

# ROBOSUB

**RoboSub 2026 | TeamTime #2**



**Date**

**16 April 2026**

**Website**

**[robosub.org/2026](https://robosub.org/2026)**



# Welcome to RoboSub 2026!

**July 11-16, 2026**

**Woollett Aquatics Center | Irvine, California, USA**

# AGENDA

Edit your name to “Name | Team Name”  
For example: Jane | University of RoboNation

## **COMPETITION OVERVIEW**

(The Teams, Important Dates, Deliverables)

## **EVENT DETAILS**

(Schedule, Hotel, Shipping)

## **TASKS & COURSE UPDATES & REVIEW**

## **RESOURCES & QUESTIONS**

# COMPETITION OVERVIEW



**JULIANNA**

**Director of Program  
Operations**

# Registration Closed on April 1st

- ▶▶ **58 Teams!**
- ▶▶ **8 Countries**
- ▶▶ **8 Rookie Teams**

# Reminder: Important Dates

2026							MAY	
SUN	MON	TUE	WED	THU	FRI	SAT		
					1	2		
3	4	5	6	7	8	9		
10	11	12	13	14	15	16		
17	18	19	20	21	22	23		
24	25	26	27	28	29	30		
31								

2026							JUNE	
SUN	MON	TUE	WED	THU	FRI	SAT		
	1	2	3	4	5	6		
7	8	9	10	11	12	13		
14	15	16	17	18	19	20		
21	22	23	24	25	26	27		
28	29	30						

2026							JULY	
SUN	MON	TUE	WED	THU	FRI	SAT		
			1	2	3	4		
5	6	7	8	9	10	11		
12	13	14	15	16	17	18		
19	20	21	22	23	24	25		
26	27	28	29	30	31			

**May 27** - Event & Design Documentation Submission Deadline

**June 24** - Pre-Qualification Deadline

**July 11-16** - RoboSub 2026

# Event Submissions



Past Examples  
[robosub.org/past-programs](https://robosub.org/past-programs)

## Technical Design Report

Write a report describing the team's design principles and competition priorities.

**Max: 6 pages**

## Team Website

Website documents your team, system design, and competition approach, evaluated on (1) Content and (2) Quality.

## Team Video

Prepare a video that is a creative showcase highlighting the team's personality, mission and culture.

**Max: 3 minutes**

Submit in registration portal:  
[robonation.smapply.org/acc/l/](https://robonation.smapply.org/acc/l/)



Questions? Submit on Discord.

**TIP:** Review your submission from the perspective of a judge.

# In-Person Deliverables

**Delivered  
in-person  
during the  
competition:  
July 11-13**

## Design Strategy Presentation

Prepare a presentation with a concise description of your team's strategic vision, and how the vehicle design compliments your goals.

**Time: 15 min.**

## System Assessment

Prepare your ASV to be inspected by judges to assess technical design, technical innovation, and craftsmanship of the design.

**Time: 15 min.**

**TIP:** Define your team's competition strategy and how that influenced your design choices, testing, and overall approach.





# MATHWORKS SIMULATION AWARD

## Introduction

The MathWorks Simulation Award recognizes teams that score high in an Autonomous Underwater Vehicle virtual environment made especially for the RoboSub competition. The current environment will be updated to reflect the tasks in the team handbook. Open to all teams registered for RoboSub.

## Award Prize and Recognition

- 1st Place - \$1000
- 2nd Place - \$750
- 3rd Place - \$250

## Deliverable Requirements

- 3-5 minute video (screen recording) of the AUV doing the tasks in simulation
- All the necessary code/files to run the model

Contact Abhishek Shankar through email ([abshanka@mathworks.com](mailto:abshanka@mathworks.com)) or Discord for any questions!

AUV Simulation  
Webinar with MathWorks



# EVENT DETAILS



**CHERI**  
**Senior Events**  
**Manager**

# Preliminary Schedule

MAY 2026	JUL 11 SAT	JUL 12 SUN	JUL 13 MON	JUL 14 TUE	JUL 15 WED	JUL 16 THU
Pre-Competition Submission Deadline	Team Orientation <i>(mandatory)</i>	Practice & Qualifications		Semi-Finals		Third-Chance & Finals
	Design Presentations / System Assessments					
	Overnight Pool Testing (@ Event Hotel)					Awards

# Reminder: Hotel Booking Deadline



**BOOKING DEADLINE: June 19, 2026 (or until room block is filled)**

**Event Hotel: Hilton Irvine/Orange County Airport**

- **Rate: \$190 + tax / night**
- **Available Dates: July 9 - 17**
- **Booking Link: [www.hilton.com/en/attend-my-event/student-robosub-2026/](http://www.hilton.com/en/attend-my-event/student-robosub-2026/)**
- **Parking Fee: \$22.00+ tax/ night**
- **Overnight Pool Practice: 10:00 pm - 2:00 am**

# Reminder: Shipping

Guidelines in the Team Handbook, Section 6.4.2

## Don't Delay Your Planning

- Teams may ship to event hotel (Hilton Irvine / Orange County Airport)
- Shipments cannot arrive prior to Saturday, July 4th.
- Schedule deliveries during weekday business hours.
- Hotel has a loading dock to handle large containers.
- Shipments must be shipped back no later than Saturday, July 18th.
- Outbound shipping must be picked up BEFORE team departs to return home.



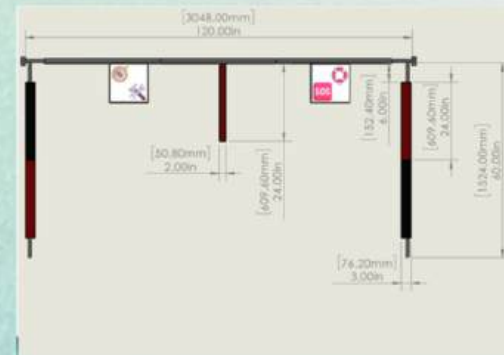
# TASK & COURSE REVIEW



**DAVEMAN**  
**Dr. Dave Novick**  
**Technical Director**

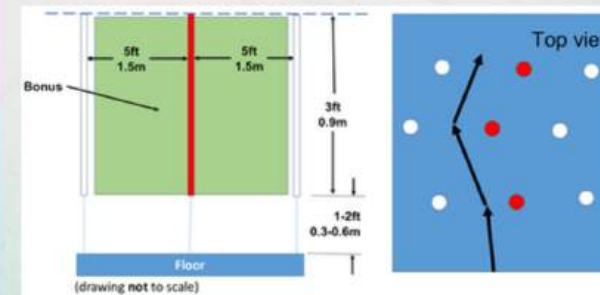
# Task Overview

## Task 1: Begin Assessment



Head out to assess the environment.

## Task 2: Avoid Debris



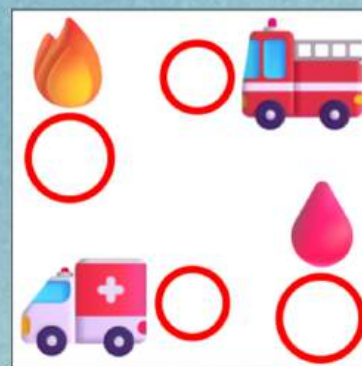
Navigate a channel that is blocked with debris.

## Task 3: Recon



Recon the area to determine what assistance to provide.

