

Dry Paper Under Water

TEACHER, THEN KID TURNS

RUN AT 10:00

20 MIN

The point

Air takes up space. The glass is never empty — it is full of air, and the water cannot come in until the air goes out. Run it as the scientific method, naming each step aloud: **Question** → **Predict** → **Test** → **Observe** → **Conclude**.

Materials

- Clear drinking glass
- Paper towels
- Dishpan / deep basin of water (3+ in over the rim)

Steps

- 1 **QUESTION:** “Will the paper get wet under water?” Wad a paper towel and **wedge it tight in the bottom** of the glass.
- 2 **PREDICT:** everyone circles a guess on the worksheet back (band 1) first.
- 3 **TEST:** glass mouth-down, held **perfectly level** — push it slowly all the way under. Count to five.
- 4 **OBSERVE:** lift straight out, wipe the rim, pull the paper — **bone dry**. Pass it around.
- 5 Ask **why** before telling. Watch through the glass wall: water climbs only a little, then stops.
- 6 Repeat **tilted**: silver bubbles glug up, water floods in, paper soaked. What left — and what moved in?
- 7 **CONCLUDE** in their words, then give **every child a dunk turn**.

Say: “The glass was never empty. It was FULL — full to the brim with air. Water knocked, and air would not give up its seat.”

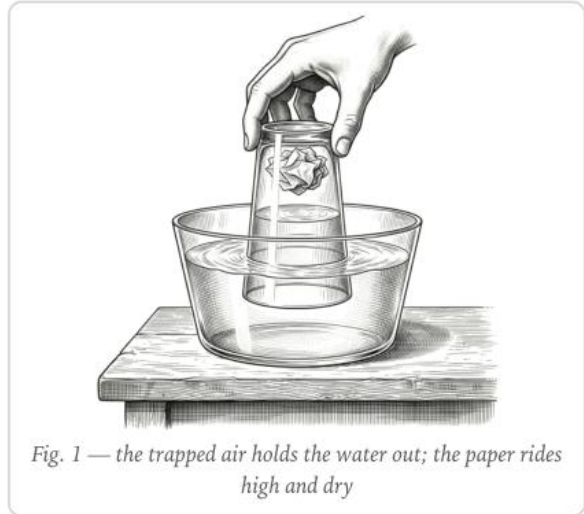


Fig. 1 — the trapped air holds the water out; the paper rides high and dry

TEACHER PREP — THE DAY BEFORE

Test with **your actual glass and basin**: the basin must be deep enough to sink the whole glass. Wad the paper big enough that it cannot fall out inverted.

What to watch for

- Water visibly stops a little way inside the mouth
- The tilted repeat: bubbles OUT, water IN — a trade
- Kids saying “the air is in the way” unprompted

EXPECTED RESULT

Straight down: paper stays dry — **trapped air occupies the space**, so water cannot enter.
Tilted: air escapes as bubbles and water takes exactly the room the air gives up.