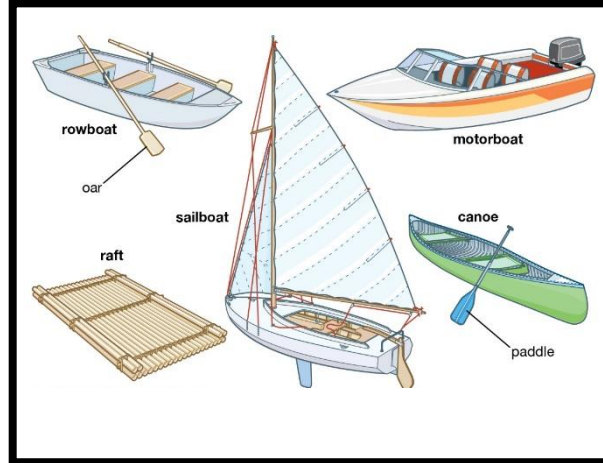


# Year 5 Design & Technology Ship Building



## What I should already know:

- apply understanding of how to strengthen, stiffen and reinforce more complex structures
- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work



## At the end of this topic, I will:

- Know how to create a design criteria to inform the design of innovative, functional, appealing products that are fit for purpose
- Know how to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, and prototypes.
- Have selected from and used a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- Have selected from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

## How to make a propeller:

1. Put the two pieces of wood on either side of the boat. The ends should stick out further than the boat.
2. Keep the pieces of wood in place by wrapping lots of elastic bands around or using glue.
3. Put two more elastic bands around the ends of the wood.
4. Next, put your propeller in the middle between the two pieces of wood.
5. Twist the propeller round so the elastic band gets twisted around the propeller.
6. Place the boat in water and let go of the propeller so the boat moves.

## Vocabulary

Hull	Watertight body of a ship
Bow	The forward part of the hull/ship
Stern	The back of a ship
Port	Left side when facing the bow
Starboard	Right side when facing the bow
Keel	A structural beam that runs in the middle of the boat from the bow to the stern
Propeller	A device which rotates to push away water and thrust the ship forwards
Reinforce	To support or strengthen
Functional	Designed to be working and useful, rather than just attractive



### Equipment:

- Two pieces of thin wood
- Elastic bands
- Plastic spoons
- Glue