We can use robots for data collection. We can use underwater ROVs to collect data about the health of our Oceans. Our schools takes ROVs to Bermuda to collect data about invasive species such as the lionfish. Our ROV will help us collect data on the United Nations Sustainable Development Goals.

We think that Life Below Water is the most important United Nations Sustainable Development Goal because we depend on the ocean for food. We all need algy because it gives us oxygen. We also need to recycle and keep our oceans and beaches clean.

Another important United Nations Sustainable Development Goal is Responsible Consumption and Production. We think that this is the case because there is evidence that the world is slowly getting warmer. Also, we have recently seen multiple large storms across the world, as well as near us, in a very short period of time. This is partially being caused by the greenhouse gasses emitted by factories, so by reusing things that can be reused, we are reducing emissions from the factories that would be making new things to replace them. If it gets bad enough, it could even kill the very fish we are trying to protect from the Lionfish. Some of the greenhouse gasses also come from landfills, so by responsibly disposing of our waste we are helping the environment.

Our underwater ROV will be able to collect data about ocean health through water and sand samples. Water and sand samples have eDNA in them so scientists can learn if invasive species are in an area. It will also have a camera so we can observe what is in the ocean. We will use pvc piping for structure. To move the bot we will use propellers. We will attach a container for the water sample.

We will use the engineering design process to create a ROV by knowing that we need to figure out how many Lionfish are where (define the problem) and learning more about Lionfish and how to collect eDNA (background research). Then we would figure out how we would design the glider (brainstorm, evaluate and choose a solution). Third, we would create the glider and test it. If it performed well, we would be done, but if it did not, we would go back to one of the previous steps to fix it, and try again.

We are excited for our school to bring our ROV to Bermuda! And, we can't wait to see what data our underwater robot collects. Robots for Science!!!!!