

Engineering Club - Circle of Pong 2019



This week the Engineering challenge was to devise a way to deposit a ping-pong ball into a paper cup that is located in the middle of a 6-foot diameter circle. As an introduction, you may know the United States and its territories encompass 169 geologically active volcanoes that are monitored by the United States Geological Survey (USGS). In order to prevent loss of life and property, the USGS issues volcano warnings which requires real-time monitoring of volcanoes, their seismology, and gas, thermal, and surface deformation measurements. **The students were** challenged as scientists are to have to overcome geography to monitor volcanoes.

The Constraints:

- Every person in the team must be actively involved in the placement of the ball.
- The ping pong ball must start outside the circle and must come to rest inside the paper cup in the center of the circle.

- Students may not touch the ping pong ball or reach into the 6-foot circle.
- No part of anyone's body may extend into the imaginary cylinder that extends above the circle.
- Only the provided materials may be used.

Testing: You have 20 minutes to test and iterate their designs freely. You must build your device away from the testing site, and then bring their device over to the testing site in order to test. Teams may not build/iterate in at the test site!

Materials per team of 2-4 Engineers

- 5 cm of Tape
- 30 cm of 3-ply String
- 4 Rubber Bands
- 1 Dixie Paper Cup
- 1 Sheet of Copy Paper
- 2 Paperclips
- Brown Paper Lunch Bag (3" x 6-7")



This challenge was adopted from: The Tech – Circle of Pong. Twelve teams participated in the challenge.



Several teams tried to “bounce” it in without success. After lots of trial and error four teams had success with different means of getting the ping pong ball in the dixie cup. Prizes were awarded.

Through the try, fail, learn approach, our students develop skills and habits of mind. These include creativity, problem solving, design, collaboration, leadership, risk-taking, perseverance, and learning from failure.



Some of the teams testing their designs during the challenge.



The first team to complete the challenge successfully.



The second team to complete the challenge sporting their Engineering t-shirt prizes.