## Task 4: Deploy



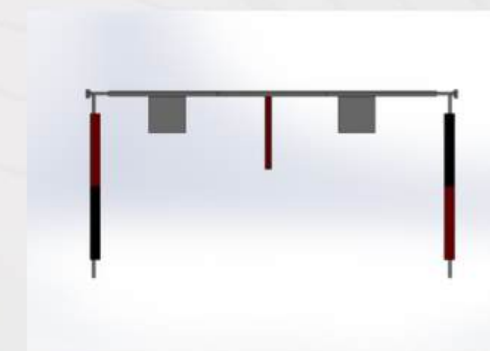
Provide necessary assistance

## Task 5: Restore



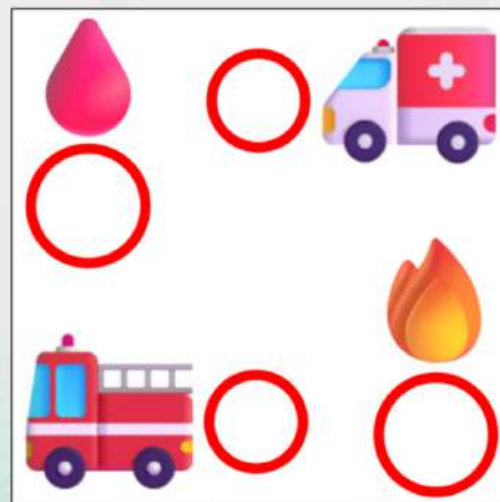
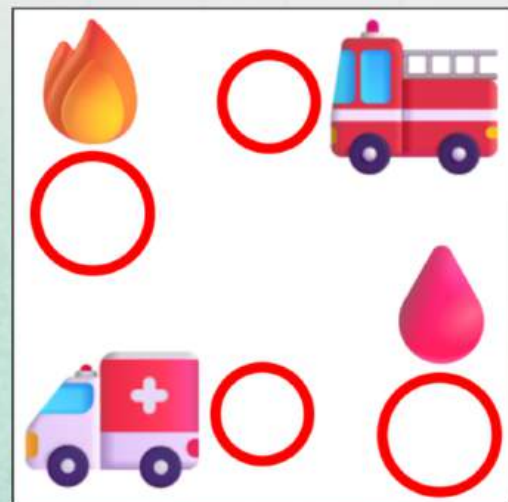
Restore vital infrastructure and health.

## Task 6: Return Home



Safely return home after the assessment.

