

RoboSub 2024 | TeamTime #2

Thursday, April 11, 2024 | 7:00 PM Eastern Time



Woollett Aquatics Center, Irvine, CA





GET STARTED

- 1 Edit your name to "Name | Team Name"
(DaveMan Novick | Team RoboSub)
- 2 Let us know in the chat:
Has your team done a water test yet?

AGENDA

- [19 : 00 - 19 : 05] Welcome
- [19 : 05 - 19 : 15] Timeline & Deliverables
- [19 : 15 - 19 : 25] Accommodations & Shipping
- [19 : 25 - 20 : 40] Tasks Update
- [19 : 40 - 19 : 45] Data Sharing & Discord
- [19 : 45 - 20 : 00] Questions?





ROBOSUB

IRVINE, CALIFORNIA | AUGUST 5 - 11, 2024

Timeline

 RoboSub.org/2024

| Date / Deadline | Event |
|-----------------------------------|--|
| November 1, 2023 – March 18, 2024 | Registration |
| May 19, 2024 | Last day to cancel and receive 100% refund |
| June 17, 2024 | Event Submissions Deadline: <ul style="list-style-type: none"> • Team Information • Background Checks • On-Site Requirements • Merchandise Order |
| June 24, 2024 | Design Documentation Deadline <ul style="list-style-type: none"> • Technical Design Report • Team Video • Website • Testing Plan • Community & Outreach |
| June 24, 2024 | Last day to cancel and receive 50% refund |
| July 22, 2024 | Last day to Submit Pre-Qualification Video |



Pre-Competition Deliverables

Design Documentation

(1) Team Website

- Test it! Consider the user experience maneuvering your site and finding the required information.



TIP: Think about how easy your submission is to judge, from the judges' perspective.

(2) Technical Design Report

- 6-page limit (not including appendices)
- Get detailed! Review the requirements thoroughly and don't forget to outline your strategy and testing in detail.

(3) Team Introduction Video

- Conducted in English or English Subtitles
- Maximum 3 minutes
- Hosted on team's YouTube Channel or Team Website
- Be creative! Share your competition approach while sharing your team's personality.



Submit in registration portal:
<https://robonation.smapply.org/accl/>



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Accommodations



Hilton Irvine

18800 Macarthur Blvd, Irvine, California 92612



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Hilton Irvine

18800 Macarthur Blvd, Irvine, California 92612

- **\$175/quad room rate + 10.3% room tax**
- **Rates available 3 days pre and post contracted dates**
 - **Free internet access**
 - **Booking by link – Link TBD**
 - **Booking Deadline - July 10, 2024**
 - **Cancellation Deadline - TBD**
- **Discounted \$18.00/day self-parking**
 - **Ship to hotel – details coming**



Shipping

- **Ship to the hotel is available**
 - **Shipment cannot arrive before July 29**
- **Boxes must be picked up by teams by August 5**
- **Return shipments must leave hotel by August 14th***

