



Remote Learning Student Workbook



How to use this workbook

This workbook will help you structure your time and plan out your Big Question project.

Each section should take approx. 45mins to complete.

1. Choose your Big Question.
2. Complete the sections of the booklet that help you answer your Big Question.
3. You may not need to use all of the booklet.
4. You can then use the pages you have completed to help you design your final presentation or hand the workbook in as the finished product!



Contents

- 1. History of the America's Cup**
 - a. The Trophy
 - b. The Great Exhibition

- 2. About the boat**
 - a. Materials
 - b. Mechanisms / foiling

- 3. About the Team**
 - a. Nutrition and training
 - b. Clothing
 - c. Keeping safe

- 4. Environmental concerns**
 - a. Life Cycle Assessment
 - b. Carbon fibre
 - c. Renewable energy



History of the America's Cup

1. Watch the following film <https://youtu.be/rp30zIDy10Y>
(also hosted on our resources home page 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.

2. Make a few notes about what you have learnt below:

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3. Read the following paragraph which gives you information about the America's Cup trophy.

The trophy dates back to the Great Exhibition of 1851, organised at Crystal Palace in London by Prince Albert to showcase British technology and excellence to the world. A syndicate of businessmen from New York sailed the schooner America across the Atlantic Ocean to represent the United States at the World's fair. The schooner won a race around the Isle of Wight and, with it, a trophy called the £100 Cup (it was subsequently inscribed, incorrectly, as the 100 Guineas Cup).

As the schooner America, passed the Royal Yacht in first position and saluted by dipping its ensign three times, Queen Victoria asked one of her attendants to tell her who was in second place. "Your Majesty, there is no second," came the reply. That phrase, 'There is no second', is still the best description of the America's Cup, and how it represents the singular pursuit of excellence.

4. Use the following website to find out about the Great Exhibition of 1851:
www.victorianschool.co.uk/Gt_exhib.html

5. Can you explain in your own words why you think the America's Cup yacht race was part of the Great Exhibition? Use the key words to help you.

KEY WORDS: technology, innovation, excellence, British, Industrial Revolution

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About Britannia, INEOS TEAM UK's AC75 yacht

1. Watch the following film: <https://youtu.be/h3dXyf6XC1w>
2. What do you notice about the boat? Use the prompts to help you write words to describe what you see.

Sounds I can hear

Water being displaced

Words to describe how the boat looks

Monohull

Things I really notice

Its speed





Materials

1. Watch the following film:
www.stemcrew.org/resources/materials-and-their-uses/

2. Complete the table below using what you have learnt from the video:

Material	Where it is used	Properties
Carbon Fibre	The hull of the boat	Strong and lightweight

3. Choose one of the materials from the table above and find out more about it. Can you give other examples of where it may be used and why?

Material chosen	What I found out about it	Other uses for this material



How does the boat 'fly'?

1. Watch the following film: <https://vimeo.com/400728419>
2. Label the forces on the image below, use the following words to help you.
3. Add arrows to show the direction and size of force. Remember, the bigger the arrow, the bigger the force.

forward thrust

upthrust

water resistance / drag

gravity

resultant force





4. Using what you learnt from the foiling video, can you explain in words and diagrams how Britannia 'flies'?

How Britannia 'flies'



Nutrition and Training

1. Watch the following films:

www.stemcrew.org/resources/nutrition/

www.stemcrew.org/resources/meet-the-team/

2. Make some notes in the space below about how the sailors maintain their health and fitness:



Clothing and Safety

Look at the image of Nick Hutton, one of the INEOS TEAM UK sailors. Can you explain why he wears the clothing that he does?

For each arrow, write:

- what is it
- what it could be made from
- why is it needed



What is it?

What is it made from?

What is its purpose?

What is it?

What is it made from?

What is its purpose?

What is it?

What is it made from?

What is its purpose?

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What is it made from?

What is its purpose?



Protecting our 'pitch'

Looking after the environment has always been a key concern of INEOS Team UK.

Watch the following films:

1. www.stemcrew.org/resources/life-cycle-assessment/
2. www.stemcrew.org/resources/solar-panels-modelling-and-data-analysis-lesson-1/
3. <https://youtu.be/NbyPcb70bfk> INEOS TEAM UK short film



Above is a diagram of the Life Cycle Assessment. Annotate each icon where there is a '?' symbol to show what you have learnt from video 1.

Why is carrying out a Life Cycle Assessment so important? Explain in the box below.



Planning your presentation

Well done! If you have completed some or all of the pages in this workbook, you have done lots of research into INEOS TEAM UK.

You may now choose to turn your research into a finished presentation for your Teacher.

There are suggestions of online apps you can use on the Big Question project page.

Don't know where to start? Use the pages of this workbook to put the information you have written here into your presentation.

Simply add a **synopsis page**: a brief paragraph of what your presentation is about and;

A **summary page**: a paragraph of conclusions you have come to which answer your Big Question.

Good luck! If you would like to share your project with us we would love to see it.

Send finished projects to education@1851trust.org.uk

Remember to add your name and school 😊

The best ones will be shared on our social media!