# Task Images



...found on Box

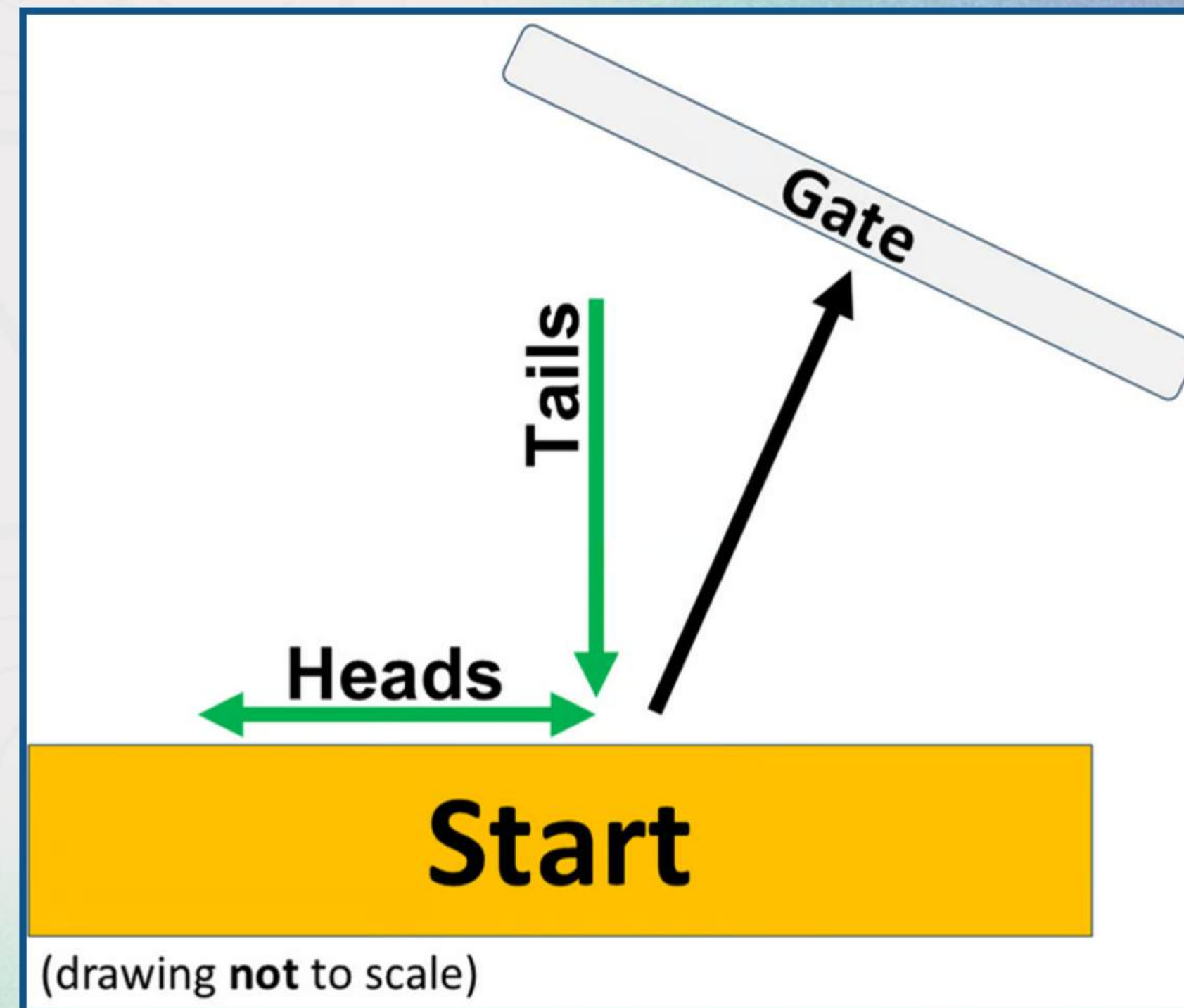


# Heading Out (Coin Flip)

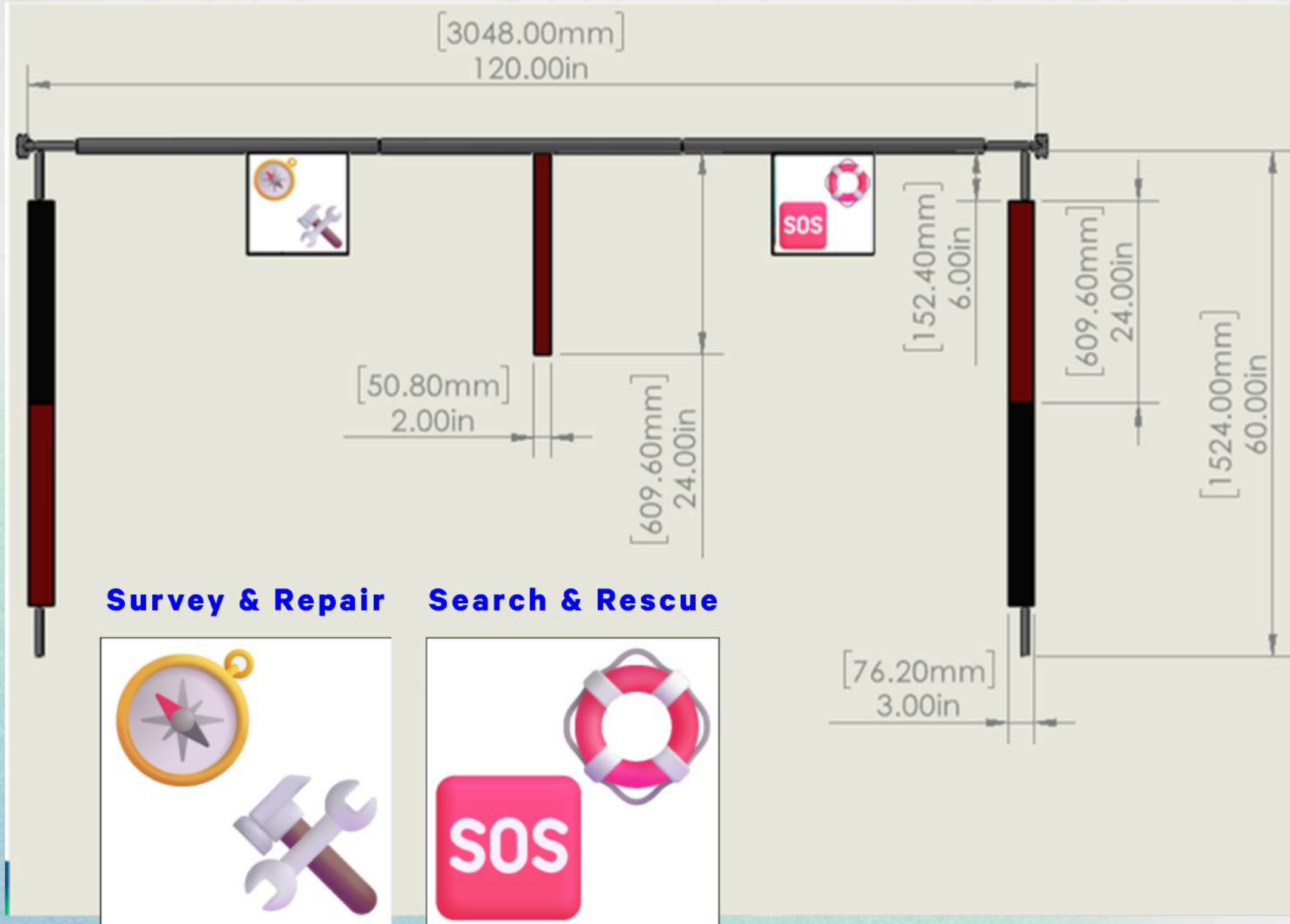
At the start of a run, teams may orient their AUV in any orientation from the designated starting location. All vehicles must begin the run on the surface, and submerge before leaving the start zone.

Before the start of a run, and for additional points, teams may request a coin flip which determines the AUV's starting orientation:

- If the coin lands on HEADS, the AUV is positioned approximately parallel to the gate.
- If the coin lands on TAILS, the AUV is positioned with its tail approximately facing the gate (the AUV is backward).

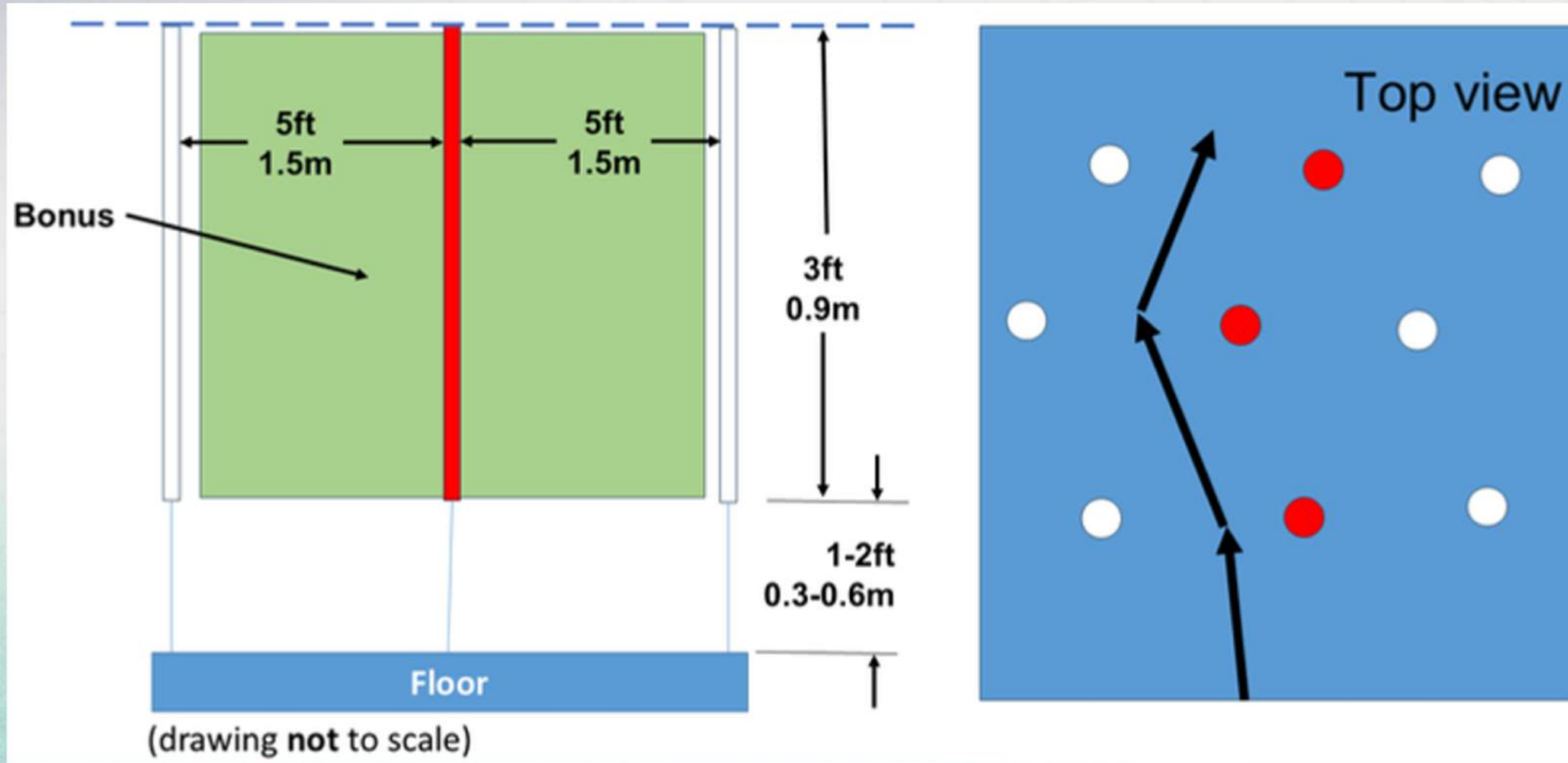


# Task 1 - Begin Assessment (Gate)



- The AUV navigates through the gate, and chooses a role:
  - **Survey & Repair**
  - **Search & Rescue**
- Extra points awarded for AUV staying with the choice for the remainder of the tasks
- **New:** randomly assigned a role
- With Style
  - 10 ft (3m) before/after gate
  - Extra points: Yaw, Roll/Pitch
    - Every 90° change in orientation
      - Yaw +100
      - Roll/Pitch + 200
    - Up to 720° (8x)

