Science Fables

The Ship That Wouldn't Sink

Story Quiz

This quiz follows Lila and Ben as they learn about buoyancy, density, and why large steel ships can float.

1. What is buoyancy?

A. The downward pull of gravity
B. The upward force that water exerts on an object
C. The amount of metal in an object
D. The speed at which an object moves

2. Why did the lump of clay sink at first?

A. It was too cold
B. It did not displace enough water to create a strong enough upward push
C. It was made of wood
D. It contained too much air

3. Why did the same clay float after it was shaped like a small boat?

A. It became lighter
B. It spread out and pushed aside more water
C. It changed into a different material
D. It absorbed water

4. Why can a large steel ship float?

A. Steel is lighter than water
B. Its wide, hollow shape gives it a lower average density and helps it displace a lot of water
C. Its engine holds it above the water
D. The cargo pulls it upward

5. Why can overloading a ship be dangerous?

A. The ship becomes too warm
B. The ship may sink too low and lose its safe balance with the water's upward push
C. The steel turns into clay
D. The water stops producing buoyancy

Answer Key

1. B — The upward force that water exerts on an object

Buoyancy is the upward force that water exerts on an object.

2. B — It did not displace enough water to create a strong enough upward push

The lump of clay sank because it did not displace enough water to create a strong enough upward push.

3. B — It spread out and pushed aside more water

The clay floated when shaped like a boat because it spread out and pushed aside more water.

4. B — Its wide, hollow shape gives it a lower average density and helps it displace a lot of water

A large steel ship can float because its wide, hollow shape gives it a lower average density and helps it displace a lot of water.

5. B — The ship may sink too low and lose its safe balance with the water's upward push

Overloading a ship can be dangerous because it may sink too low and lose its safe balance with the water's upward push.