



Suitable for
Ages 8+

Time Required:
1 hour

Ships of the Spanish Armada

Can you make a ship float? Learn about the Spanish Armada, have a go at crafting your own ship and consider what evidence it may leave behind.

Background

Queen Elizabeth I faced many challenges during her years as ruler of England. One of her biggest came in 1588, when King Philip of Spain sent his Spanish Armada – a huge fleet of 130 ships and 50,000 men – to invade England. The Armada was sent in response to English interference in Spanish affairs and the two countries religious differences.

The Spanish were expected to win, but their ships were larger, slower and not built to withstand the bad weather. The Spanish leader, The Duke of Medina Sidonia, was inexperienced and made tactical errors, meaning poor planning also caused major problems for the Armada. However, the English ships were faster, better to control in battle and could weather storms far better than the Spanish.



The famous 'Armada Portrait' of Queen Elizabeth I, painted around 1588 to celebrate England's victory over the Spanish Armada. © Courtesy of Royal Museums Greenwich / Public Domain.

Studying shipwrecks helps archaeologists explore how ships were built, used and adapted for different conditions at sea. As most ships break apart underwater, archaeologists rarely find a complete ship. Instead, they use small pieces of evidence – such as wood, cargo and metal fittings – to reconstruct what the ship may have looked like and how it was used.



One famous example is the wreck of the Spanish Armada ship La Girona, discovered off the coast of Northern Ireland. Archaeologists found gold jewellery, cannons and personal belongings preserved underwater. These discoveries help us learn more about the sailors, the cargo and what happened when the ship sank.



This 1873 engraving by Jules Noël shows the dramatic shipwreck of the famous Spanish Armada in 1588. Image by Jules Noël. © Wikimedia Commons / Public Domain

Design and Test Your Own Ship!

For this activity, we will investigate what we can learn about ships from the past by designing and testing your own model ship. You will need to think carefully about the materials, size and shape of your ship. Will you build something strong and fast or easy to steer? What might that tell an archaeologist about its purpose?

Think of every design choice you make when building your ship as if it is archaeological evidence! When you test your ship, you will use similar skills to an experimental archaeologist – observing how the design behaves and what that tells you about how real ships might have worked in the past.



Activity One: Design a sail for your ship

A sail is essential for a ship and a distinctive design would help others recognise it at sea. Before you build your ship, design your own sail so your vessel can be easily identified by others in the fleet.

You will need:

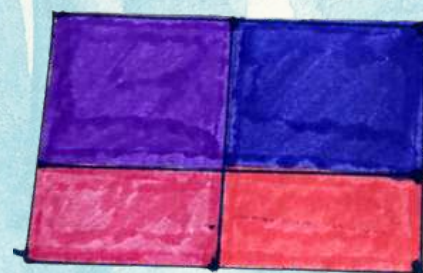
- Piece of paper, or print and trace/cut-out the template on page 14
- Pencil
- Rubber
- Colouring pens/pencils

*Adult supervision
required when
using scissors*



Use colours, patterns or symbols to show what your ship represents. Plan your design on some scrap paper before drawing it on your sail.

*Something personal to **you**!*



For the Spanish Armada!



For a country!





Activity Two: Create your own ship!

For each ship you will need:

- 2 empty plastic drinks bottles (with lids)
- 13 lollipop sticks
- 1 piece of square paper or card, roughly 30 x 30 cm
- PVA glue and a glue spreader
- Scissors
- String
- A paper drinking straw
- Pencil
- Rubber
- Flag design



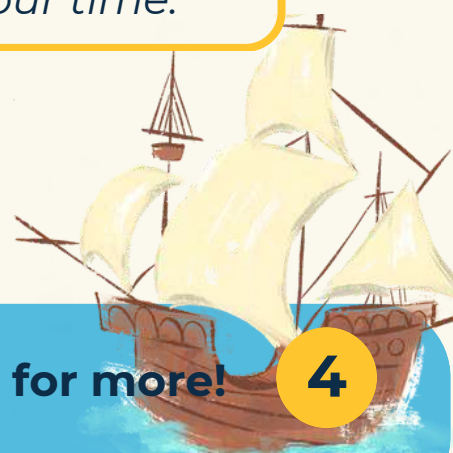
Before you start...



Before making your ship, carefully cut two identical length slits, one in each of your plastic bottles.

