

Ship's Log

Cape Cod Catboat Crew Challenge: BOAT BUILDING

Sailor's name: _____

After exploring the websites and completing the Investigations in the Catboat Crew CATegory: BOATBUILDING, answer the following. You can use words or diagrams.

VIDEOS

1. What is buoyancy?
2. What is density?
3. Explain how a bowling ball is more dense than a basketball.
4. Why did the water level rise in the bathtub when Archimedes took a bath?
5. What does "displace" mean?
A) to make fun of B) to cause to move from (an object's) usual place

INVESTIGATIONS

1. What happened when you placed the foil ball into the water? A) it sank B) it floated
2. What happened when you placed the boat into the water? A) it sank B) it floated
3. The foil ball/pennies and the boat/pennies were approximately the same weight.
A) true B) false
4. How did the density of each foil/penny combination affect (influence) your results?
5. What happened when you carefully placed your foil ball on the boat with the pennies?
A) the both floated B) they both sank
6. Put it all together! Based on what you learned about buoyancy, why is the foil boat able to stay afloat with both its weight and the added weight of the foil ball (which, remember, by itself, the foil ball sank)? Think about it...it's like an anchor. Throw it overboard and it sinks to the bottom. Hoist it to the deck and does it make your boat sink?