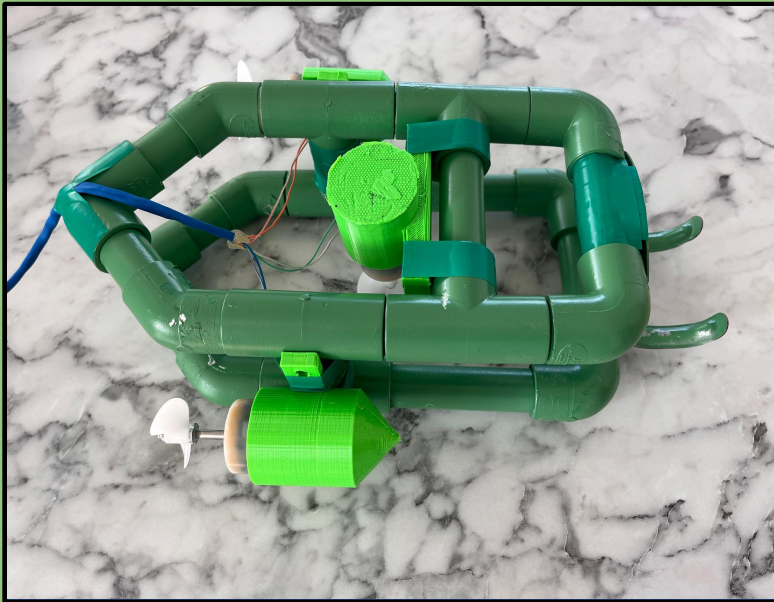


# Team Tahī

SAGE Engineering, Rotorua, New Zealand



**HIGH SCHOOL STOCK CLASS**

3-6 Years participating in SeaPerch

1-2 Times at the International SeaPerch

**Our SeaPerch is unique because:** (100 words MAX)

Our ROV's shape is unique. We chose to have a sleek rectangular shape at the front with a V shape at the back, to make it more hydrodynamic so that it can slice through the water. Therefore, it's faster, more maneuverable and stable. Our way to achieve neutral buoyancy and stability is unique. We waterproofed the top layer of the ROV to ensure only the bottom layer filled with water to keep the ROV balanced. We used our 3D printed motor holders to increase the buoyancy and the water inside the ROV kept the buoyancy neutral without adding pool noodle.

**SeaPerch Design Overview:** (100 words MAX)

Our ROV is designed to be fit for purpose for all of its tasks. Our design uses pvc pipes configured in such a way that every piece is essential and that we don't have additional unnecessary weight. By using the engineering design process (ask, imagine, plan, create, test, improve) we improved our international's design. We did this by 3D designing motor holders, making the top layer airtight, using counterweights to balance the ROV, and altering the hook position to the front. We then tested, making alterations to maximise the overall efficiency.

**Our biggest takeaway this season is:** (100 words MAX)

Our biggest takeaway this year was the efficiency of the engineering design process. We learnt this when preparing for regionals when we didn't follow it and the ROV wasn't fit for purpose whereas for nationals and internationals we followed the process and our ROV ended up much more fit for purpose. Another big takeaway was communication., We learnt the importance of making sure that we communicate with our team members about our availability in order to organise dates for practices as it is hard to organise for us due to us being busy and being an out of school group.