# Task 2 - Avoid Debris (Slalom)



- Vertical RED and WHITE 1" PVC pipes moored at different heights to the floor, floating vertically
- Keep the red center PVC on the same size as when you passed through the gate.
- Stay within the area of the pipes (green)

## Task 3 - Recon (Bins)

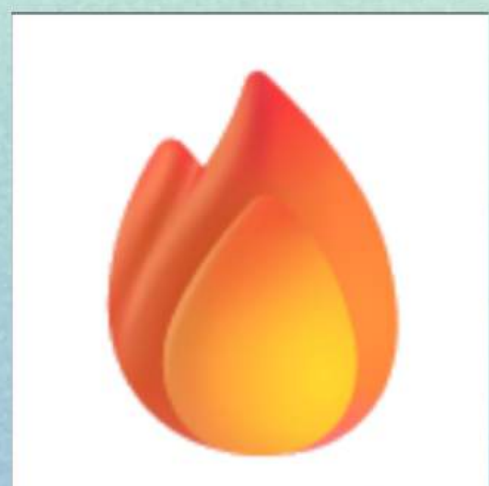
- Will the altitude distances of the bins from the ground change? Will the final CAD be published? Or it will the altitude be ambiguous just like the octagon tables altitude from the ground up?



**CleverMade  
Collapsible Milk Crate  
25L (6.6 Gal) 50 lb Capacity  
(Ocean)**

**13.2" x 13.2" x 11"  
(33.5cm x 33.5cm x 28cm)**

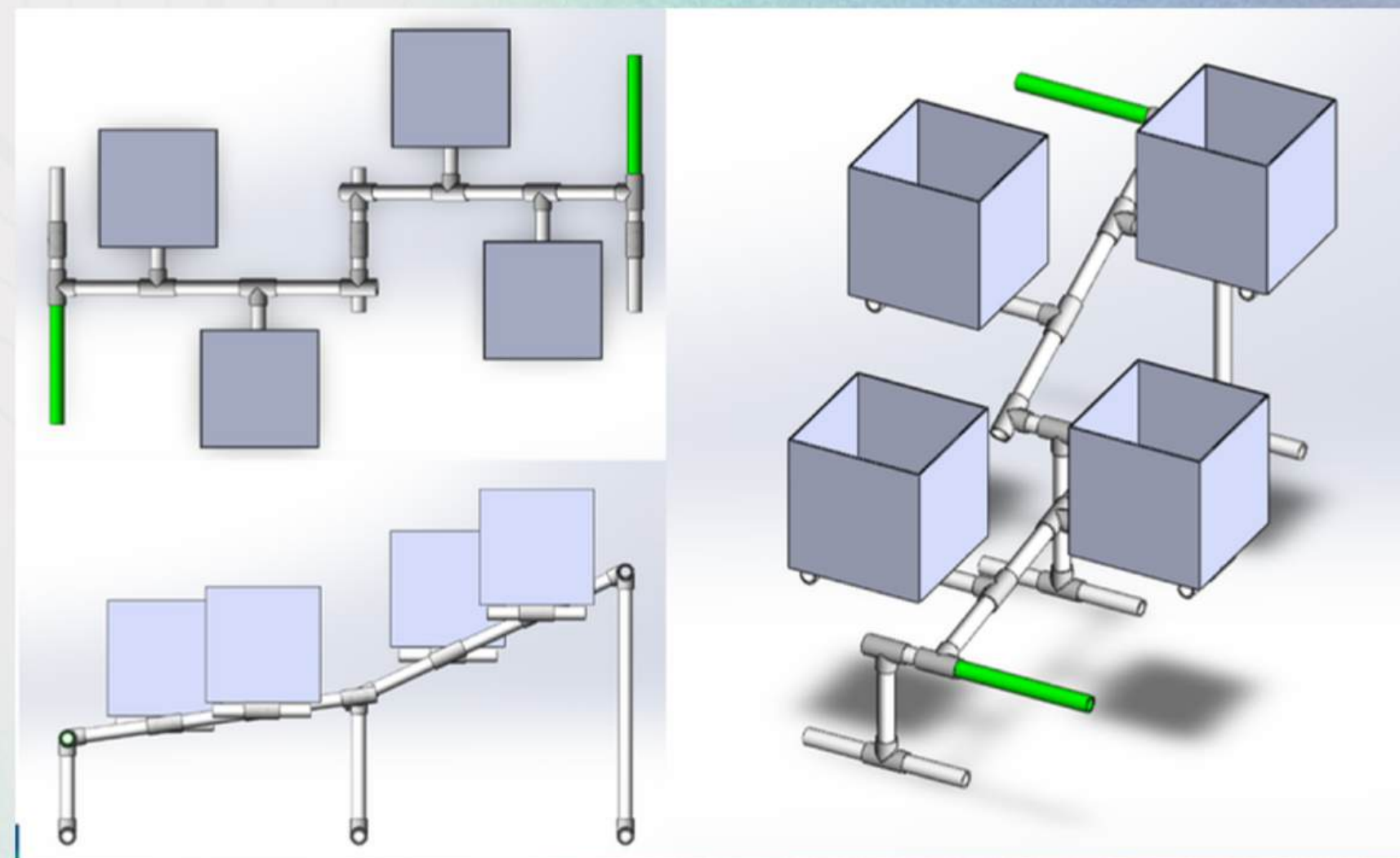
- 3D pipeline made from PVC supported off the bottom of the pool
- Four bins hang off the sides of the pipeline
  - Two for **Survey & Repair**
  - Two for **Search & Rescue**



