a course using only the bristles of a broom. Fastest time won this challenge.



We experimented to determine which shape is strongest: a solid beam or a tube. The tube won.



We applied this knowledge to construct the tallest paper tower.



By constructing a human arch, we learned the secret of arch design.



We combined our understanding of Bernoulli's principle and structures to build a windmill capable of lifting the most pennies.



Using our knowledge of potential and kinetic energy, we designed a slow descent marble roller-coaster



We concluded our study of physics by building a catapult to determine the launch angle that produces the greatest range. Each team was then challenged to launch marshmallows towards a target for the most points.





To summarize all the points of physics we learned, we sat on a seat of nails. Ouch! Not really, it's all about pressure.



