

## Boating Brigade

*Let's go sailing! Build and test your own boat. Can you get yours to float?*

### Big Idea

Students will experiment with different materials to see if they can successfully create a boat that will carry a toy person around the water tables.

### Illinois Early Learning Standards

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| <p><b>11.A.ECg</b> Generate explanations and communicate ideas and/or conclusions about their investigations</p>   | <p>During boat making, students are asked why they are choosing each material and why they think it will be the best material to float.</p>                             |
| <p><b>K-2-ETS1-3</b> Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p>           | <p>Students may use their boats to race one another with the fan and determine why each boat was successful in floating with different building materials.</p>          |
| <p><b>2-PS1-2</b> Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose</p> | <p>By building their own boat, students will be given several different types of building materials and testing which materials are best to keep their boat afloat.</p> |

### Materials

- Cork
- Plates and bowls
- Wax paper
- Pool noodle or foam
- Egg carton
- Plastic containers
- Orange peels
- Apples cut in half
- Popsicle sticks
- Straws
- Sticks or pieces of bark
- Toy people
- Other recycled materials

### Setup

Tables set up as building stations filled with creation materials along with a water table to test out boats. If no water table, a bath tub or sink will work as well.

## Directions

- Introduce the students to the materials that are available for creating their boat. Encourage them to take the time to plan and create their boat using the materials. Blueprints are also a great idea.
- Hand each student a toy person that will ride in their boat once they have started creating. Assist the students with their creations and talk over the materials they've collected to use: will these materials sink, or float?
- Once the students are finished with their creations, they can move on to testing their boats. One side of the table/tub should be labeled for start, and the other for finish. They can use a paper fan (or real) to move their boats from one end to the other, commenting on if their person is safely contained inside the boat. After, they should move along for the next child to test their boat.

## Investigation Questions:

- What's important when riding in a boat?
- What materials here do you know float?
- Why are you choosing to build your boat with that material?
- Have you ever ridden in a boat, or seen a boat? What did you notice that boat had?
- What's one of your goals for your boat? How can it protect your person?
- Is your boat safely carrying your person to the finish? What can we do differently? Why do you think your boat is working?