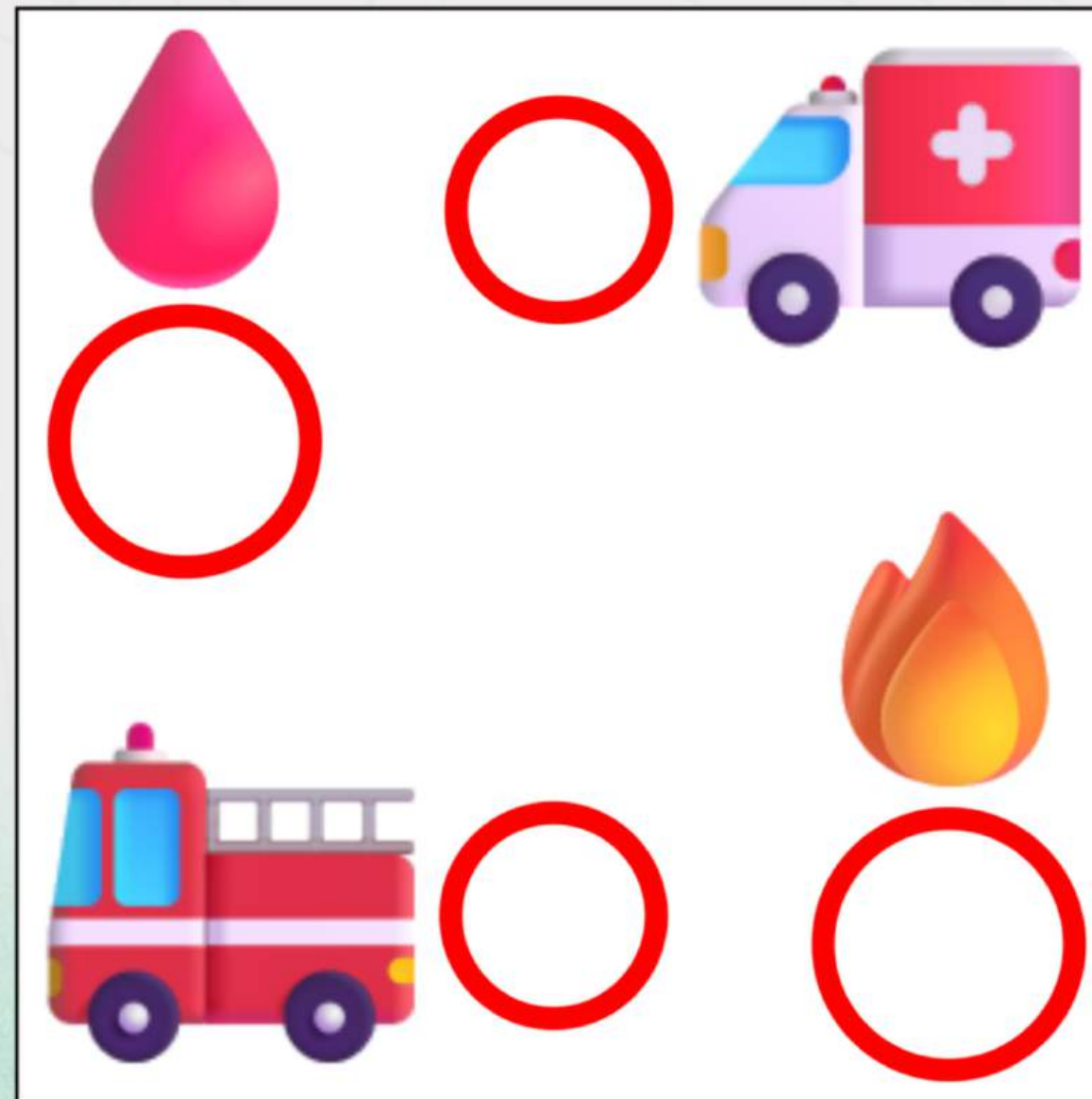
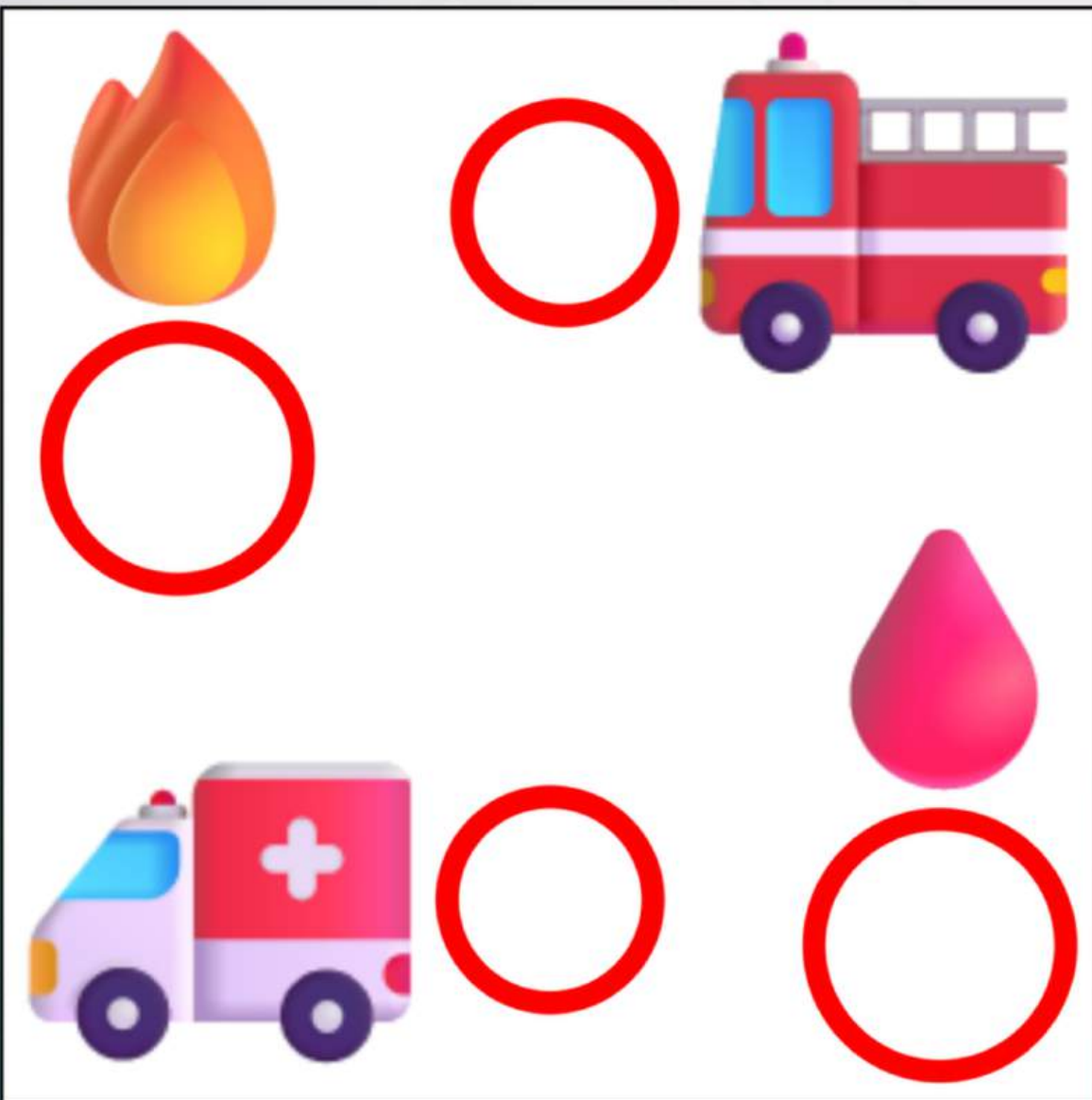
Survey & Repair



