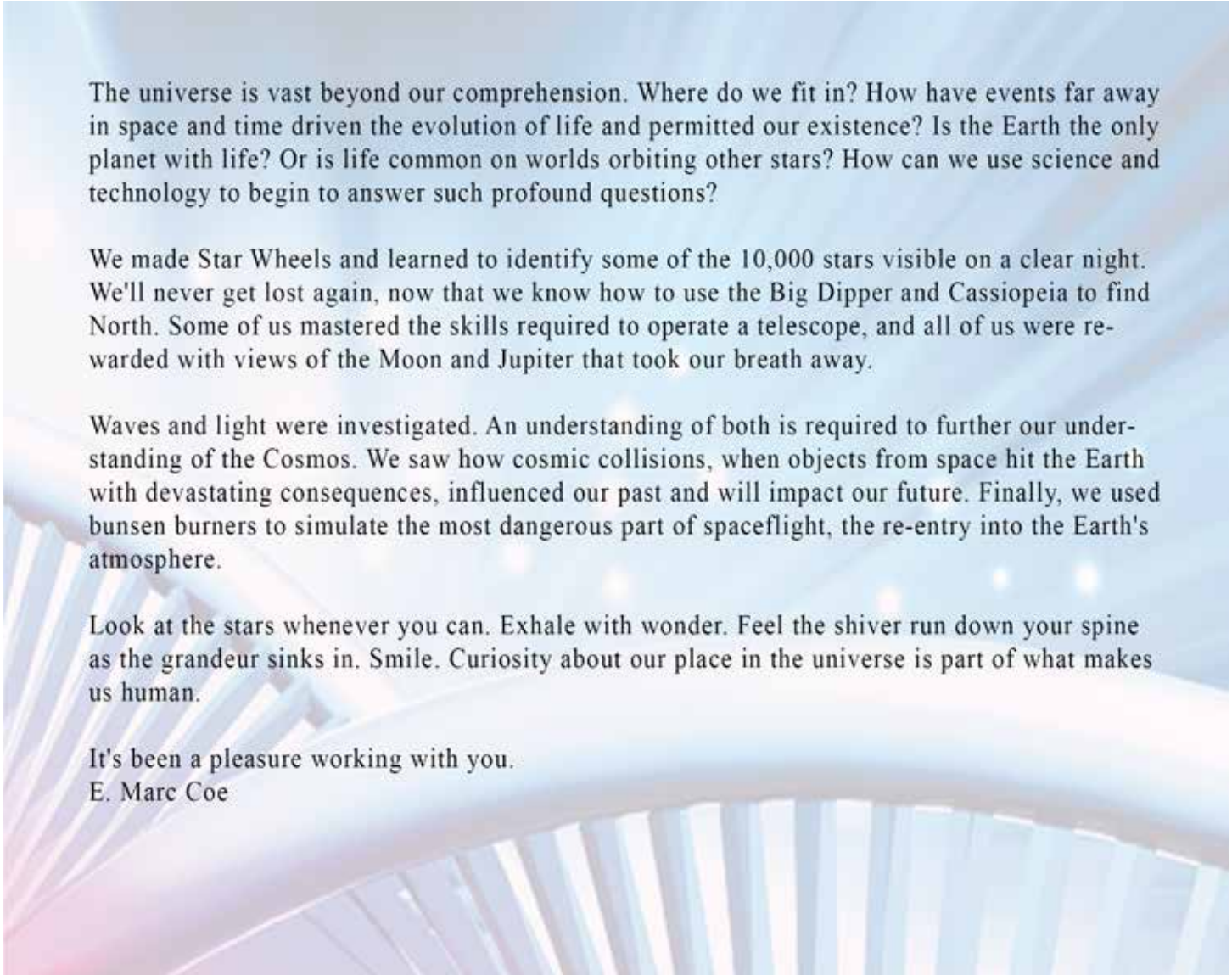




the stars
challenge

Explore the Universe
Winter 2016





The universe is vast beyond our comprehension. Where do we fit in? How have events far away in space and time driven the evolution of life and permitted our existence? Is the Earth the only planet with life? Or is life common on worlds orbiting other stars? How can we use science and technology to begin to answer such profound questions?

We made Star Wheels and learned to identify some of the 10,000 stars visible on a clear night. We'll never get lost again, now that we know how to use the Big Dipper and Cassiopeia to find North. Some of us mastered the skills required to operate a telescope, and all of us were rewarded with views of the Moon and Jupiter that took our breath away.

