



# national science week 2021

## National Science Week 2021, Gladstone Fish Industry, Years F-2

**Overview** Students design and build a boat to carry maximum mass

**Resources** How boats float video for teacher  
<https://www.youtube.com/watch?v=32kbMMt-3-s>  
Who sank the boat? Pamela Allen book; alfoil, masses, tubs of water.

### Learning intentions

- "Use materials, components, tools, equipment and techniques to safely make designed solutions." (ACTDEP007)
- "Science involves observing, asking questions about, and describing changes in, objects and events." (ACSHE013)

### Success criteria

For students to design and build a boat from alfoil and use different sizes and shapes for carrying maximum mass.

### Introduction

The ocean provides food sources such as fish, prawns, lobsters, and oysters. These creatures rely on a healthy habitat to survive. Read Barry and Jenny's expedition and discuss how litter can impact their environment.

<http://ghhp.org.au/assets/documents/education/Interactive%20PowerPoint.pptx>

Read Who sank the boat? Book by Pamela Allen.

Boats in the harbour are very large and heavy but they don't sink.

<https://www.youtube.com/watch?v=jj-vKtmtljw> Video for kids to watch.

### Lesson steps

- Set up buckets or tray of water for testing the boat shapes
- Provide each student with a 20cm x 20cm piece of alfoil
- Allow the students to design different shaped boats and place in the water
- Add masses one at a time until the boat sinks
- Record the number of masses added
- Draw a picture of the best design

### Conclusion

Discuss with the students which shape worked the best.

Explain that science involves testing different ideas.

Describe how boats, which are needed for fishing and other industries, float due to displacement of water.