Search & Rescue

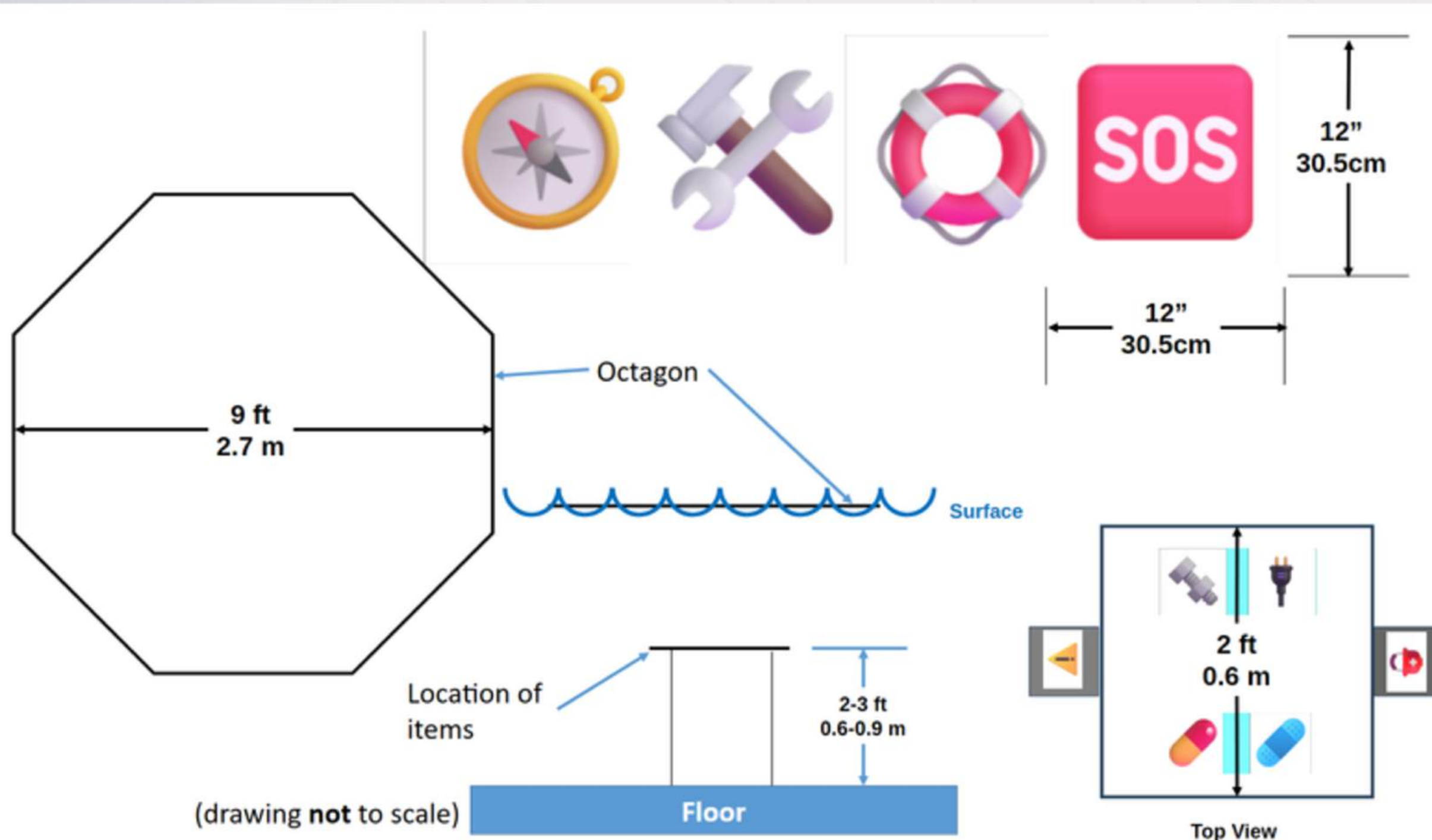


# Task 4 - Deploy (Torpedoes)



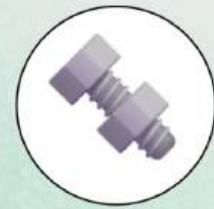
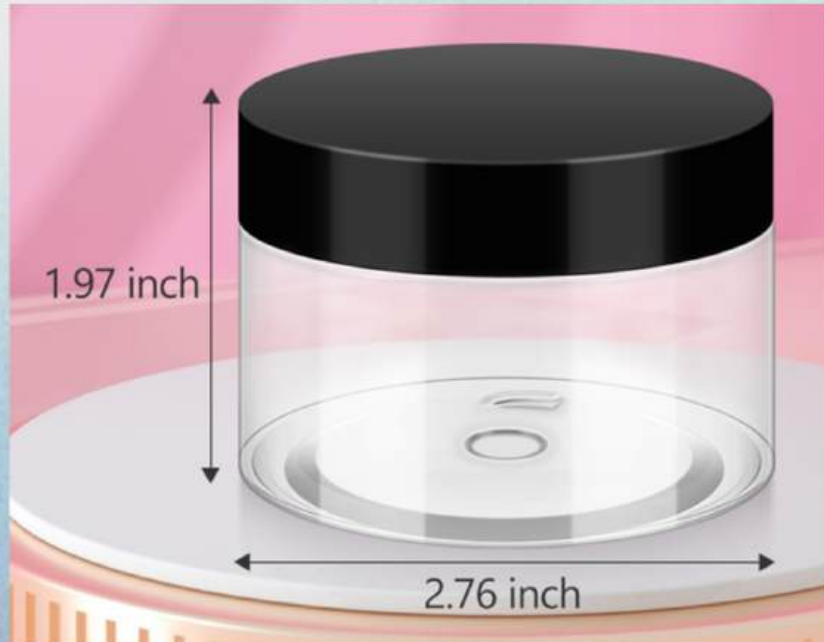
- Fire torpedoes through opening
- Maximum points for firing through larger opening and then smaller open for your role.
- Additional points awarded for firing far (1.0m) and farther (1.5m)

# Task 5 - Restore (Octagon)



- Octagon floats on the surface.
- Hanging off octagon, four images face inward
  - Table below holds four items
  - Basket on opposite side
    - Survey & Repair
    - Search & Rescue

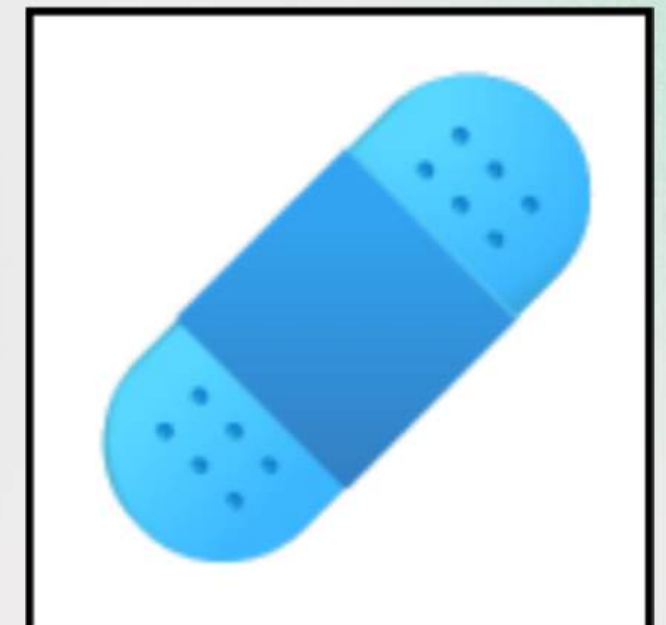
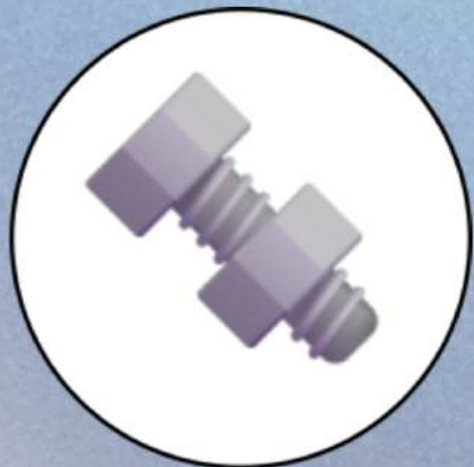
# Task 5 - Restore (Octagon)