**Teams cannot checkout before their shipment is picked up!*



27th Annual
RoboSub 2024
Task Ideas

Logarithmic Spiral

Explore the oceans & seek new discoveries



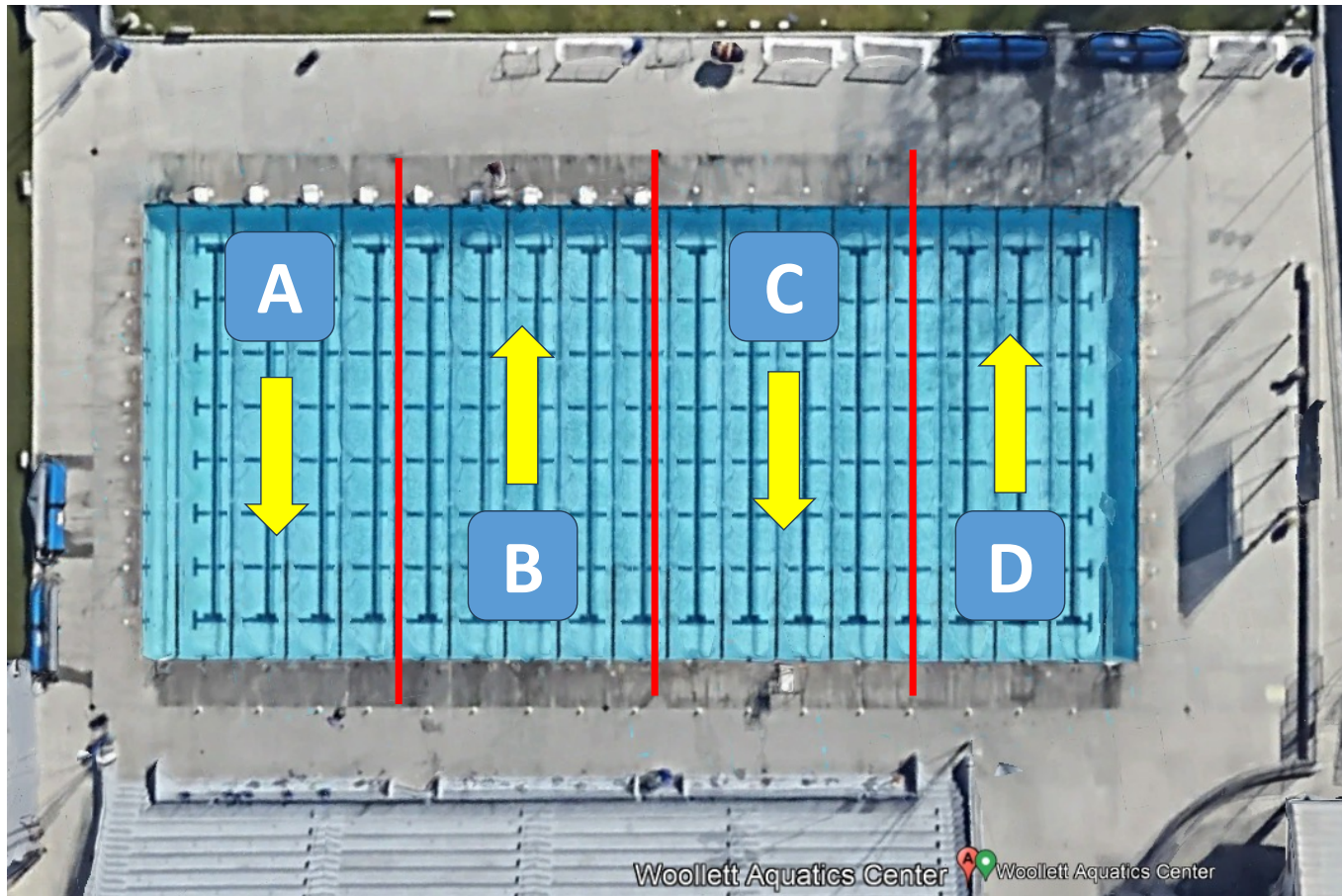
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robosub.org

