

# Jewel of Muscat

## Activity Sheet: Intermediate Science & Technology

1. Make your own model of the Jewel of Muscat.
  - Look at the 3D model of the Jewel of Muscat on the website or study a hard copy picture of the ship. Note the design features:
    - What is the shape of the bow?
    - What is the shape of the stern?
    - How many masts and sails are there?
  - Using your ball of modelling clay re-create a hull shape that is similar to the Jewel of Muscat reconstruction.
  - Test your design in the water to make sure it floats. If it does not float evenly make the necessary adjustments to improve the stability.
  - Poke two wooden sticks through the sides of your ship to make the wooden cross beams to support your masts.
  - Use the thin wooden sticks for the masts and pieces of modelling clay in the bottom of your boat to hold the masts in place. Use two more pieces of modelling clay to attach the masts to the crossbeams.
  - Cut out your sails from paper. Look carefully at the 3D model to create the right shape for your sail.
  - When you have completed your model of the Jewel of Muscat put it back into the water. Blow on the sails from behind the ship. How does it sail?
  - How could you improve the performance? Check the 3D model on the website to see what's missing.
2. Write a report on the construction and sailing of your Jewel of Muscat model. Mention any problems you had and how you fixed them.

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## How ships and boats have changed over the years

3. Find an image of a modern ship or boat that interests you. If your chosen vessel is near where you live you may like to photograph or draw it.

Now compare your ship or boat with the Jewel of Muscat under the following headings:

	Jewel of Muscat	Your vessel
Buoyancy: why does it float?		
Stability: what stops it tipping over?		
Propulsion: what makes it move?		
Direction: how is it steered?		
Construction materials: what is it made from?		
Use: is it a working vessel or used for leisure?		

*Note: You may like to refer to the Beginners Science and Technology Information Page to review the concept of how boats float.*