Waves and light were investigated. An understanding of both is required to further our understanding of the Cosmos. We saw how cosmic collisions, when objects from space hit the Earth with devastating consequences, influenced our past and will impact our future. Finally, we used bunsen burners to simulate the most dangerous part of spaceflight, the re-entry into the Earth's atmosphere.

Look at the stars whenever you can. Exhale with wonder. Feel the shiver run down your spine as the grandeur sinks in. Smile. Curiosity about our place in the universe is part of what makes us human.

It's been a pleasure working with you.
E. Marc Coe



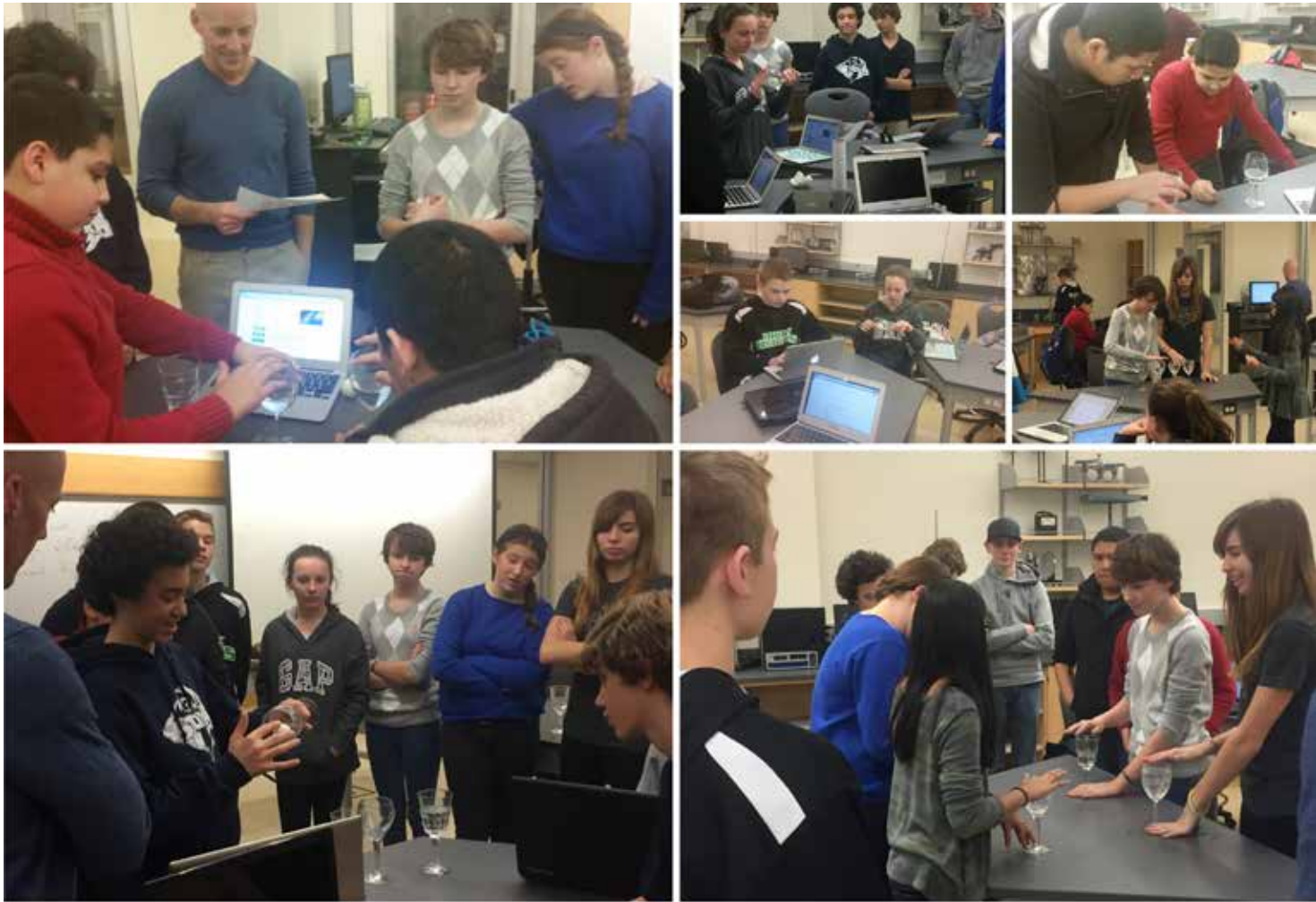
Gravity was investigated using the "levitating" slinky.



Even after a long day at school, we were enthusiastic and couldn't wait to get started!



Information about the universe travels to us via waves. Waves were investigated using many activities.



We learned new ways to annoy our parents as we created waves using water and wine glasses.