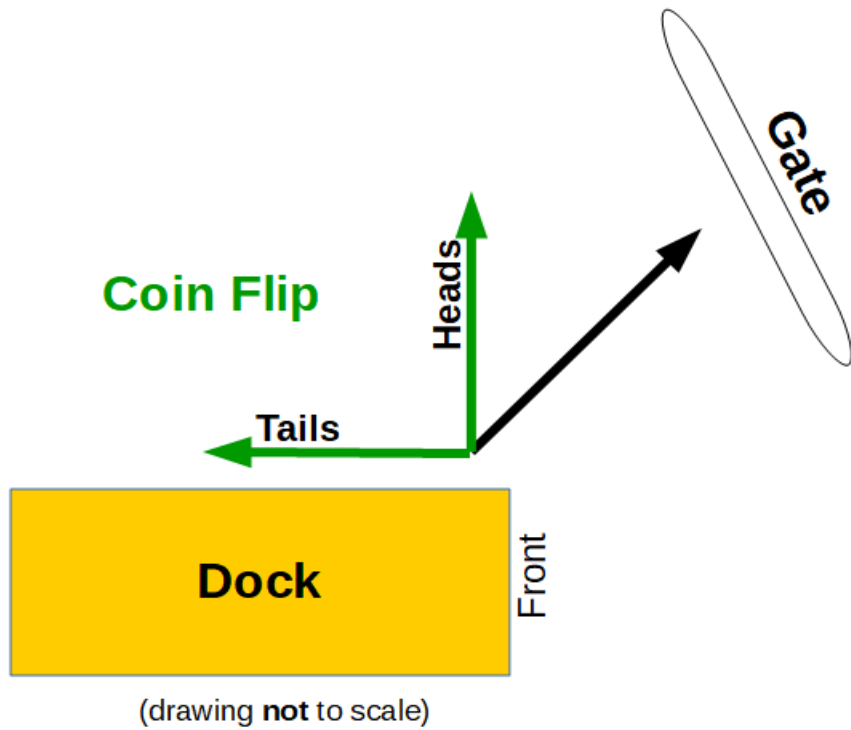
Woollett Aquatics Center, Irvine CA



Woollett Aquatics Center, Irvine CA



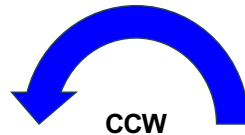
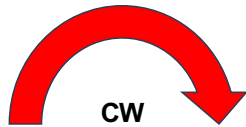
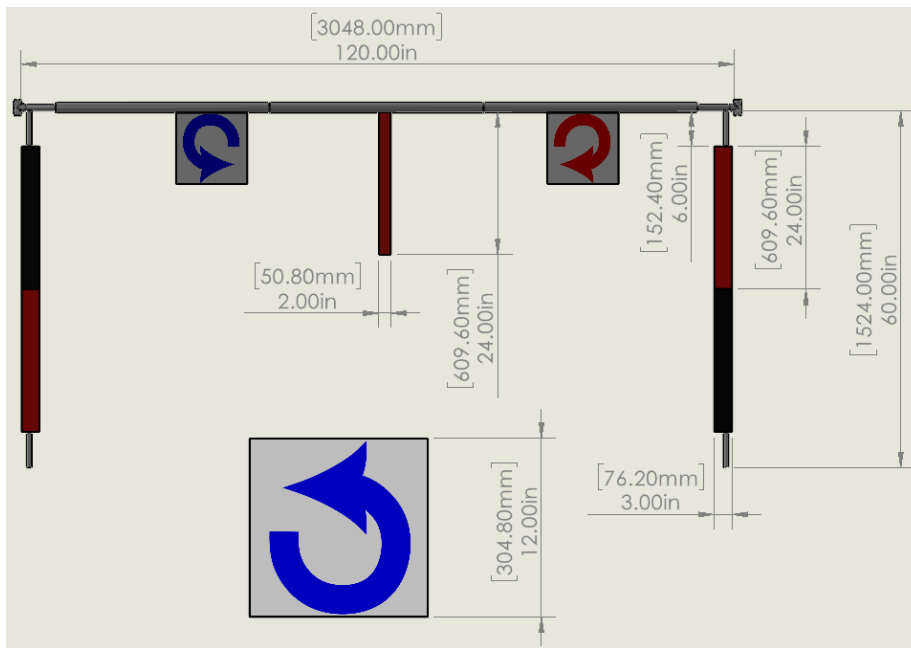
Rough Seas | Coin Flip



- Random orientation
 - 90° or 180° from dock



Enter the Pacific | Gate



Choose direction and ocean temperature

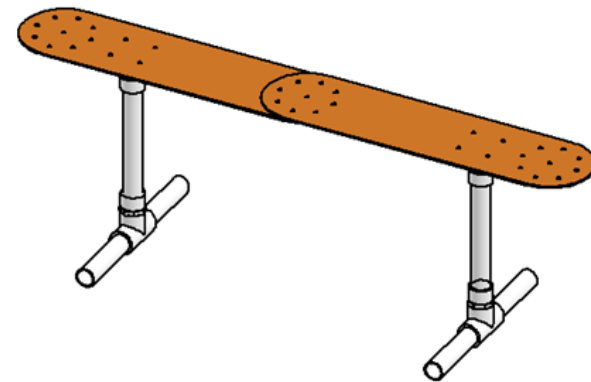
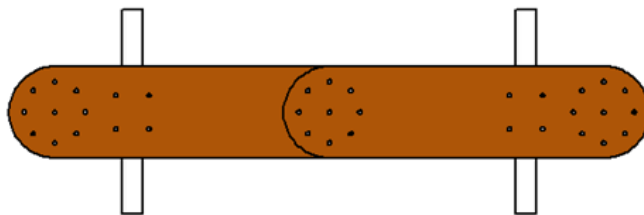
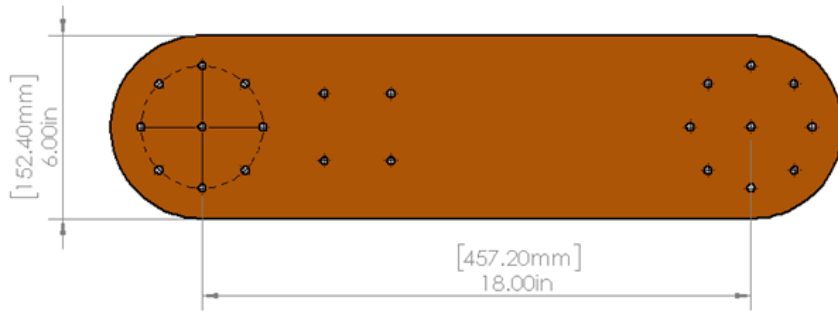
- Clockwise (CW) / Hot (**Red**)
- Counter clockwise (CCW) / Cold (**Blue**)
- Different colors? Say so on Discord

