

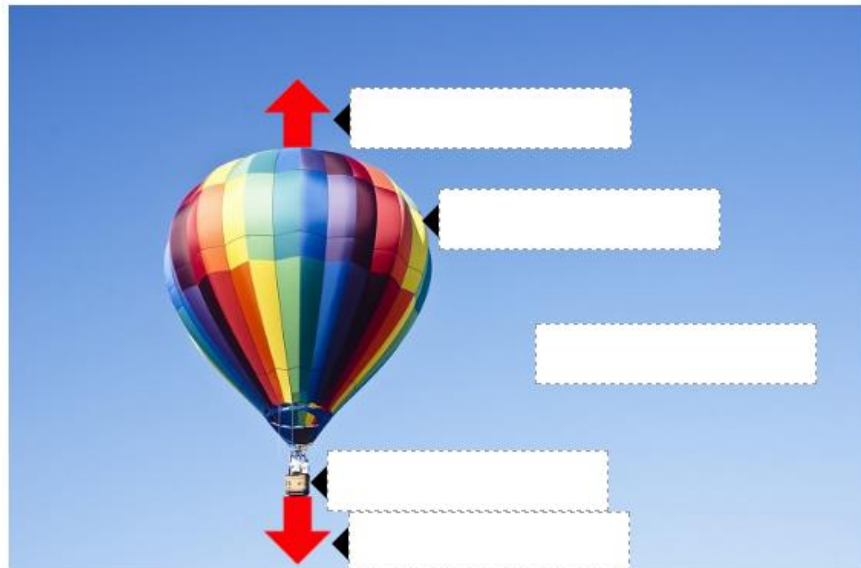
**Directions:** After watching the BrainPOP “Buoyancy” video, take the **CHALLENGE** and fill in your answers below.

**1** Which of the following substances are fluids? Choose more than one answer.

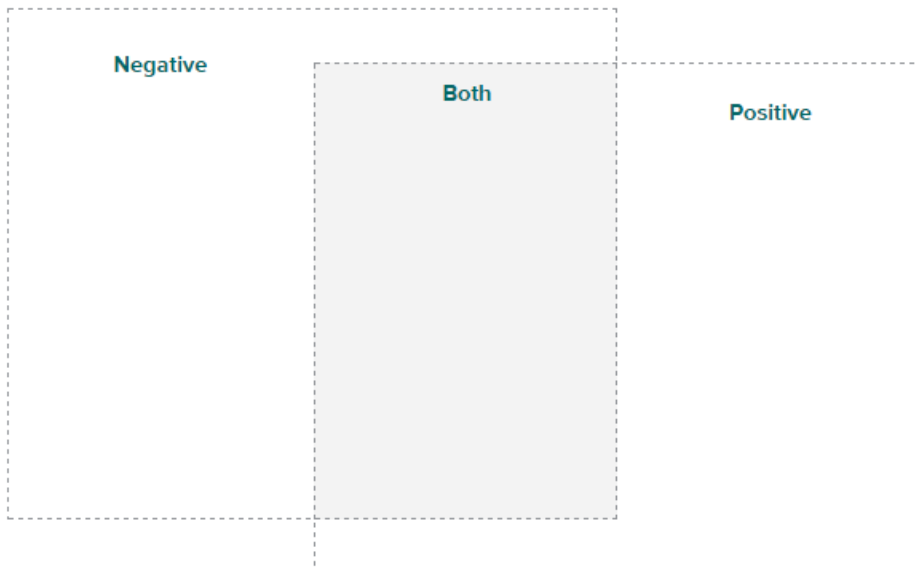
- Orange juice
- Water vapor
- Ice
- Carbon dioxide
- Rubber
- Gasoline
- Snow
- Honey



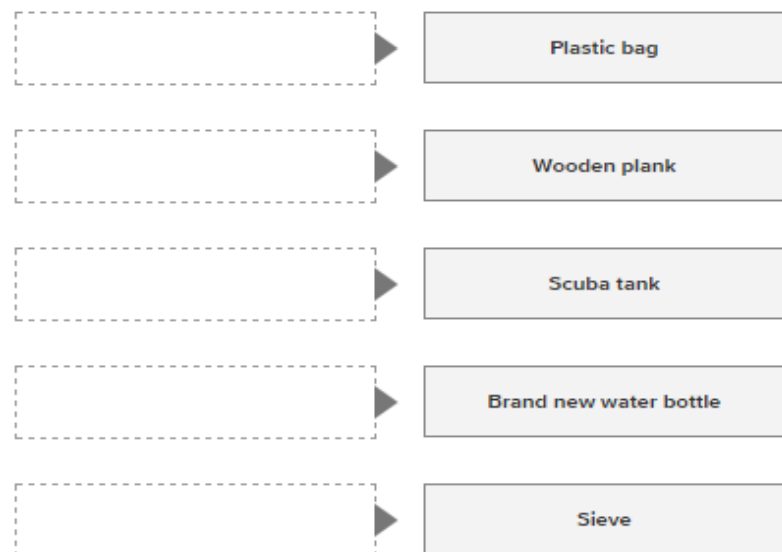
**2** Drag the terms to the parts of the image they describe.



