

## Propulsion Power

### Materials

- › Cardboard
- › Rubber Band
- › Sticky/Duct Tape

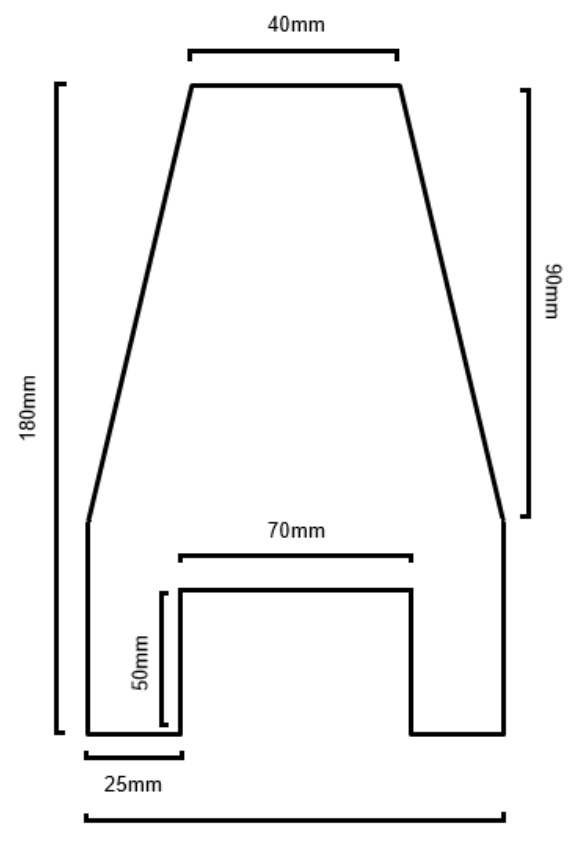
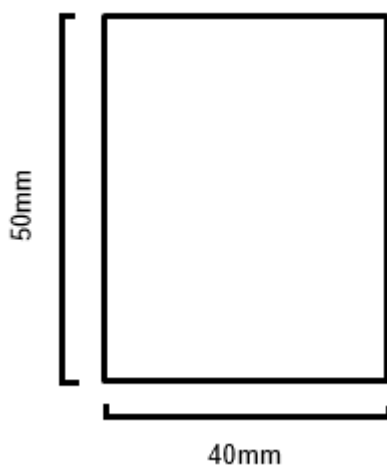
### Activity Overview

- › This is a fun activity that uses a propeller to move your boat through water
- › Create this experiment and see how fast your boat will go!



### Activity Plan

- › Create the shape of your boat and propeller with some cardboard using the templates below
- › Wrap your boat and propeller with duct tape or sticky tape to keep them waterproof
- › Attach the rubber band to your boat, and place the propeller in the middle
- › Wind the propeller until the rubber band is tightly wrapped (see the example)
- › Place the boat in water whilst keeping a hold of the propeller
- › Release the propeller and watch your boat accelerate forward!
- › Take a picture of your boat and share it with us using #BabcockSTEM
- › **EXTRA:** See if you can create a similar boat using a plastic bottle



## Reflective Questions

- › Would using a plastic bottle improve your boat's design? Why?
- › Why are boats narrow at the front?
- › What materials are used to make ships and why?



## Crossword

Use your STEM knowledge to complete the crossword below. You might want to use the internet for extra help!

### ACROSS

- 5 - Wind resistance or water friction
- 7 - The object pushes water aside
- 8 - Upward force on a boat in water
- 10 - This increases as you go deeper in water
- 11 - Unit of measurement for speed at sea

### DOWN

- 1 - Nautical term for the right side of a ship
- 2 - Mass of an object relative to its volume
- 3 - Nautical term for the left side of a ship
- 4 - Force that pulls the boat downwards
- 6 - Used to see out of a submarine
- 8 - Tank that fills with water in a submarine
- 9 - Force that pushes a boat forward

