

## Water Monkeys (HS-302)

**Describe how your team is giving back to the community and why do you think it is important?**

Our team gave back to the community by hosting free 3D Printing and 3D design summer camps for Elementary and Middle School students during our summer break. We decided we wanted to give back by introducing engineering skills to youth, to help spark interest and also help them by teaching the information that wouldn't be available in school. We also wanted to have a safe way for outreach during the pandemic. We decided to teach the classes virtually over Zoom and Google Classroom. We taught them how to make sketches as well as how to use TinkerCad to make different models to get a handle of the software. Models included die, chess pawns, the Eiffel tower, the leaning tower of Pisa, and more. At the end, we 3D printed the models out for the students and also talked about how design is used in fields such as robotics to help them in the future. The highlight of the camp was probably the ear-saver for COVID masks to relieve stress on the ears, as it was the most useful for the students. During the camps, we also discussed our backgrounds and how we were part of SeaPerch, and some became interested in the concept of underwater robotics. Because of this, we prepared a video lesson for a DIY bottle submarine in which they could learn simple concepts such as buoyancy and drag through the building of the bottle submarine which they could use in a pool or tub (see attached link for the video). By the end, we had 3 total sessions which were 3 weeks long, twice a week for 45 minutes each, and had a total of 48 students across the 3 sessions. We plan to have an extension or followup to these camps again this summer, as the participating parties seemed pretty happy with the program.



**Supporting References:**

<https://drive.google.com/file/d/1riYLRfhfMMREC8M2D7RU3Zq5XuT-ce8V/view?usp=sharing>

