

Life

Physical

Earth and Space

LESSON 33

Identifying objects that are buoyant

Lesson Preparation

Tool Kit Materials

- Table tennis ball
- Golf ball
- Sponge ball
- Marble
- Toy car
- Seashell
- Plastic straw
- Large foam block
- Craft stick

Teacher Collected Materials

- Plastic container (see *The Night Before*)
- Hand towel or paper towels
- Paper clip
- Rubber band
- Crayon without a paper wrapper
- Lego® or other plastic toy
- Plastic bottle cap

The Night Before

- If possible, use a clear container. Fill the container with at least 4" of water.

The Lesson

- **Teacher Note:** Buoyancy depends on the mass and volume of a solid. Objects that are denser (i.e., have more mass than an equal volume of water has) will sink in water.
- Seat children in a circular arrangement on the floor. All children should be able to easily see the demonstration area.

“In our last science lesson, we used a balance to find out whether one object was heavier or lighter than another object.”

“Heavier objects have more mass than lighter objects.”

“In today’s science lesson, you will learn another way to describe objects.”

“Another way to describe objects is to tell whether or not they float on water.”

- Show children the basin of water and the table tennis ball.

“Put your thumb up if you think the table tennis ball will float on water.”

“Put your thumb down if you think the table tennis ball will sink to the bottom.”

- Allow time for the children to signal their predictions.

“Let’s check to see what happens when I put the table tennis ball on the water.”

- Place the ball on the water in the basin.

“Does a table tennis ball float on the water or sink to the bottom?”
float

- Remove the table tennis ball from the water. Use the hand towel or paper towels to wipe off the ball.
- Show children the golf ball.

“Put your thumb up if you think the golf ball will float on water.”

“Put your thumb down if you think the golf ball will sink to the bottom.”

- Allow time for the children to signal their predictions.

“Let’s check our predictions.”

- Place the ball on the water in the basin.

“Does a golf ball float on the water or sink to the bottom?” ***sink***

- Remove the golf ball from the water.
- Show children the sponge ball.

“Put your thumb up if you think the sponge ball will float on water.”

“Put your thumb down if you think the sponge ball will sink to the bottom.”

- Allow time for the children to signal their predictions.

“Let’s check our predictions.”

- Place the ball on the water in the basin.

“Does the sponge ball float on the water or sink to the bottom?” *float*

- Remove the sponge ball from the water.

“Objects that float when you put them on water are said to be buoyant (boi'ənt).”

“Let’s say the word ‘buoyant’ together.”

- Say the word “buoyant” with the children.

“The table tennis ball and the sponge ball are buoyant because they float on water.”

- Sort the balls into two groups—those that are buoyant and those that are not buoyant.

“I sorted the balls into two groups.”

“One group has objects that are buoyant, and the other group has objects that are not buoyant.”

“Let’s test some more objects.”

- Show children the marble.

“Put your thumb up if you think the marble is buoyant and will float on water.”

“Put your thumb down if you think the marble will sink to the bottom.”

- Allow time for the children to signal their predictions.

“Let’s check our predictions.”

- Place the marble in the basin of water.

“Does the marble float on the water or sink to the bottom?” *sink*

“Is the marble buoyant?” *no*

“In which group will I put the marble?” *not buoyant*

- Remove the marble from the water and place it with the golf ball.
- Repeat for the toy car, large foam block, bottle cap, paper clip, crayon, seashell, craft stick, Lego, straw, and rubber band.

“Who would like to share something you learned in science today?”

- Allow time for the children to share.

“In our next science lesson, we will use characteristics to identify objects.”

- **Note:** Put the basin of water and assorted objects in the science center for the children to test during center time.