



The Clever Crow Challenge

In the story, "The Crow and the Pitcher," a thirsty crow finds a pitcher with a little water at the bottom. The crow can't reach the water but doesn't give up. It drops pebbles into the pitcher and slowly, the water rises, and the crow is able to drink! Clever, right?

Did you know this story isn't just a fable? Scientists have discovered that crows, like the Cuban Palm-Crow, are really smart. They use tools, solve puzzles, and even plan ahead!

In this activity we'll recreate the crow's clever experiment to understand why dropping pebbles into the pitcher caused the water to rise.

You will need:

- 1 tall, clear container (a plastic water bottle or glass vase works well)
- Water
- Bottle cap
- Small pebbles or marbles (at least 20-30)
- Measuring cup
- Marker or tape (to mark water levels)







- 1. Fill the clear container halfway with water.
- 2. Mark the starting water level with tape or a marker on the outside.
- 3. Drop the bottle cap into the water. It should float, but be too far down to reach

What can you do to make the water rise so that the bottle cap floats higher?

4. Add pebbles or marbles one at a time and watch the water level rise. Keep track of how many pebbles or marbles you add to the container and write it in the space below.

5. When the bottle cap is floating near the top, stop and mark the final water level with tape or a marker.

How many peoples or marbles did you use

Total:



What do you think made the water rise each time you added a pebble or

marble?

Why did that help the bottle cap float higher?







The Science Behind the Rising Water

When you dropped a pebble into the container, it took up space in the water. The water had to move out of the way, and the only place it could go was up!

This is called water displacement.

Each pebble pushed some water upward. As you added more pebbles, the water level kept rising. That's how the bottle cap eventually floated higher.

Try This Variation!

What happens if you use pieces of Styrofoam instead of pebbles?

- 1. Remove the pebbles and refill your container to the starting water level.
- 2. Try adding pieces of Styrofoam one at a time.
- 3. Watch what happens to the water level.

Did the water level rise like it did with the pebbles?

.....

.....

Why or why not?







The Difference Between Pebbles and Styrofoam

Unlike pebbles, Styrofoam **floats**. It doesn't sink and take up space under the water. Since it doesn't push water out of the way, it doesn't cause the water to rise much. That's because it's less dense than water and full of air!

This shows us that not all materials displace water the same way. To make water rise, an object has to sink and take up space below the surface like the clever crow's stones!