Extra points for staying with your choice for the remainder of the tasks

With Style

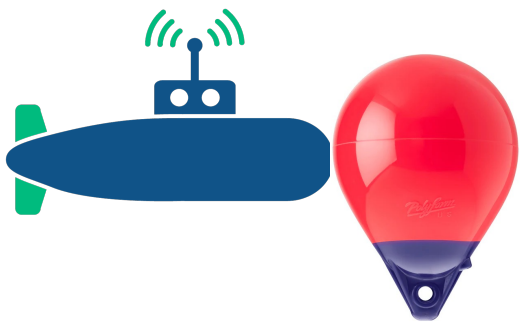
- 10 ft/3 m before/after gate
- Extra points
 - Every 90° change in orientation
 - Yaw: +100
 - Roll/Pitch: +200
 - Up to 720° rotation
 - Yaw: +800
 - Roll/Pitch: +1600

Path

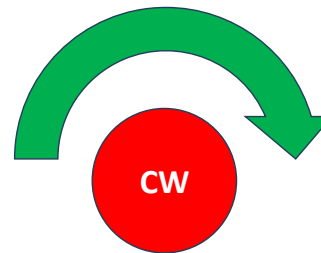


Hydrothermal vent | Buoy

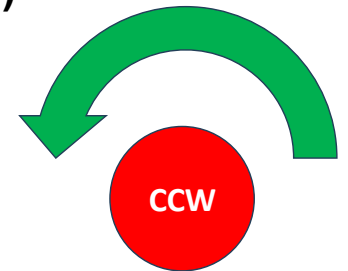
🚢 Single **RED** buoy (Polyform A0)



Circumnavigate
(Top View)



360°



360°

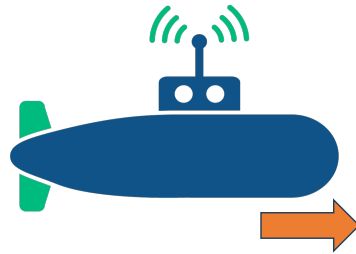


Floor

(drawing **not** to scale)

Hydrothermal vent | Buoy

🚢 Single **RED** buoy



🚢 Fire torpedo for extra points

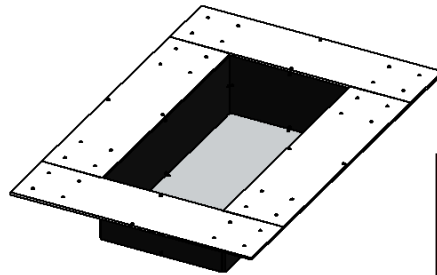
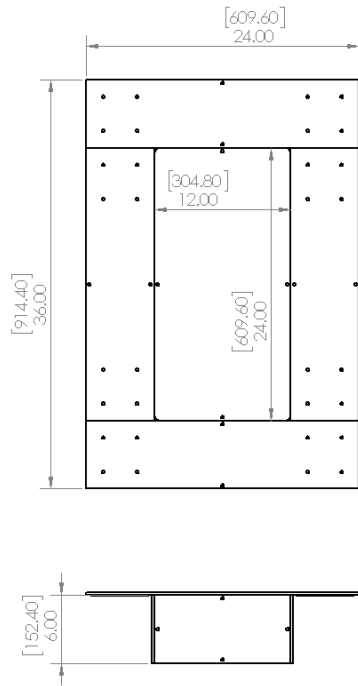


