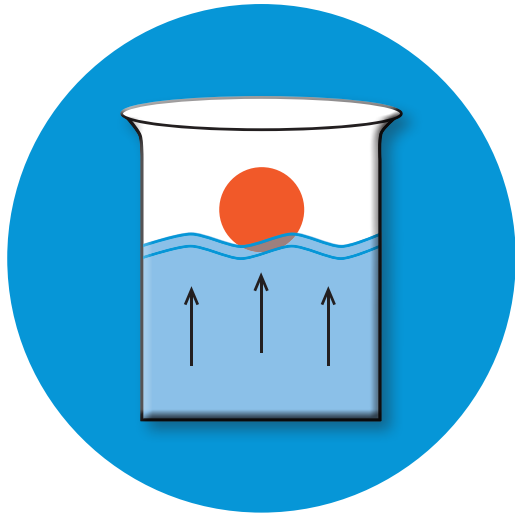


Handout 6 Buoyancy



Why do some things float on the water and other things sink? It's a principle called buoyancy.

Your team needs to be sure your Cardboard Canoe will have enough buoyancy to stay afloat...if not, your paddler will end up in the water!

Think of buoyancy as a pushing game between your boat and the water. Your boat pushes against the water, and the water pushes back.

- The one that weighs the most pushes the hardest.
- If the boat pushes harder (weighs more) than the water, the boat sinks.
- If the water pushes harder (weighs more) than the boat, the boat floats.

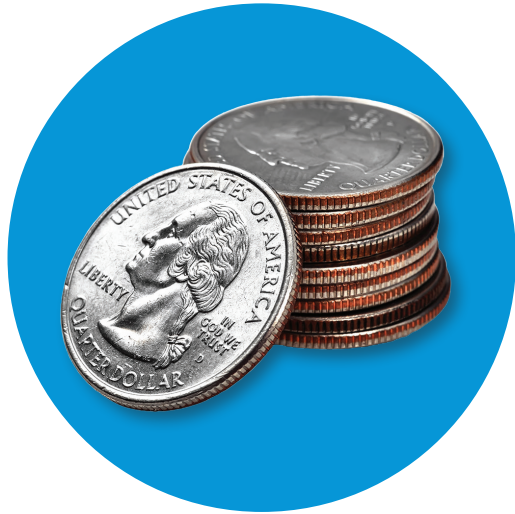
Buoyancy Experiment

Here's an experiment to explore the three types of buoyancy

- Positive – the object floats like a boat
- Negative – the object sinks like an anchor
- Neutral – the object hovers like a submarine would

continued on back 

Buoyancy continued



Supplies Needed

Large plastic tub that will hold at least one gallon of water
Small plastic tub with a lid to float or sink in the water
An assortment of coins or other objects to use as weights
Water to fill the large tub

Process

Fill the larger tub with water, then put the smaller tub (with the lid on) in the water to see if it floats. Record your observation.

Now, experiment with adding weight to the tub.

- How much weight can you add and still have it float?
- How much weight makes it sink to the bottom?
- Can you find the right amount of weight to make it hover?

Think about the boat your team is building. How much weight will you be able to put in the boat before it sinks?