ROYAL MUSEUMS GREENWICH

Move the ship

School Session Overview
October 2025

Key information

Length of session: 100 mins
Key Stage: KS2
Location(s) of session: *Cutty Sark*

Learning objectives	Curriculum links
Learners will: • Identify, investigate and record the science on board a historic sailing ship • Identify and use forces in action and how mechanisms mean a small force can have a greater effect • Make a winch (a mechanical device) • Discover how Victorian engineering helped make *Cutty Sark* famous	KS2 Science • Asking relevant questions and using different types of scientific enquiries to answer them • Making systematic and careful observations • Identify the effects of air resistance, water resistance and friction, that act between moving surfaces • Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect KS2 Design and Technology • Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]

Key words

Sail, sailing, sailor, cargo, China, Australia, Greenwich, captain, river Thames, import, export

Overview of the session

Introduction
Learners are given a brief overview of the ship's history and are asked to discuss what objects make our life easier (tap to get water etc). Learners are asked to work out what could be on *Cutty Sark* that made seafaring easier. A lot of these ideas are scientific. A ship designer drew up plans and needed to consider lots of different elements to make a successful ship.

Guided Tour
Learners are taken on a tour through the ship to look for objects which have been engineered to make living / working on a ship easier (using a checklist with hints which learners can tick off). Once learners reach the main deck, we split into two groups—one continues their investigations, the other moves part of the ship to see engineering in action. Learners then swap.

Design and Technology
Learners pair up to make a working winch which can be taken back to school.

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Suggested pre visit knowledge/ activities	Suggested post visit activities
Research what engineers do. Make a list of everyday things that have been designed or engineered.	Design a cargo ship—what features does it share with the *Cutty Sark*? Make a pulley using a coat hanger, a cotton reel and some string British-Science-Week-2025-Primary-activity-pack-Final.pdf
Links to useful resources	
STEM Learning Ten things you should know about Cutty Sark | Royal Museums Greenwich Home - Primary Engineer	