Floor

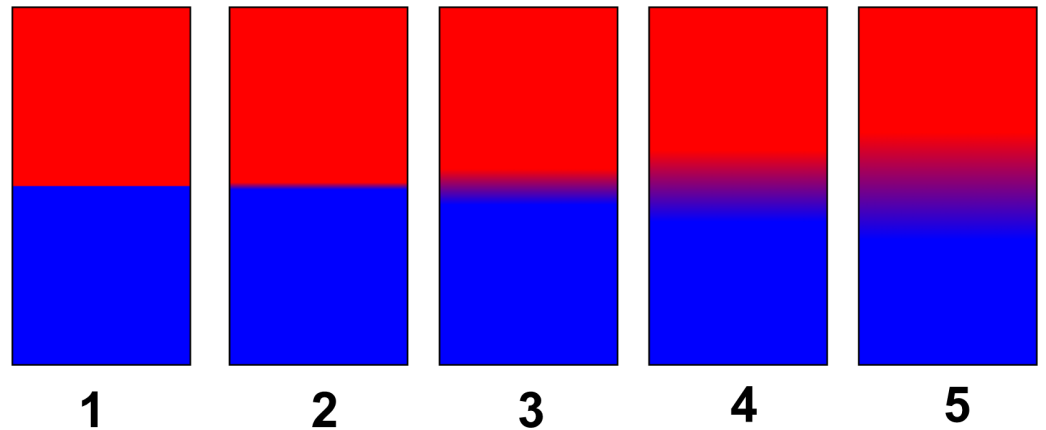
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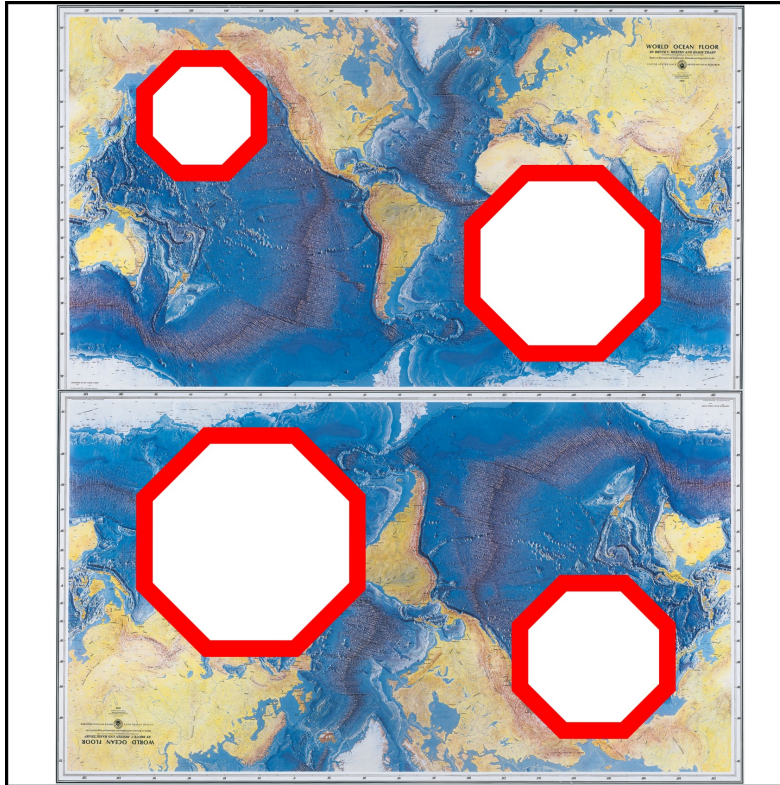
Ocean Temperatures | Bins



- Single bin
 - ½ Red, ½ Blue
 - Different colors? Say so on Discord
- Divider in the middle (not shown)
- Place marker in correct side based on your choice



Mapping | Torpedoes



🚢 The panel has four different openings

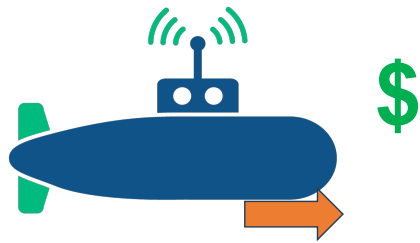
- Smaller opening = more points
- Can not obtain points twice on same opening



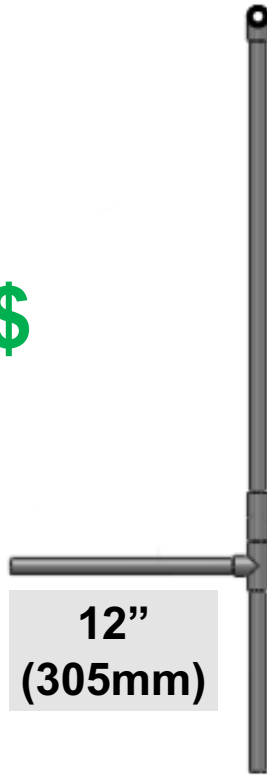
Floor

(drawing **not** to scale)