Ensure that they are in line with each other and long enough for your lollipop stick to fit into!

This needs to be completed by an adult and can be fiddly, so take your time.





Method:

1. Begin by making the base of your ship. Lay 9 lollipop sticks side-by-side in a straight line, so that all the ends match up neatly.
2. Next, apply glue to one lollipop stick and position it across the top ends of your 9 sticks. Glue a second across the bottom ends to hold them together.

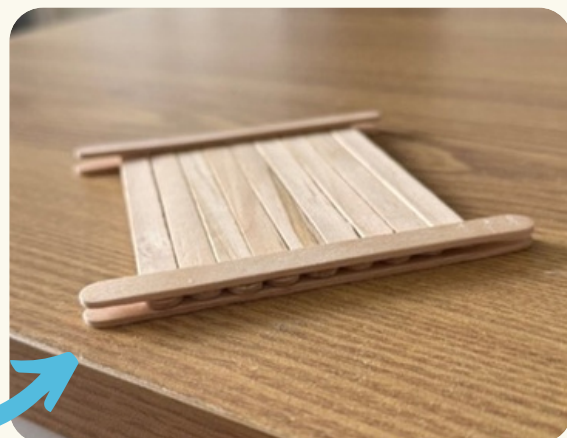


Top Tip!

Use small amounts of glue! Too much can make your ship slippery and slow to dry.



3. Carefully, turn your lollipop stick base over. Glue another lollipop stick across each end on this side too. This will make your ship base much stronger. You should now have a flat raft shape made from lollipop sticks!

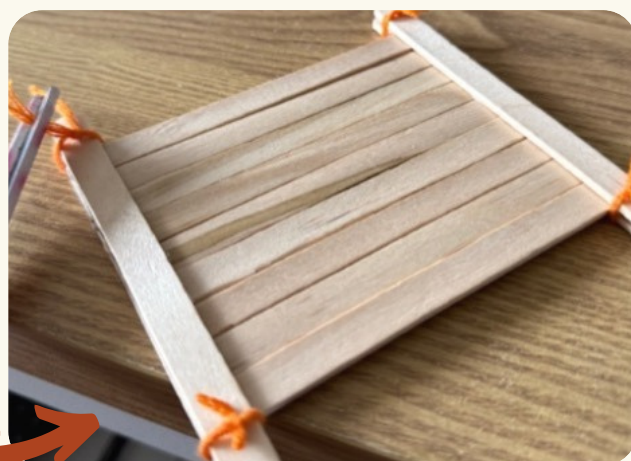


4. Cut four small pieces of string that are all the same length. Tie 1 piece of string loosely around each corner of your lollipop stick base.





5. Once you have tied loose knots in all four corners of your base, tighten the knots - these extra ties will help stop the sticks from moving around. Trim the extra string off each knot.



6. Now it is time to attach your bottles. Carefully, push one end of your lollipop stick base into each slit on your bottles. Be gentle so the sticks do not snap!

An adult should help with this step as the edges of the plastic slots can be sharp.



7. Now, you are going to make the mast for your ship. Take your straw and carefully cut a few small slits into one end. Slide this cut end underneath one of the middle lollipops sticks on your base. This should help the straw stand upright. If any sticks come loose, gently push them back into place.





- 8.** Cut 4 more longer pieces of string. Tie one piece from the bottom of your straw to each corner of the bottles. These strings will help support your mast and stop it from falling over. Once all 4 strings are attached, slightly tighten them one at a time. Keep adjusting the strings until your straw mast stands as straight as possible and is secure in the middle of your ship.



- 9.** Next, make your sail. You can use the sail template provided on page 14 or create your own using a square piece of paper or card. If you designed your sail earlier, copy the design onto your template or glue it on.

- 10.** Place a rubber underneath your paper to protect your table. If you are using the template, carefully make holes with your pencil where the dots are marked. Carefully, push a pencil through the paper near the top and bottom to make 2 holes. Make sure the holes are in a straight line so your sail will fit properly onto the straw.



Top Tip!

Push your pencil slowly when making holes so the paper doesn't tear!

