

Name: _____

STEAM Makers Boat Show & Challenge

Congratulations! You've been chosen to submit an entry into this year's STEAM Makers Boat Show! The Boat Show & Challenge will be on Friday, May 13th. Awards will be given out for *exemplary and creative* work in various categories!



Essential Questions:

How did the sea influence an Ancient Civilization?

What factors influence the effectiveness of a ship's design and function?

The Boat Challenge is to create a successful boat, which will:

- Hold as many 6-ounce size juice cans without sinking.
- Fit within a 73-quart plastic container, with 1 inch in between your boat and the container edges on each side.
- Use only 1 roll duct tape, 1 roll masking tape, 1 roll aluminum foil, and 3 metal coat hangers to construct the boat. **Additional decoration items may be used, but the overall boat design must fit within the container and 1-inch space limits.*
- Be held afloat based on the water's buoyant force.
- Incorporate design elements from an Ancient Civilization.

1. Choose to work SOLO or with a partner—choose wisely by picking someone who will *help* and not *distract* this project!

Check ONE:

I am working SOLO. I will be working with _____.

2. Choose an Ancient Civilization to research and base your work on.

Pick ONE:

- Greeks
- Romans
- Phoenicians
- Egyptians
- Chinese
- Viking
- Pacific Islander



3. Choose a format to demonstrate your progress and findings. To document these findings, choose ONE:

- Google Slides
- Blendspace site
- Buncee site
- Paper/pencil portfolio

4. Complete each section below. **ALL WORK MUST BE DONE BY FRIDAY, MAY 13th. Your work will be displayed for an audience to enjoy.**

Date & Name of Who Completed This	Task
	<p>a. Science/Technology—Find, and explain, as many scientific principles and factors you can that affect whether or not a boat/ship floats or not.</p>
	<p>b. Engineering— Incorporate as many ship design elements from your chosen ancient sea culture into your modern ship design that you can.</p> <p><u>Draw and label your final plan before you build it. Be sure to check the Boat Challenge requirements above!</u></p>
	<p>c. Arts—Answer: How does the sea influence the culture of a civilization? (Culture includes art, music, language, food, clothing, religion, and shelters.) Choose ONE:</p> <ul style="list-style-type: none"> — Music—Use rhythm, pitch, volume to write an original sea chantey. Use 2 or more different nautical terms throughout your chantey. — Drama/play—write and act out a 5-7 minute play to answer the question, “how is the sea important to your culture?” — Mural—create a mural that tells a pictorial story about a seagoing hero who could have been from your chosen ancient civilization. The audience should be able to see elements of a hero’s quest. <i>Your mural must fit within a 1 foot by 3 foot long piece of paper and include a title.</i> — Artwork—Create a portfolio of new work using a nautical or sea-inspired theme with your chosen Ancient Civilization. Your portfolio must be centered on ONE art movement: Impressionism, Post-Impressionism, Cubism, Fauvism, Expressionism, Dadism, Surrealism, or Pop Art. Include at least 2 well-thought and crafted pieces.
	<p>d. Math—Determine and record the actual <u>surface area</u> and <u>volume</u> of your ship. Use your final plan design from part b (above) to find these dimensions. You will <u>use this information to write ratios</u>, comparing the maximum weight and volume your ship can hold in the Boat Challenge with your ship's size.</p> <p>*Consider creating a toothpick and clay ball model of your ship’s design BEFORE you actually build with the Challenge Materials.</p>

COMPLETE after THE BOAT SHOW! (Write in complete, correct sentences, with details to support your thinking!)

Self-Assessment

	Yes	No	Sometimes	Evidence
I used multiple sources of research information to guide my work.				
I stayed on topic during my work.				
I didn't interrupt others and helped out, or asked for help, when needed.				
I was responsible for completing my work in a timely manner.				

1. Explain what you learned from this project.

2. Describe what you particularly enjoyed about this project.

3. Explain what was challenging for you in this project.

4. Describe what you would specifically change in this project for next year's class.