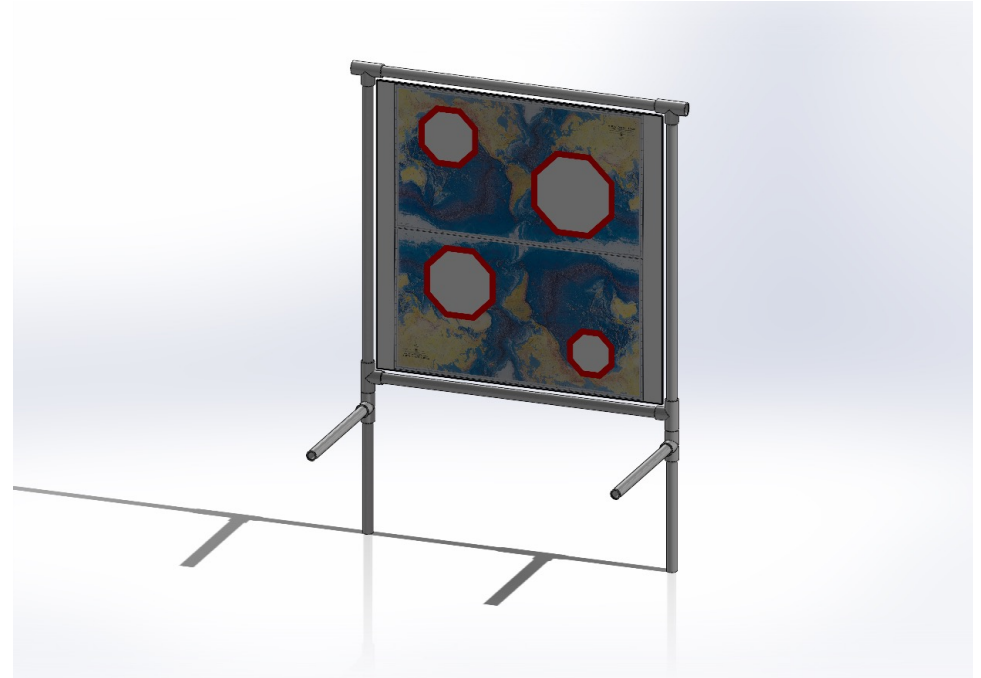
Mapping | Torpedoes



\$



12"
(305mm)

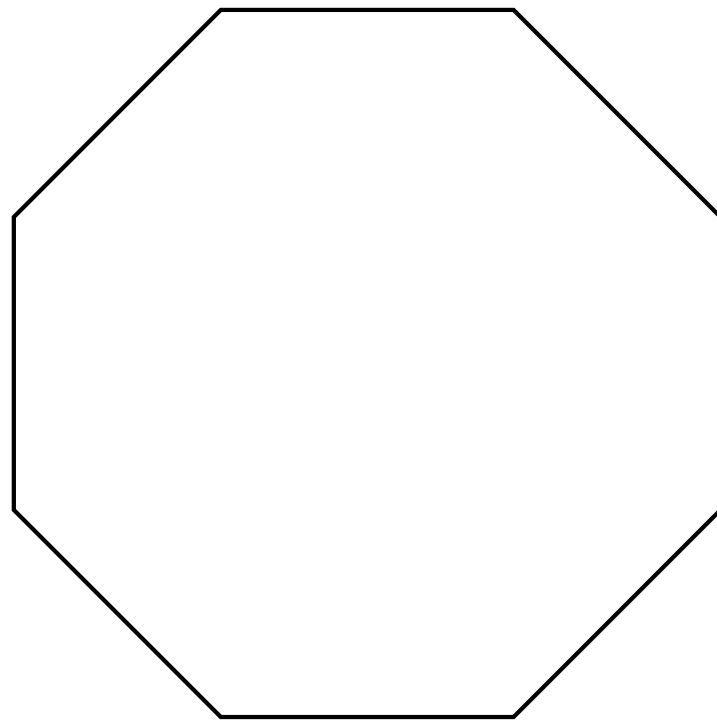


 >12" (305mm) more points

- Different distance? Discuss on Discord



Collect Samples | Octagon

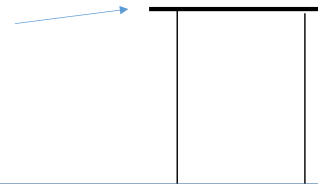


- 🚢 “Ring” floating on the surface
- 🚢 One Pinger located at the center of the octagon
- 🚢 Three (3) different samples to collect
 - Tube worm
 - Coral
 - Nautilus