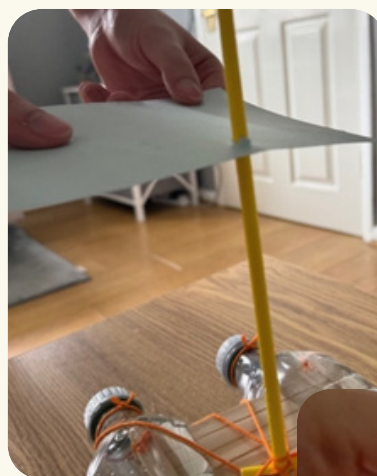




- 11.** Now, make 2 more holes in the top corners of your sail. These holes will be used later to tie your sail onto the ship.



- 12.** Carefully, slide the bottom hole of your sail onto the top of the straw mast. Make sure your design is facing forwards.



- 13.** Next, gently push the top hole onto the straw as well. Your sail should now stand upright on the mast. If your ship leans, adjust the strings slightly to balance it.



- 14.** Cut 2 more longer pieces of string. Thread one piece through each top corner hole on your sail. Tie the strings loosely to the ends of your bottles. Once both sides are attached, gently tighten the strings to hold your sail in place.





Your ship is now finished – well done! Try placing it carefully into a bowl or tray of water and watch it float. Next discuss the questions below and try out our bonus activities to see if your ship could survive the challenges!



Discussion Questions

- What worked well in your design?
- What would you change if you had to build it again?
- Why were ships built differently in different parts of the world?
- If your ship sank and archaeologists found it hundreds of years later, what parts might survive?
- How do archaeologists know what life at sea was like in the past?
- If archaeologists found parts of a shipwreck, what clues could tell them where it came from?
- Why is it important to protect underwater archaeology?



Bonus Activity - Cargo



Cargo

Goods or supplies carried by a ship; like food, clothes, tools or trade goods.



Load your ship with small objects like coins, LEGO bricks, buttons or stones. Place them onto your ship one at a time. Add cargo slowly and evenly on both sides to help keep your ship balanced! How much can your ship hold before it starts to sink or tip over?

Think like an archaeologist:

What does the way your ship carried cargo tell you about how real ships had to be loaded?



Archaeological Challenge

Now, imagine your ship sank and stayed underwater for hundreds of years.

- What would the cargo show about how it was used?
- Would all of your cargo survive?
- Which items might rot away and which might still be found by archaeologists?

Explore how and why different materials survive with our **Rot or Not?** activity.





Bonus Activity - Wind

Now that your ship floats, let's see how it moves using wind! Place your ship in a bowl or tray of water and try moving it using different kinds of "wind".

You can create wind by:

- Gently blowing across the water
- Using a straw to blow air towards your sail
- Fanning the air with a piece of card



Start with gentle wind first – strong blowing can make your ship tip over or move too fast to control. Watch carefully to see how your ship moves. Does it go straight? Does it turn? Does it tip?

Now imagine you are a sailor trying to navigate a large ship in difficult wind conditions. How easy is it to control your direction?



Explore Further

- Find out more about naval battles in the post-medieval period - if a large group of you has created your own ships you could have a go at reenacting a famous battle by placing your ships in a paddling pool!
- Investigate the artefacts uncovered from the Spanish Armada wrecks discovered in Northern Ireland in the collections of **National Museums NI**, available to browse online.





Additional Notes for Discussion Questions

1. Why were ships built differently in different parts of the world?

- Different seas and weather conditions
- Different materials available for ship building
- Different purposes, such as fishing, trade, exploration or warfare
- Different shipbuilding traditions, techniques and technologies

2. What might survive from a shipwreck and what would be lost?

- Objects made of pottery, stone, glass and some metals often survive.
- Wood can survive if buried in mud with little oxygen.
- Cloth, paper, food and rope are more likely to decay.
- Storms and currents can move or damage objects after a ship sinks.



The *Mary Rose* was built during the reign of Henry VIII and sank in 1545, nearly half a century before the Spanish Armada. However it provides a fascinating time capsule for 16th-century life onboard a



ship and over 19,000 objects were recovered. You can browse the collections online: <https://maryrose.org/artefacts>.

3. If archaeologists found parts of a shipwreck, what clues could tell them where it came from?

- The shape and design of the ship.
- Types of wood or building materials used.
- Cargo carried on board and coins, pottery or personal objects.
- Decorations, symbols, flags or inscriptions.



