

SINK OR FLOAT

AGES

Children 5–10 years

PROGRAM DESCRIPTION

This sink or float program can be run in a few different ways. For early elementary or kindergarten prep, discuss sinking vs. floating or show a video. Ask the children to predict if they think a variety of objects will sink or float, then test each one in the tub of water. Discuss and record together. Older children can design their own boats to see which one holds the most weight in water. Other simple craft options include origami boats and tiny cork boats. Suggested runtime: 30–60 minutes.

MATERIALS AND PREPARATION

Sink or Float Tests

Materials:

- A variety of waterproof items
- A tub of water
- Recording sheet with large boxes (optional, see Resources)



Image source: Shutterstock

ADAPTATION:

You could also set out a second tub of salt water for children to explore how salt water affects buoyancy.

Floating Boats

Materials:

- Aluminum foil 12 x 18 inches (1 sheet per person)
- Plastic tub with water
- At least 30 pennies for testing
- Paper and pencils for design work
- Masking tape, craft sticks, and craft foam (optional)
- Corks and toothpicks (optional)



Image source: Shutterstock

Instructions:

Children see what kind of boat they can make out of tinfoil. The boat must be able to float, cannot be wider or longer than 6 inches, and each penny added to the boat must hold for at least 15 seconds before adding another penny.



Image source: Shutterstock

Questions to ask:

- What if you redistribute the weight of the pennies?
- Is there any way to improve your boat? Modify your design and re-test.
- Which materials make a better boat?

ADAPTATION:

If you have time, try testing the boats in waves. Which ones handle waves the best?

UNIQUE SPACE AND/OR PERSONNEL NEEDS

An extra volunteer or staff member to monitor water safety.

RESOURCES

Web

Chicken crossing icebreaker puzzle from *Math Is Fun*:

<https://bit.ly/3yD0TUV>

“Sink or Float” from *Sci Kids* (video): <https://bit.ly/3vtz1jN>

“Ferry Boat for Kids” from *Moving Machines for Kids*: <https://bit.ly/34kU4JJ>

Buoyancy video from *Kids Want to Know*: <https://bit.ly/3fHZ684>

Sink or float worksheet from *Teachers Pay Teachers*:

<https://bit.ly/3p3eFM8>

Books

Non-fiction

Captain Kidd’s Crew Experiments with Sinking and Floating (2012) by Mark Weakland (children’s)

Let’s Try It Out in the Water (2001) by Seymour Simon, Nicole Fauteux, and Doug Cushman (children’s)

Things That Float and Things That Don’t (2014) by David A. Adler and Anna Raff (children’s)

Ways We Go: We Go on a Ferry (2019) by Joanne Mattern (children’s)

Ferry Boat (2021) by Michael Garland (children’s)

Fiction

What Floats in a Moat (2013) by Lynne Berry (children’s)

Swim Swim Sink (2020) by Jennifer Harney (children’s)

Fox & Chick: The Quiet Boat Ride and Other Stories (Fox & Chick series) (2019) by Sergio Ruzzier

Printables

Origami Boats

Instructions. How to make a paper boat

