



# How do you design a winning America's Cup boat?

## Task

Your task is to answer the Big Question above using a wide range of information. You may find the information available in STEM Crew's digital resources helpful. These resources are all inspired by INEOS TEAM UK, the British challenger for sailing's America's Cup.

## How to begin

1. Use the mind map sheet to plan how you will answer the Big Question
2. Watch the videos listed below and make notes about what you have learned
3. Communicate your learning by choosing your preferred presentation method

There is no single correct answer to the question. Answering the question involves research and independent learning in order to be able to present your findings to your teacher and class. You can also use information from other sources to help answer the question.

This investigation is an extended project and you should aim to spend 5-8 hours on it. Keep your **project log** up to date to make a note of all your hard work!

## Videos

Watch the following video for information on the background of the America's Cup, the world's oldest sporting trophy.

<https://www.stemcrew.org/resources/>



### NOT HEARD OF THE AMERICA'S CUP BEFORE?

Watch this short video to learn about the history of the America's Cup and the incredible context we use within our resources.

The following videos will help you answer the Big Question.

<https://www.stemcrew.org/resources/dt-contextual-challenge/>

<https://www.stemcrew.org/resources/meet-the-team/>

<https://www.stemcrew.org/resources/materials-and-their-uses/>

<https://www.stemcrew.org/resources/mechanisms/>

<https://www.stemcrew.org/resources/life-cycle-assessment/>

<https://www.youtube.com/watch?v=L3819eGpyic> (INEOS TEAM UK short film)

<https://www.youtube.com/watch?v=NbyPcb70bfk> (INEOS TEAM UK short film)

<https://www.youtube.com/watch?v=RPB7g2iNZug> (America's Cup testing short film)

## Presenting your work

Here at STEM Crew HQ we have a focus on **creativity**. So why not be creative with how you present your project? Here are some ideas to get you started;

- Create a vlog
- Use green screen app to virtually put yourself at the INEOS TEAM UK Base or on the boat itself
- Produce a Prezi <https://prezi.com/>
- Keep it formal and produce slides using PowerPoint
- Really impress your teachers and use the Explain Everything app <https://explaineverything.com/download/>





**Mind Map Planner**

**How do you design a winning America's Cup boat?**

How can the team draw from previous experiences to build the fastest yacht? Which team members may have experience in this?

What is the end goal of INEOS TEAM UK? Why might we want to design the fastest yacht? How might this influence what we do?

What are the key parts of the boat that the engineers will look at improving? Would improvements on every part of the boat give equal upgrades in performance?

*Why have you come to this conclusion? Back up your opinions with evidence.*

Would all the engineers do the same job? What specialists might be needed?

Focus the question to a more specific point – for example, do you want to focus on the materials used, manufacturing methods, testing methods or virtual reality simulation work? Remember you can use multiple factors.

How can we learn from the technology on the America's Cup yacht to influence our lives?

Decide how you want to present your project. There are some ideas listed above to provide inspiration, but do not feel like you are limited to these. Be as creative as you can!





**Project Log**

Date	Research and investigation completed:	Time taken
23.3.20	Watched video and made notes about history of America's Cup	30 mins

**Other information used**