A good example is the discovery of the *Queen Anne's Revenge* (the 18th-century flagship of famous pirate Blackbeard!) which was discovered by archaeologists in North Carolina, USA. Diagnostic artefacts such as a bell and a specific type of barrel helped

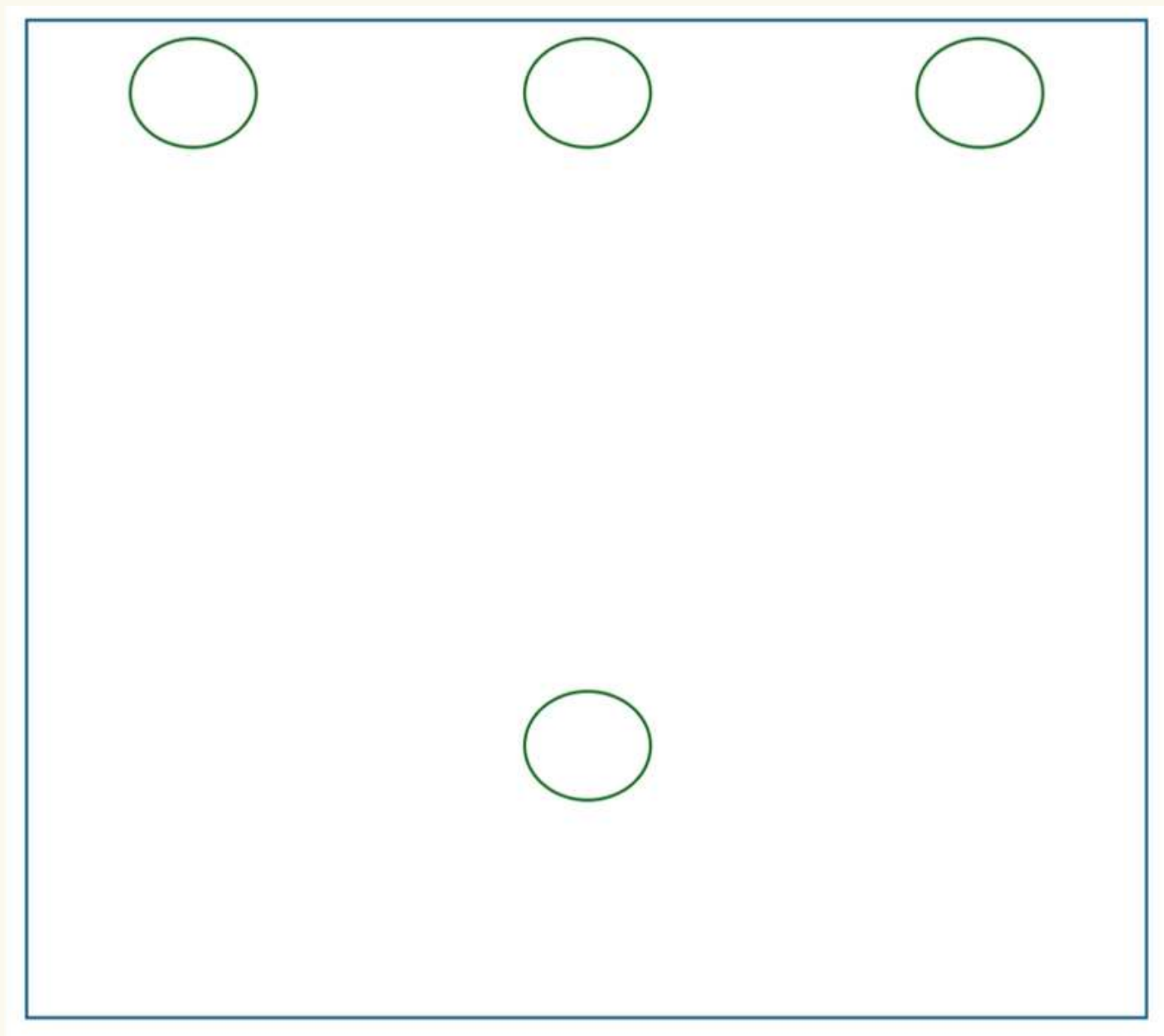


archaeologists identify this famous ship. Find out more at <https://www.qaronline.org>



Craft Activity

Mast Template



Note: This is a placement guide – the holes should NOT be this size!