Octagon



Location of samples



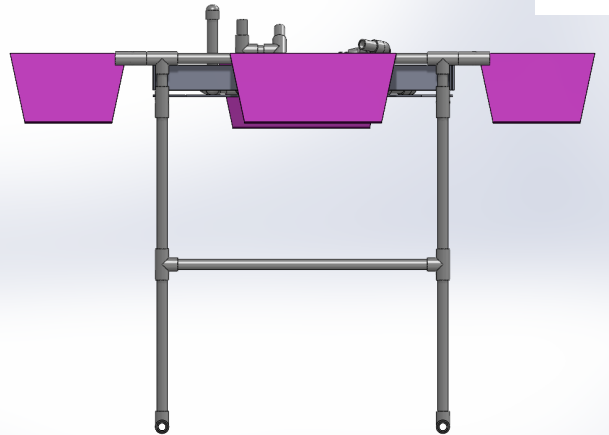
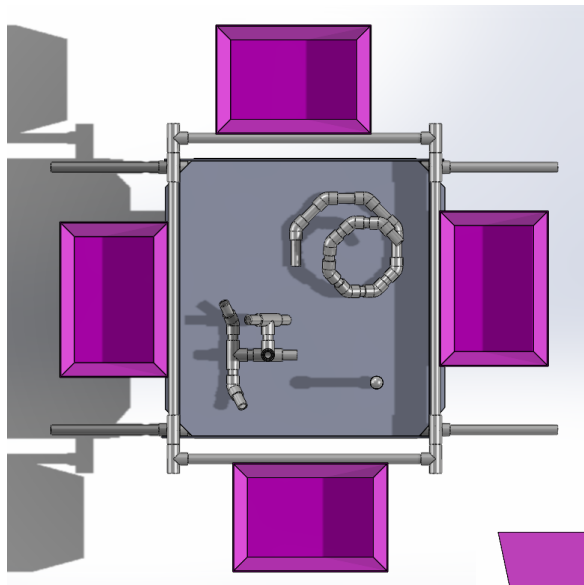
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Floor



Collect Samples | Octagon

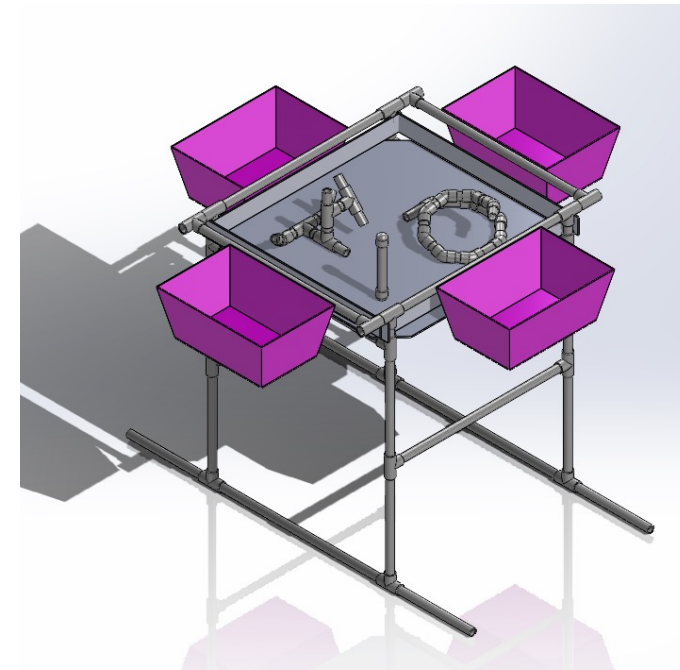


🤖 3 samples in the center (PVC structures).

- Tube worm
- Coral
- Nautilus

🤖 Place each one in a collection bin

🤖 **Vote** on the color of the samples



Collect Samples | Octagon



Finding the tasks

🚢 Path

- One from Gate to Hydrothermal vent (Buoy)

