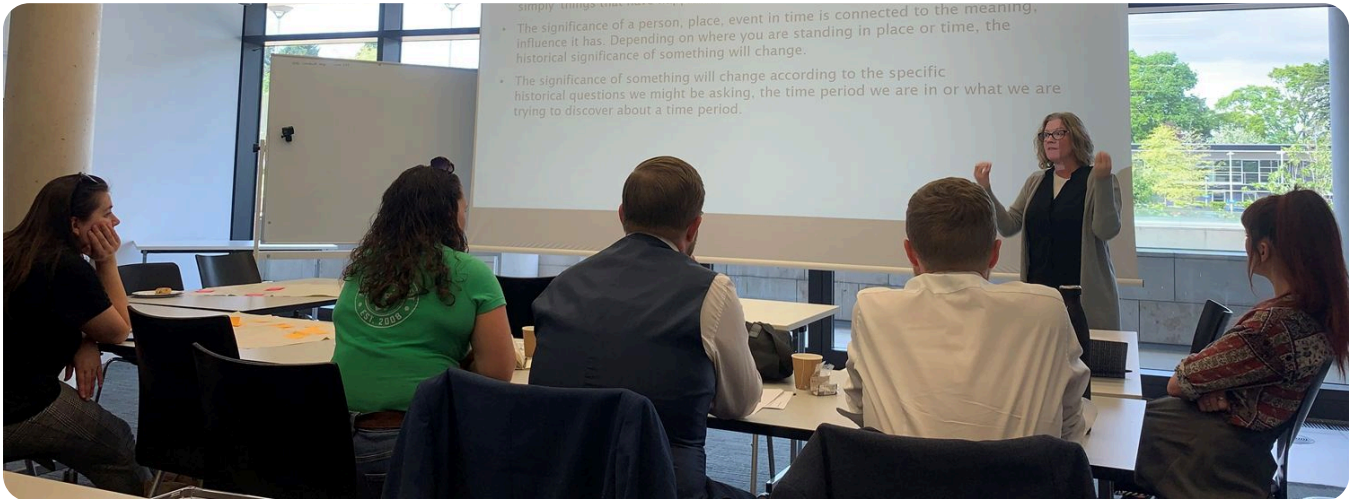




Keeping afloat



AIM 1

To investigate different 'anti-sinking' ideas.

AIM 2

To evaluate the effectiveness of different 'anti-sinking' ideas.

Summary of lesson

This lesson is aimed at coinciding with the correlating history lesson ('Why did the sinking of the Titanic become a disaster?'), although this is not essential. It is to follow on from a lesson on watertight bulkheads for students to put to the test their own theories on how they could keep their own 'ship' afloat.

EQUIPMENT

- Lesson PowerPoint
- A large cardboard drinks carton (e.g., 1 litre juice carton)
- Scissors
- Ruler
- Stopwatch
- Waterproof tape
- Two large plastic storage boxes (larger than 10 litre) filled with tap water (to simulate water tanks)
- Resealable waterproof bag
- White clay or play-dough

National Curriculum links

This lesson provided the opportunity for students to practise their experimental skills and investigations.

Students will be able to:

- ask questions and develop a line of enquiry based on observations of the real world as well as making their own predictions using scientific knowledge and understanding.

This lesson also allows them to:

- select, plan and carry out the most appropriate types of scientific enquiries to test predictions
- use appropriate techniques, apparatus, and materials during laboratory work, paying attention to health and safety.

They will also be able to record their results and come to their own conclusions at the end.

If it is not possible to align this lesson with the accompanying history content due to curriculum restraints, this lesson can be built into a unit on forces or density (floating and sinking).

Lesson guidance

A practical lesson

PART

1

Recall the previous lesson

This is a practical lesson with the two aims shown at the start of this overview. To begin with, students are expected to complete a factual recall of the previous lesson in order to use that knowledge in today's lesson. This will not take long and can be completed either through written or verbal answers. To support this, on Slide 4 there is a diagram that can be explained if needed.

PART

2

Prepare for the practical

Once the aim on Slide 5 has been explained, students can begin to prepare for their practical by gathering their resources.

PART

3

Record, conclude and link back

It is important to note the students will be expected to record their findings on the results table on Slide 7 whilst they are working so they can then write their conclusions at the end. This can finally be linked back to the Titanic right at the end where students can see if any of their ideas could have potentially helped the Titanic before it sank.

TEACHING NOTES

Students can manipulate the mass and distribution of clay (representing cargo and passengers) and the number and position of bulkheads to explore what variables can affect the flooding of a ship. They should be able to control the variables they are not testing.

Remembering Titanic Lessons © 2023 by Wonyong Park, Neta Shaby, Rachele Newman, Megan Barton, Christopher Dale, Ashleigh Fair, Natalie Harrison, Mary Shepherd and Christopher Zieba is licensed under [CC BY-NC-SA 4.0](#). You can share and adapt the materials, as long as you give appropriate credit and do not use them for commercial purposes.