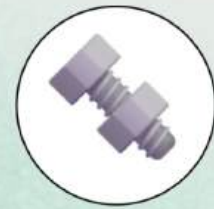
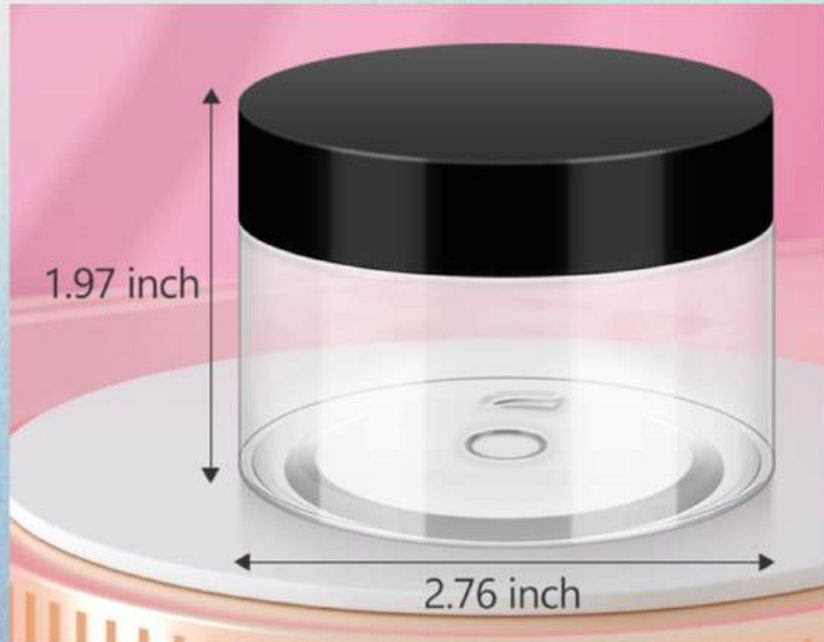
Survey & Repair



Search & Rescue



# Task 5 - Restore (Octagon)



Survey & Repair

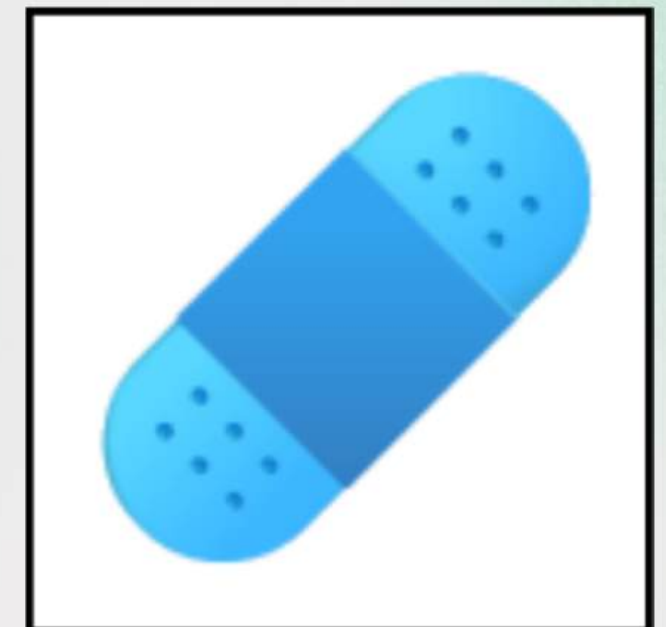


Search & Rescue

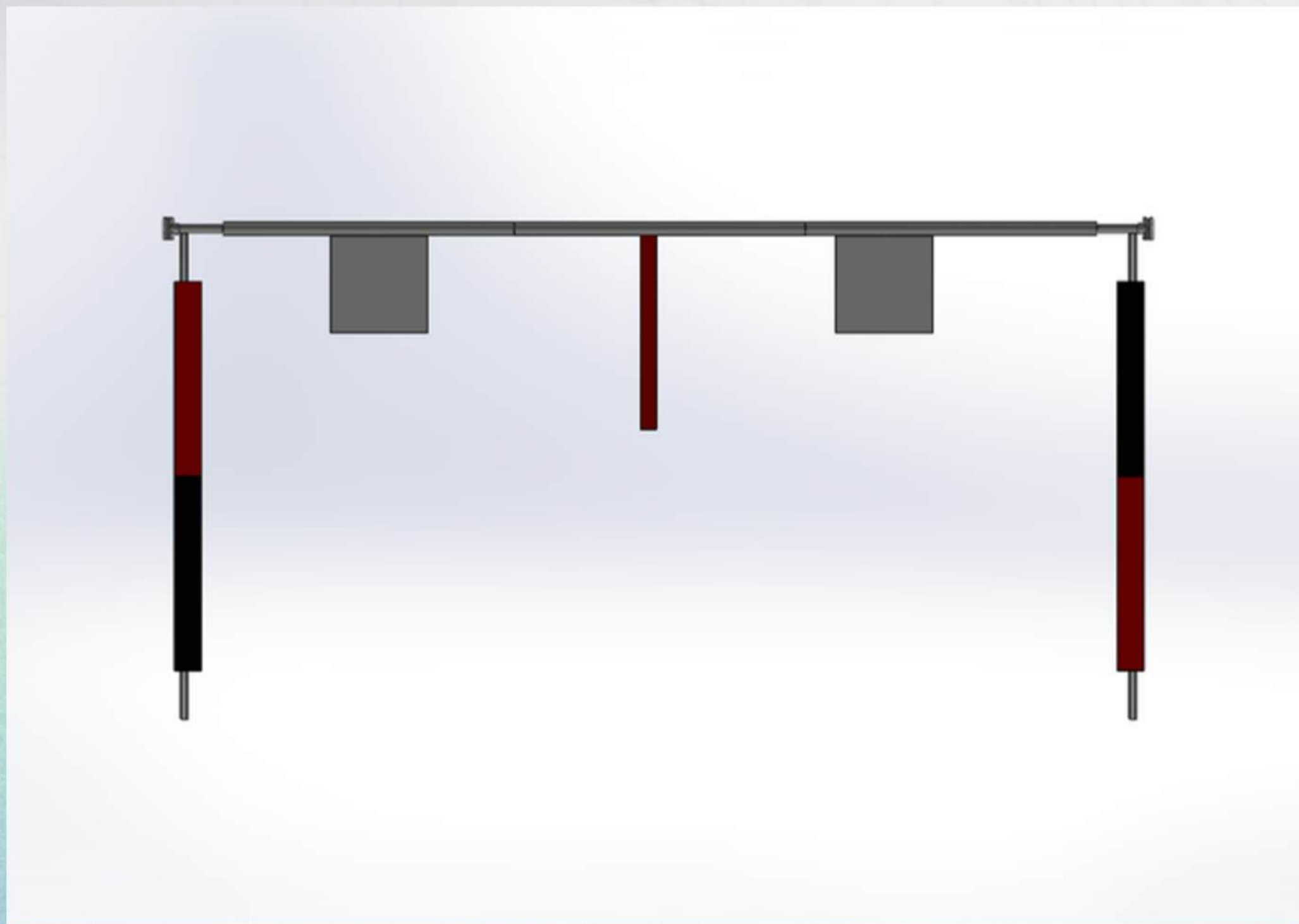


## QUESTIONS

- *What will the colors of the objects in the Octagon task be? What will be the color of the table's top surface? Will the images on the 4 task objects placed above and this images will be visible from the top always, can the objects will be placed sideways?*