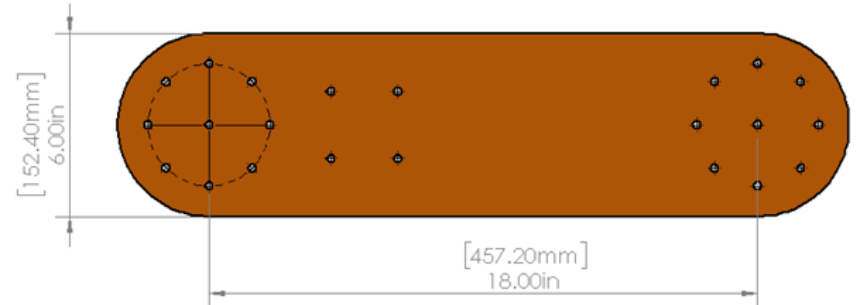
🚢 Pinger

- One located at the center of the octagon

🚢 **Vote** on the location of the second pinger

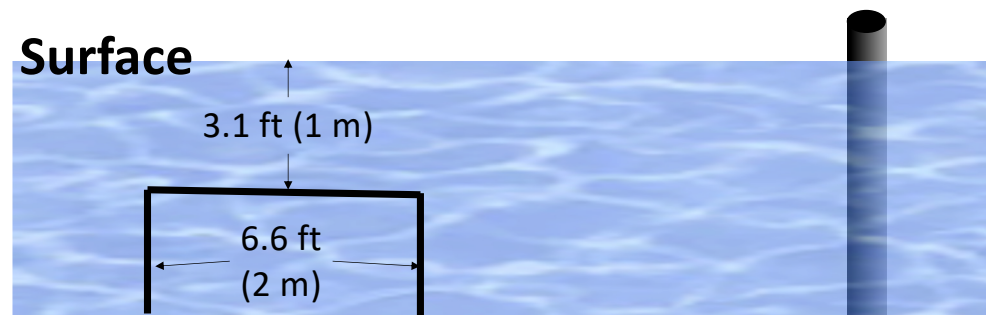
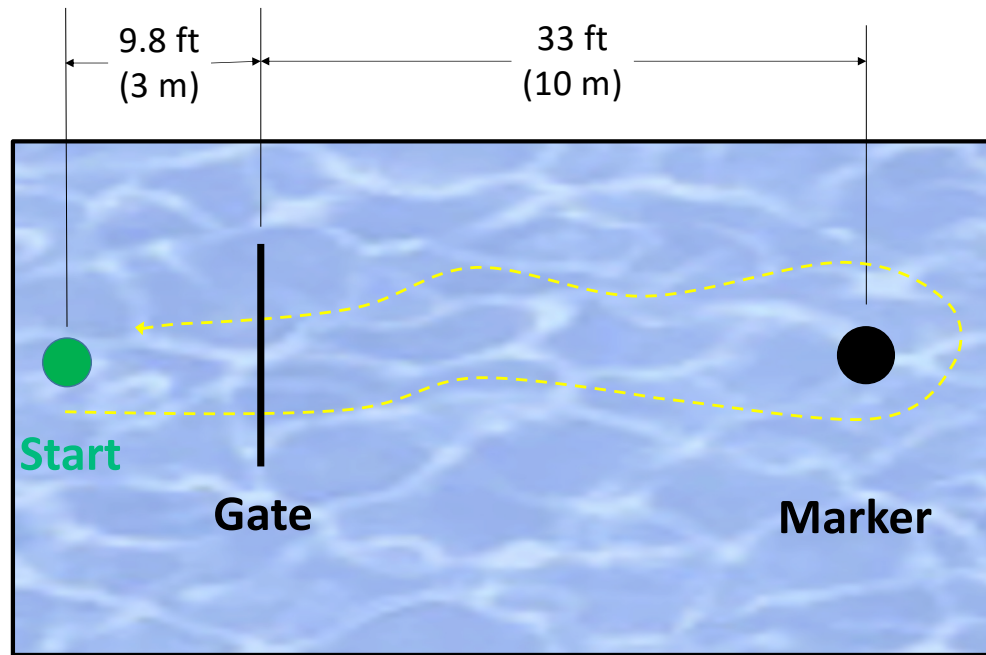
- Ocean Temperatures (Bins)
- Mapping (Torpedoes)

🚢 Second path will point toward the other task



Pre-qualification

- Optional
- Must be submitted before being on-site at competition
- Directions on how to do this will be available in the Team Handbook (or review the old handbook, since it's the same).



(drawing not to scale)



Data Sharing

 RoboSub.org/data-sharing

What is Data Sharing?



Centralized Repository



Community Driven



Competition
focused

Vision
Acoustics
Mechanical Designs
Electrical Designs



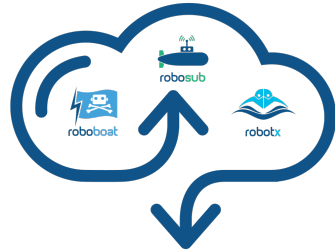
DATA FOR ALL
TEAMS



LARGE DOMAIN
OF DATASETS



BETTER PLATFORM
FOR NEW TEAMS



Meet the RoboSub Data Moderators

2023- Moderators

- **École de Technologie Supérieure**—Caroline & Olivier
- **The Ohio State University**—Brach
- **University of Alberta**—Anya & Sam

2024- Moderators

- **California State University, Fullerton**—Sai
- **Kennesaw State University**—Michael
- **The Ohio State University**—Cameron
- **Universidade Federal do Rio de Janeiro**—Eduardo



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Stay Connected

 RoboSub.org/2024



Discord

JOIN TODAY!

- Scan the QR Code
- Select the RoboSub24 role
- Turn on notifications





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TeamTime



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Next TeamTime

- Thursday, July 11
- 7:00 p.m. Eastern Time
- Don't forget to register





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GOT QUESTIONS?





robonation



seaperch



seaglide



gosense



roboboat



robosub



robotx



RoboNation is a 501c3 nonprofit organization whose mission is to provide a pathway of hands-on educational experiences that empower students to find innovative solutions to global challenges. Working together with the industry, research and educators, we have grown to include over nine student competitions and programs and engage more than 250,000 students per year.

For more information contact university-competitions@robonation.org