

FALL 2023
 Professor Kathryn Schulte-Grahame
 Stacked Cornerstones of Engineering

Beacon Communities & Beachmont Elementary STEAM Club

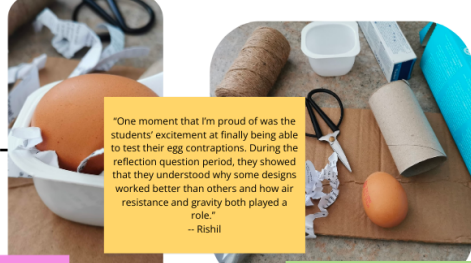
An Engineer is someone who...
 Asks questions
 Shows curiosity
 Uses tools to solve problems
 Considers alternatives
 Explores the world around them
 Discovers new things

An Engineer is someone like you!

"I was very happy when one of the kids gave me and each of the other mentors a hug at the end of the day. He seemed to really enjoy the activity, as he let his imagination run wild and created a functional candy grabber with paper features to make it look like a fearsome shark!"
 -- Samantha

- Activities:
- leaf chromatography
 - hex bugs and the engineering design process
 - candy grabber
 - curing cancer
 - bird houses
 - seismographs
 - ciphers and invisible ink
 - egg drops

Building seismographs and learning about seismic waves!



"One moment that I'm proud of was the students' excitement at finally being able to test their egg contraptions. During the reflection question period, they showed that they understood why some designs worked better than others and how air resistance and gravity both played a role."
 -- Rishil

"Even though we're much older and working with larger scale projects, I think it does us good as engineering students to get a reminder of how to properly embrace failure: with the open-mindedness and resilience of a 4th grader."
 -- Caleb

"One moment today that I'm proud of is when my group's egg drop succeeded. The kids in my group were cheering and were genuinely happy that the egg didn't crack. I was so glad that I was able to help make STEM fun for kids. I always love to see a kid smile because you know it's real."
 -- Matthew



Featuring reflections from Northeastern students.

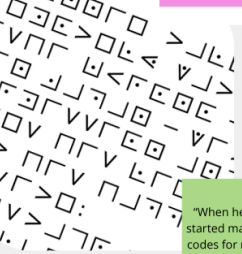


Creating orthographic projections!

"I was especially proud of one kid in my group who asked a great question. He asked me, 'How does this engineering technique benefit the world and the people in it?' I loved this, because he had the exact right mindset for a good engineer. He didn't just want to learn how to do orthographic projections, he wanted to learn about WHY they are actually useful and important."
 -- Rene

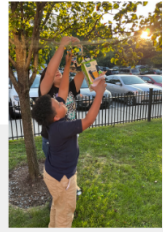


Decoding ciphers and experimenting with invisible ink!



"When he learned the codes, he started making sentences with the codes for me to decode. We spent at least 15 minutes doing this. I love that he felt confident about himself and understood what he was doing."
 -- Ayeisha

"Over the course of the activity, he tried a couple different methods and materials for his build, but ran into several problems. Regardless, he kept his vision in mind, and eventually was able to find something that worked for him. I really admire his perseverance because, with a little guidance, he ended up with a bird house that looked a lot closer to his drawing than I believed his construction could get. I remember the moment that this student's bird house was completed because it was the most satisfying moment of the day."
 -- Nathalie



"They were able to take what they learned and, with a little help, involved everyone in the process. It made me proud to see that they could understand a difficult concept and work on it."
 -- Marvin

