The Oil Drop Under Water

KIDS HANDS-ON | RUN AT 11:25 | 20 MIN

The point

Gravity never turns off — yet the oil drop RISES. The truth is a seesaw: the heavier water sinks past and **shoves the lighter oil up**. This is the honest explanation for every helium balloon.

Materials

- Clear jar of water on a tray
- Cooking oil in a cup
- Pipettes (A-9 kit)

Steps

1. **PREDICT first** (worksheet): the oil drop will… sink / float up.
2. Each child draws a little oil into the pipette, pushes the tip UNDER the water, and squeezes one drop low in the jar.
3. Watch it wobble upward, join its friends, and settle as a layer on TOP.
4. Circle what really happened. Now the argue question: did gravity let go of the oil?
5. Reason it out: gravity pulls BOTH — but it pulls the heavier water harder; the water sinks past and shoves the oil up. A seesaw, not an escape.
6. Say what is really shoving a helium balloon up. (The heavier air, sinking past it.)

> *Say: "Nothing escapes gravity — not oil, not balloons, not you. When something floats UP, look for the heavier stuff sinking past it and doing the shoving."*

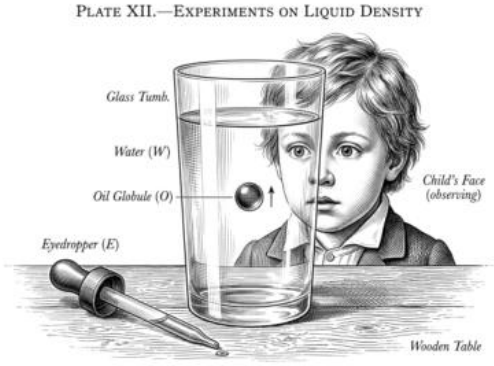


Fig. 1. A Globule of Olive oil rising through Water

TEACHER PREP

Tray under the jar; a drop of dish soap in reserve for cleanup; test the pipette draw with littles' hands in mind.

What to watch for

- The tip must go UNDER the water — a surface drop teaches nothing
- The argue moment before the explanation; let sink/float wrestle

EXPECTED RESULT

Every drop rises and pools on top. Gravity held everything the whole time — the heavier fluid just always wins the bottom.