

# Robotics in the underwater archaeologist job

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# What is an underwater archeologist?

An underwater archeologist is a person that studies systematic documentation and recovery of information and submerged artifacts of underwater sites.



We here on 2028A want to have a possible future in the underwater archeologist career, and we want to use the engineering design process to do that. Our robotics team uses the Engineering Design Process every day we are on the lab.

## Why we choose underwater archeologist?

For this challenge, we chose underwater archaeology so we can see how they use the engineering design process and how it can upgrade our engineering design process. We also chose the underwater archaeology job because we all on 2028A love the way you can take robotics(something modern) and use it for something that happened in the past for instance finding bones and other artifacts.

# The engineering Design Process for Underwater Archaeologists.



# How do underwater archeologist identify problems?

When they find a problem they figure out what the problem might be for example not enough visibility for photographers to take photos, or something is fragile after years under water. Then they would use the engineering design process to brainstorm solutions, test their ideas, and choose the best solution. They have can then find out the best way to solve the problem through the engineering design process.



## How do us on 2028A identify problems?

First we have to read the rules of the game and determine what constraints we have and what the robot has to do. Then we here on 2028A find out what is holding us back from getting the most points possible. How do we do that? We use the engineering design process and find out best options and then give them a score in a decision matrix based on what our other problems could be and how good the prototype will be for us. Through the design process we have to communicate with each other to get lots of thoughts and ideas. We have to work together as a team.

# How underwater archaeologists use the engineering design process?

When they have identified the problem and all of the constraints they have to work in then they have to work with their team to brainstorm the best possible solutions. Then they have to test those solutions and see what the best way to go is to solve the problem. Even after all that sometimes the solution they chose doesn't work and they have to do the whole thing again.



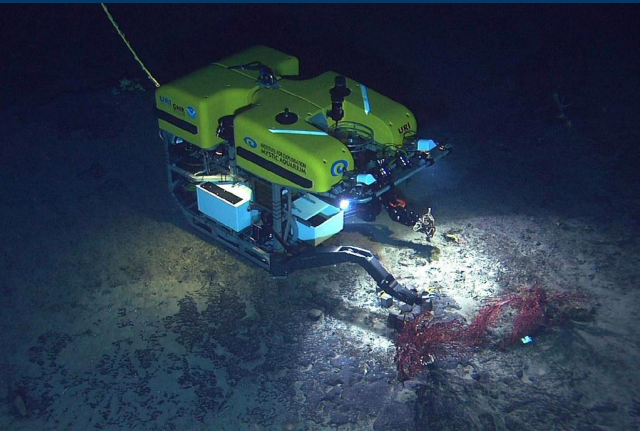


# How do us on 2028A use the engineering design process?

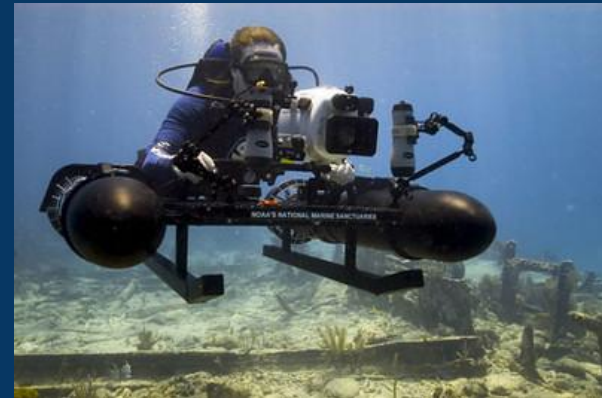
Us here on 2028A use the engineering design process over and over again because even when we have a good robot it can also get better and our programming and driving and strategies can always get better. So after we identify our problem and brainstorm solutions we have to test our ideas. Because we used to not

# How does the underwater archeologist job use robotics?

In the underwater archaeology jobs they use robotics in many ways. For example, the Hercules ROV that found the Titanic, without robots we could have never discover the Titanic in the ocean. Some other ways they use robotics in the underwater archaeology job is by using the robots to collect the artifacts or even to move things in the way of the artifacts.



**Robots are used to:**  
Take pictures or videos  
Provide extra light source  
Retrieve objects and samples  
Monitor vital signs for divers



## How does robotics prepare us for the underwater archaeology job?

Robotics prepares us here on 2028A by learning how they work together and communicate together. It also helps us by looking at their engineering design process and learning how we could use theirs to make our robot better. Another way it could help us is by looking at their strategies on collecting artifacts and then look at ours and compare to get our strategies better.

## Summary

In my slide show I talked about how my team and the underwater archaeologist job are the same and different. In the slideshow I showed how they used the engineering design process and how we use it. I also showed how they identify a problem as underwater archaeologist vs how us on a robotics team identify problems whether that be with our robot or our notebooks. In the slideshow I also talked about how they use robotics in the underwater archaeology job, and I used the robot that found the Titanic in my example for that. Finally I talked about how robotics prepares us for the underwater archeology job and how it equips us now for the future.

## Source page

<https://marineprotectedareas.noaa.gov/toolkit/underwater-archaeology.html>

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<https://pages.vassar.edu/realarchaeology/2013/09/29/ditch-the-hiking-boots-and-gab-your-goggles-the-challenges-of-underwater-archaeology/>

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<https://oceanexplorer.noaa.gov/facts/marinearch-tools.html>

<https://iopscience.iop.org/article/10.1088/1757-899X/364/1/012088/pdf>

Thank you for looking at my slide