

Prompt: Boast that Float

Objective(s):

- Build a boat that floats on water and can hold a bit of weight and not sink. (Keep adding weight until the boat sinks)
- Understand how the boat in the book *Who Sank the Boat* sunk

Activity that Involves problem-solving and strategic thinking:

- Thinking through the concept of who sank the boat in the book.
- Designing and building a boat to hold weight.

Standards addressed:

- GSS K-2-ETS1-2: Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
- CCSS.ELA-LITERACY.SL.1.1: Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.
- Connecticut Elementary and Secondary Science Core Standards:
K-2-ETS1-2: Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
- Connecticut Common Core State Standards for Mathematics:
CCSS.MATH.CONTENT.1.MD.C.4: Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

Background knowledge needed:

- What is a boat?
- Sink and Float concepts
- Understanding of buoyancy

Materials:

- Aluminum foil, popsicle sticks, tape, pennies or marbles for weights

Questions or statements to elicit engagement:

- What do you think will float or sink? Why?
- Are you surprised by anything?
- Why do you think some things didn't work as expected?
- What characteristics do the objects that floated have in common? What characteristics do the objects that sank have in common?

Vocabulary:

- boat, density, volume, float, sink, weight, hull

Reflection:

- Was the last penny that was put on before your boat sank, the reason that it sank?

Extension/Adding more complexity:

- Build a larger vessel that holds even more weight.