

Build a boat

What you'll need

- ☐ Various clean recyclables, especially containers, cans, and clean cardboard
- ☐ Straws
- ☐ Paper or Wax paper
- ☐ Tape (preferably duct tape, but normal tape is OK)
- ☐ Scissors

Introduction

In this activity, you and your child will learn about what makes things float, and then build a miniature boat (or boats) using recycled materials.

Discuss with your child:

- What makes something float?
- What makes something sink?
- Is the weight of an object what decides if it will float or sink?
- What about big heavy boats, like barges or cruise ships?

To understand why a huge, heavy barge can float, you'll need to learn about **buoyancy**, or how things float. Watch this video: "Buoyancy: What Makes Something Float or Sink?" by Kids Want to Know on YouTube: <https://youtu.be/nMIXU97E-uQ>

After this, go through the boat examples at the end of this guide, and discuss the questions there with your child.

Do it!

Now, build some mini boats! You may use the examples at the end as inspiration, or build your own.

Once you're ready to test the boats, fill up a sink, bathtub, or tub of water and see how well they float. You may like to test them with a toy that won't be damaged if it gets wet.

Make as many boat designs as you like!

Adaptations

For Younger children
Help them make their boat.

For An Extra Challenge

Vocabulary

Buoyancy: How well an object floats in water.

Fun facts

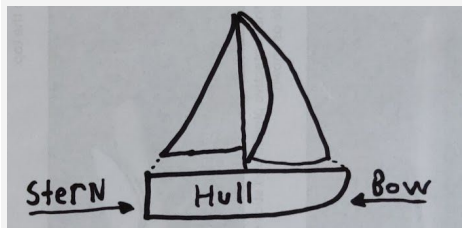
Archimedes' Problem: This video tells more of the (possibly mythical) story of Archimedes discovering

Challenge your child to make a boat that will hold a certain weight and float.

buoyancy.

<https://youtu.be/ijj58xD5fDI>

Boat examples



The shape of a boat can change how stable it is, or how fast it goes.

The **hull** is the main part of the boat.

The **stern** is the back part of the boat.

The **bow** is the front part of the boat.

Rowboat: Pointed bow, flat bottom and stern **Catamaran:** Two hulls with pointed ends



Credit: Dennis Jarvis



Public domain via Wikimedia

Sailboat: V-shaped hull, flat stern, pointed bow **Canoe:** Flat bottom, pointed stern and bow



Credit: Yatchy4000 via Wikimedia



Credit: Franklin.vp at en.wikipedia

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- Why do you think the hulls are flat-bottomed or V-shaped?
- How might the shape of the stern and bow change how fast the boat goes?
- What might be the purpose of the thing sticking down on the sailboat's hull?
- Why do you think the catamaran has two hulls?
- Which boat might be the most stable? Most likely to tip?