Technology has been extending the range of human senses for centuries. We are proud to continue the tradition.

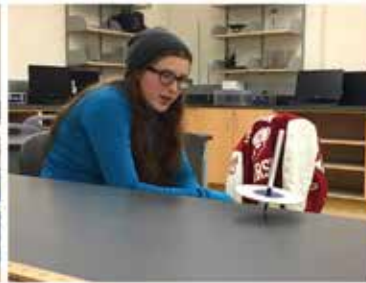
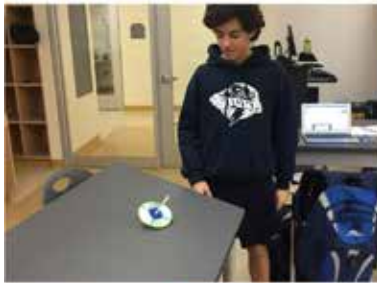


Using careful measuring, we constructed functioning telescopes.



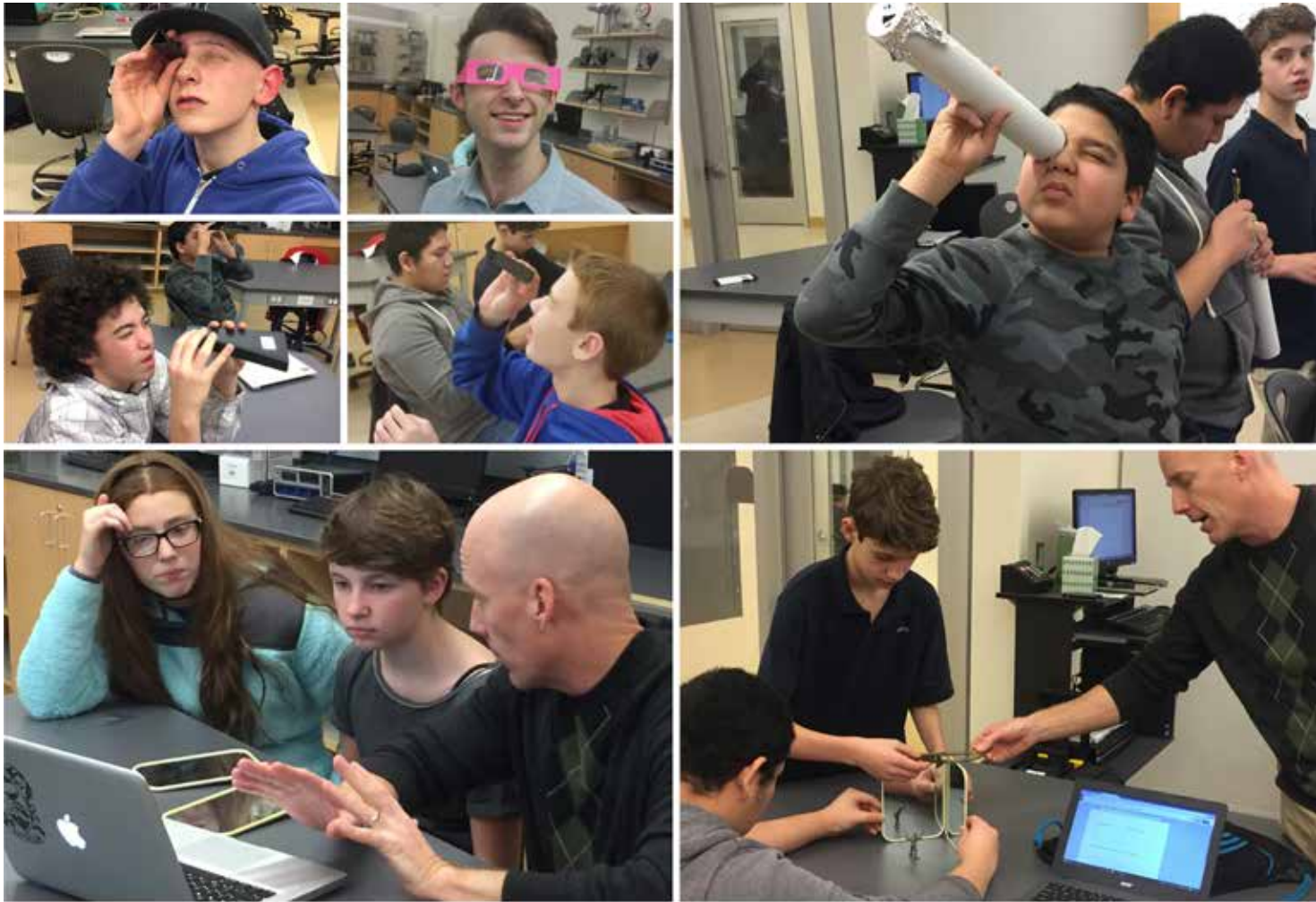


Centripetal force, which is abundant in the universe, showed us our intuitive ideas about force and motion are sometimes wrong.





