Mini Boat Building

DESIGN → TEST → IMPROVE

Students design simple boats and test balance, floating, and structure.

Grade Level
2–8

Time Needed
45–75 minutes

Skills Developed
- Engineering
- Testing
- Problem solving



Suggested Materials

- ☐ Straws
- ☐ Craft sticks
- ☐ Foam sheets
- ☐ Corks
- ☐ Paper
- ☐ Tape
- ☐ Rubber bands
- ☐ Plastic wrap
- ☐ Clay
- ☐ Scissors

and more!

How to Build and Test Your Boat



1. Plan your boat. Sketch your design and decide which materials to use.



2. Build your boat. Use your materials to create a strong and balanced design.



3. Make a prediction. Will your boat float? How much weight can it hold?



4. Test your boat. Gently place it in the water. Add pennies or small weights one at a time.



5. Record your results. How much weight did it hold? Did it tip or sink?



6. Improve and try again! Redesign your boat and test to see if you can do better.

Inclusive Adaptations

- Use team roles.
- Provide boat templates.
- Allow tactile testing and verbal predictions.



Team Role Ideas

- Designer – plans the boat
- Builder – constructs the boat
- Tester – runs the experiments
- Recorder – writes and draws results
- Presenter – shares the findings

Teacher Tips

- Talk about real-world boats and how they are designed.
- Encourage students to learn from each test.
- Celebrate creative ideas and teamwork!
- Remind students: If it doesn't work the first time, improve and try again!



Think. Build. Test. Improve. Float!

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