# Task 6 - Return Home

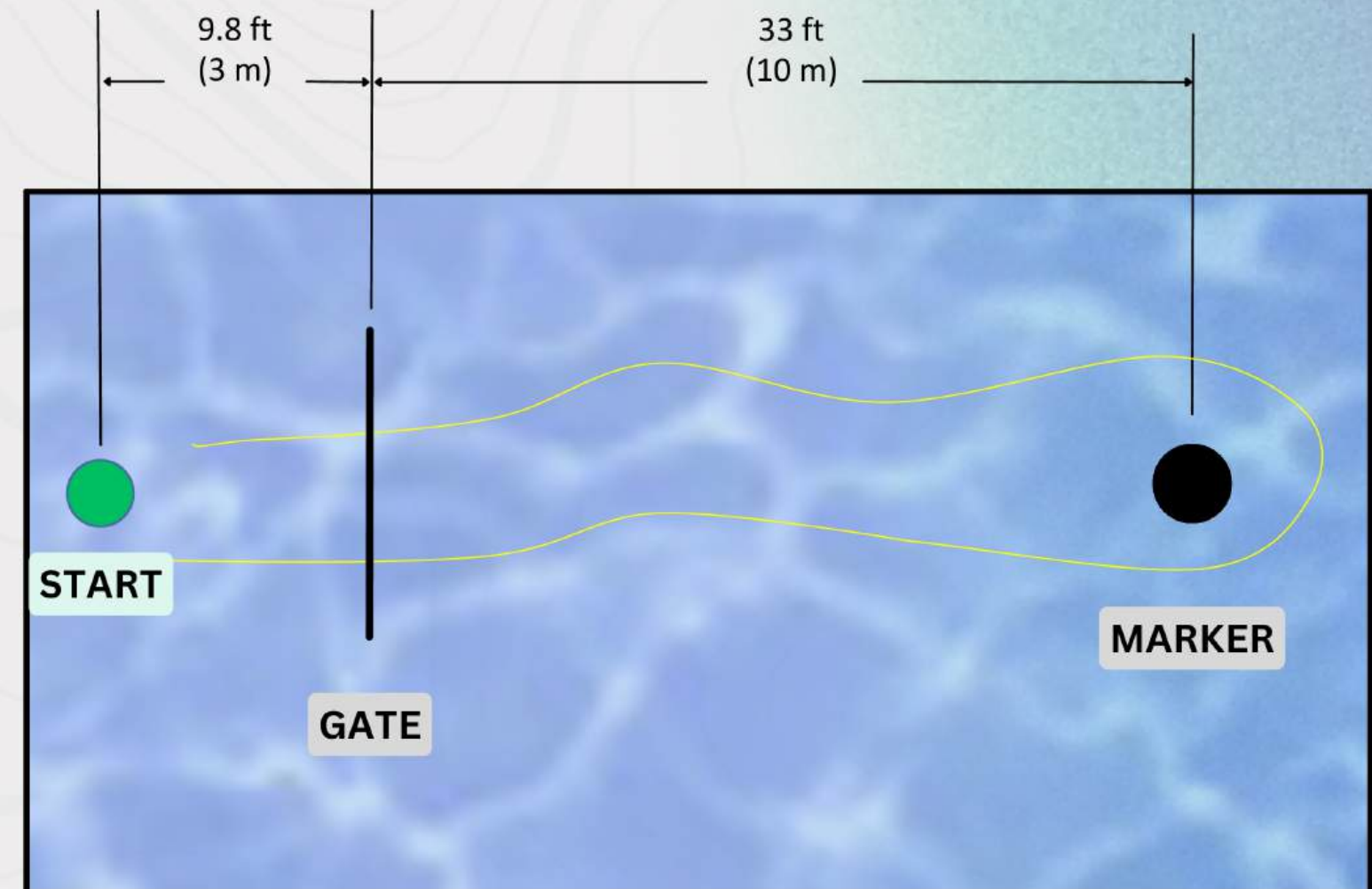


- At the end of the run, while underwater, pass back through the start gate.

# PRE-QUALIFICATION REMINDER

Submission Deadline is June 24th

- Optional opportunity to pre-qualify before traveling to competition.
- Specific instructions on the pre-qualifying maneuver is available in the Team Handbook (also available in previous handbooks).
- If you can't duplicate this layout, let us know and we can modify the layout to accommodate your area.



Surface



(drawing not to scale)

# **Pre-Qualifications due: June 24th**

## **Congratulations, Pre-Qualified Teams!**

- **École de Technologie Supérieure (SONIA)**
- **The Ohio State University**
- **Istanbul Technical University**
- **Duke University**
- **Advancing Science Technology & Art (2 vehicles)**
- **McGill University**
- **National University of Singapore**

# RESOURCES



# **NEXT TEAM TIME**

**Thursday, June 11, 2026**

**7:00 p.m. Eastern Time (US & Canada)**

**Register Now!**



## DISCORD

Stay connected and updated on the RoboSub Channel on RoboNation Discord. Scan the QR code below to get started!



### JOIN TODAY!

- Scan the QR Code
- Select the RoboSub role
- Turn on notifications!



## DATA SHARING

Join the community-driven project created to increase collaboration between teams and address the never-ending quest for test data.

*All new teams received invitations. Contact [competitions@robonation.org](mailto:competitions@robonation.org) for questions.*

### Shoutout to:

- Ohio State
- Team SONIA
- ARVP

## ALL THINGS ROBOSUB

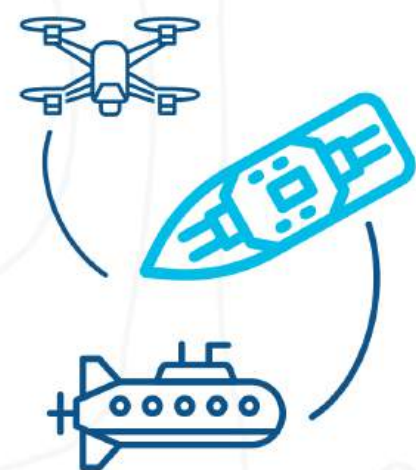
For all the latest information and updates all week, scan the QR code to the right and visit the RoboSub website! ([robosub.org](http://robosub.org))

*Stay connected and follow the journey via our social media!*





## RobotX 2026 | Singapore | Early November



- Develop a System of Systems: USV + UAV and/or UUV
- Opportunity to apply for a granted BlueBoat or BlueROV
- More information: [robotx.org/2026](https://robotx.org/2026)

# QUESTIONS?

## ? QUESTIONS

- Regarding the scoring:
  - For example, in two-vehicle scenarios: How many points in total we collect if one vehicle passes one torpedo successfully and the other vehicle shoots and passes successfully one torpedo? And do we get sequence points if this happens?
- Regarding the scoring:
  - Could you elaborate, task by task, on what do you mean by "each vehicle is treated separately pointwise, for example for the bin also with the %50 accuracy" For example: How many points do we get in total as a team in the gate task if we perform a yaw with both vehicles?



# 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 [competitions@robonation.org](mailto:competitions@robonation.org)