## Team Presentations

Each team will make a maximum 10-minute presentation to a panel of judges on the day of the competition. The team should present as though they are the sales team of the company that designed and built their SeaPerch. The U.S. Navy (panel of judges) has a mission to find the hidden mines buried under the sea floor and they are screening possible companies to determine which SeaPerch model would be right for them. It is the sales teams' responsibility to prove to the clients that their product is the best.

The formal presentation will be followed by an informal 5-minute question, answer, and discussion period. At the conclusion of the question, answer, and discussion period, judges should have a clear understanding of how students implemented their basic knowledge of engineering and naval architecture.

Although digital modeling is not required, it is highly encouraged. It can be a critical step in the engineering design process and make a significant contribution to your overall presentation score. Digital designs may be presented via images in your Technical Design Report and Presentation.
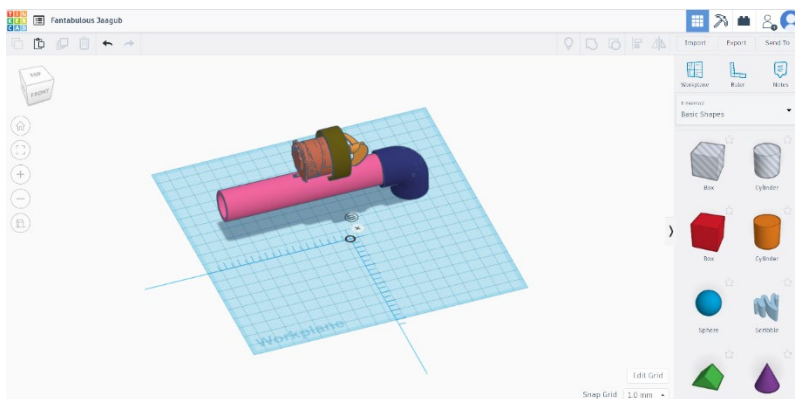
Some great examples of digital modeling (computer aided design (CAD)) tools to consider are listed below:

- https://www.autodesk.com/products/fusion-360/education
- https://www.sketchup.com/try-sketchup#for-primary-and-secondary-education
- https://www.onshape.com/en/education/
- https://www.tinkercad.com/

Many tutorials for these programs exist on YouTube, and it is highly encouraged one or more be reviewed to learn these software. You're also more than welcome to utilize other software not listed here.

SeaPerch component CAD part files (in .STL format) are available to teams from a Google Drive shared folder. Teams are welcome to download and utilize these files in the design and digital construction of their vehicle designs. Teams can access this repository at the following link:

https://drive.google.com/drive/folders/1sx3EY4k_mlnwWsXTuypNDzFocMjcR4NS?usp=sharing



*Sample digital SeaPerch CAD design being created in TinkerCAD from provided .STL files*

**Presentation Rules**

  a. All teams must include the following in their presentation:
   • Company Overview
     – Company name, size, and demographics
     – Mission/Vision statement with an emphasis on naval engineering
     – Organization of the company explained

   • Recruiting Methods
     - How did the company recruit new members?

   • Design and Manufacturing Process & Engineering Process
     – Identify the steps taken to achieve the design
     – Design research (naval engineering research)
     – Identify technical calculations or testing conducted and design priorities
     – Integrated lessons learned
     – Charts/Drawings/Pictures
     – Identify changes from the basic SeaPerch design

   • Application and use of computer technology

   • Budget information and implementation
     – Identify costs of additions and modifications to the Sea Perch
     – Explain any trade-offs of the modifications


  b. <u>High School Teams ONLY must</u>:
   • Hand out a corporate brochure to the clients which must include
     – Mission/Vision statement of the company
     – Overview of the types of engineers involved in the process
     – Organizational Chart

   • Each member of the sales team must have a resume to distribute
     Resume may be fictitious; can include real life activities
       – Team members should include their role and responsibility in the company
       – Students should use a fictitious name and address


The format for the presentation should be an on screen presentation, open to creative interpretation. Teams are encouraged to use technology in their presentations. Physical models, or other items can be used by a team to supplement their presentation and may be displayed and modeled on camera. All presentations will be conducted via Microsoft Teams.

1. Each member present at the time of presentation must participate in giving the presentation.

2. Each team member is required to answer questions from the judges.

Teams will be required to schedule their presentations from the link to be provided prior to the event at:
http://phillynavalstem.com

Teams are advised to arrive at their designated presentation room 5-10 minutes prior to their scheduled start time. Teams may be broken out from the main room into a judging room during their scheduled presentation time. Teams who are more than 5 minutes late may not be allowed to present.

**SeaPerch Challenge Presentation Rubric**

## I.    PRESENTATION OF THE COMPANY (30%)

Company Information and Objectives
- Company Description
- Mission/Vision statement and purpose that includes naval engineering focus
- Organization/structure of company explained
- Recruiting methods for new company members

Budget Management
- Identified and itemized modifications
- Explained tradeoffs for various modifications

## II.    KNOWLEDGE OF DESIGN, MANUFACTURING/ENGINEERING PROCESS (35%)

Design Process
- Identified steps to achieve design modifications/alternatives
- Demonstrated design research as part of their process, (naval engineering research)
- Identified technical calculations or testing to optimize/select design
- Modeling efforts were appropriate and met the system & mission requirements
- Practicing and testing was well planned
- Lessons learned from testing were present and specific

Engineering Process and Roles
- Discusses naval engineering field and roles
- Demonstrates knowledge of design process: problem definition, tradeoffs, and testing.
- Identifies naval engineering design considerations.

## III.    PRESENTATION CONTENT (15%)

- Organization & Flow
- Objectives & Main Points/Summary

Presentation Skills
- Focus on naval engineering
- Fluent, clear, audible delivery. Correct grammar and language use
- Non-verbal skills: Posture; practiced
- Overall confident, direct, and animated.
- Presenters and teamwork (at least 2 presenters and less than 9)

## IV.    INNOVATIVE DESIGN INTERVIEW Q&A (5 MIN) (20%)

Clarification of System Designs
- Team response to judges questions