Using our star wheels, we learned to identify constellations.



We built spectrometers, which revealed the complexity hidden in a beam of white light.

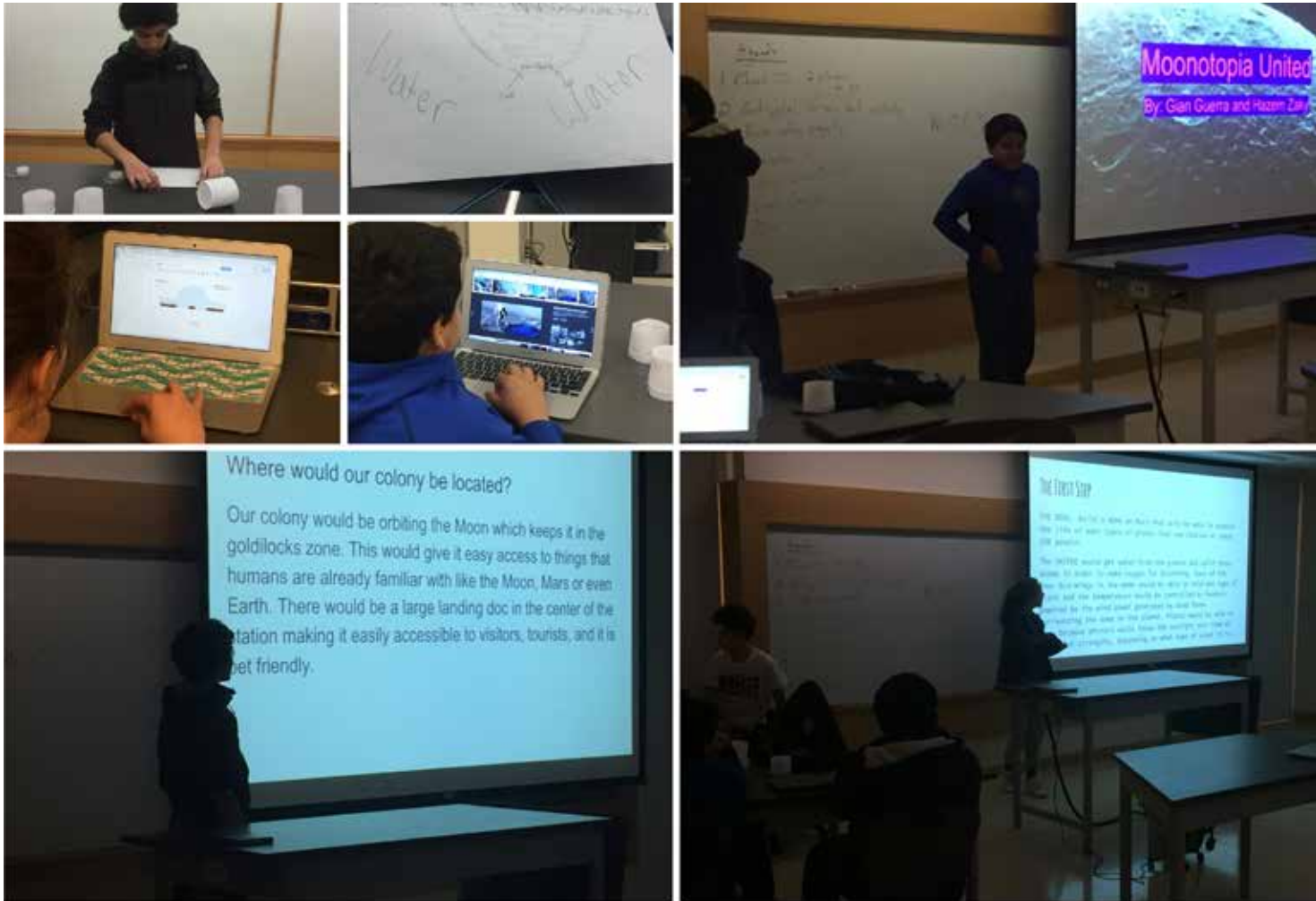




Humans have been living and working in space for decades. We discussed the challenges humans face in space.



Centripetal force provided stability to our designs and guaranteed long flights.



In the future, humans may colonize other worlds. We saw that many problems need to be solved for this endeavor to be successful.