**3** Group the objects according to the type of buoyancy they are capable of.

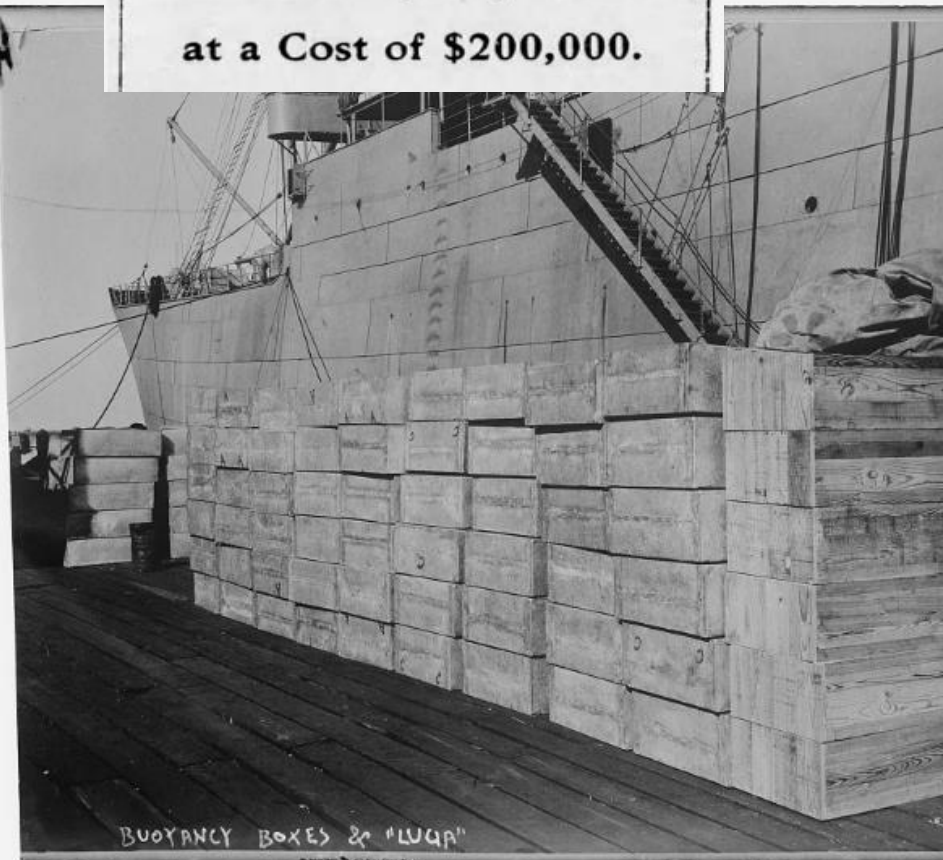


**4** Match each object with the modification needed to make it positively buoyant in water.



# "UNSINKABLE" SHIP LUCIA TORPEDOED; SUNK IN ATLANTIC

Vessel Had Been Fitted Up  
With Buoyancy Devices  
at a Cost of \$200,000.



Buoyancy boxes and LUCIA, 1900. Library of Congress

"'Unsinkable' Ship Lucia Torpedoed; Sunk in Atlantic"

Vessel Had Been Fitted Up With Buoyancy Devices at a Cost of Two-Hundred-Thousand Dollars.

The American steamship Lucia, equipped with buoyancy boxes and supposed to be unsinkable, has been sunk, according to word received here today in shipping circles. She was torpedoed by a submarine in the Atlantic, but details as to the date of the sinking and the fate of the crew are lacking.

The Lucia, formerly an Austrian freighter of the same name, left an Atlantic port with cargo on October Twelfth.

The vessel, taken over at Mobile, Alabama, when the United States entered the war, was equipped at a cost of more than two-hundred-thousand dollars with an "unsinkable" device approved by Naval officials for experimental purposes. She was held in port for several months while installation of air-filled boxes, lining her holds and cabins, was in progress. This buoyancy arrangement, its inventor declared, would keep the ship afloat, no matter how much water was taken in through holes torn in her side by torpedoes or shell fire.

The freighter had made several trips without incident, and the submarine attack which sent her to the bottom was the first attempt to sink her.

The Lucia, a vessel of six-thousand-seven-hundred-forty-four gross tons, was built in Austria in 19-12 and plied between Austrian and American gulf ports, in the cotton trade, before the war.

"'Unsinkable' Ship Lucia Torpedoed; Sunk in Atlantic," *The Brooklyn Eagle*, October 19, 1918.

# ORDER IT

Number the items in order from least to most buoyant. Explain how you made your decision.

..... Ice cube

..... Beach ball

..... Wet sponge

..... Tennis ball

..... Hockey puck

..... Helium balloon

Explanation:

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# DESCRIBE IT

Discuss the buoyancy of a rubber ducky. Include each term listed in the word bank.

**BUOYANT FORCE   DENSITY   DISPLACEMENT   GRAVITY**  
**POSITIVELY BUOYANT   VOLUME   WEIGHT**

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