



The SD24

- 8 Years participating in SeaPerch
- 1 Times at the International SeaPerch

Challenge  
**Our SeaPerch is unique because:**

Instead of designing a new ROV, we emphasized the strengths of the default ROV provided by SeaPerch, innovating on its weaknesses. For example, The default ROV has no method to collect objects. Alternative PVC parts were added to the front to create a hook, designed to collect various objects. Additionally, the default ROV is large, struggling to maneuver in the obstacle course. We use a very small ROV frame modeling the default shape, though with its hook, the ROV remains versatile in both the mission course and obstacle course.

**SeaPerch Design Overview:**

Our ROV uses a shape similar to the default ROV originally provided by SeaPerch in the building kit. However, we have significantly downsized the frame, by about thirty-three percent on height and length, and forty percent in terms of width. Additionally, alternative PVC connectors were purchased by the team, two three-way-split elbow connectors and a cross connector. These connectors, in addition to a central bar, form a hook at the front of the ROV to complete tasks in the mission course.

**Our biggest takeaway this season is:**

The Engineering Design Process is key to the success of developing a SeaPerch. Our team has only been doing the competition for 2 years consecutively, as after the COVID gap, the team had to rebuild. Last year, we functioned chaotically during the building process, just putting together the ROV based on the tutorial provided in the kit and adding small adjustments, hoping they worked. This year, we followed the Engineering Design Process, designing a prototype using CAD after doing critical research, leading to a more successful regional competition.