

The Can Crush

TEACHER DEMO

RUN AT 12:40

15 MIN

The point

Air pressure is **STRONG**. A can the kids cannot crush by squeezing gets flattened by the sky, instantly, with nobody touching it. **THIS** is what “air pushes from every side” means.

Materials

- 2+ empty aluminum soda cans (rinsed; + spares for encores)
- About 1 tablespoon of water
- Hot plate or stove • long kitchen tongs • oven mitt
- Shallow bowl of ice water • tape line on the floor

Steps

- 1 Pass the spare can: “**crush it flat between your flat palms**” — no thumbs, just squeeze. Nobody can.
- 2 **PREDICT** on the worksheet back (band 4): nothing / crushed flat / pops open bigger?
- 3 Put ~1 **tablespoon of water** in the crush can; set it upright on the hot plate.
- 4 Wait for a **steady plume of steam** from the mouth — the steam is pushing the air out; say so while you wait.
- 5 Grip low with tongs; in **one fast smooth motion** flip it **mouth-straight-down** into the ice water.
- 6 **BANG** — crushed flat, inward from every side. Fish it out and stand it next to its **un-crushed twin**.
- 7 Reason it out, then **do the encore** — they will beg.

Say: “Nothing touched that can but air. The push was always there — on the can, on you, on everything, from every side. The can only found out when it lost the push INSIDE that was holding it open.”



Fig. 4 — before and after: the steam leaves, the sky moves in

TEACHER PREP — THE DAY BEFORE

Stage everything: rinsed cans, tongs, mitt, ice in the freezer, bowl, hot plate at its station, **tape line on the floor**. If induction, confirm a compatible setup or use the stove.

SAFETY

Adult-only. Steam burns are silent and fast: tongs + mitt, kids behind the tape line, only the adult’s hands cross it. The crushed can cools quickly in the water — check before passing.

What to watch for

- The can crumples **inward from all around**, not just one side
- The twin can beside it: same can, one difference — the air inside

EXPECTED RESULT

Instant loud implosion. **Steam pushed the air out; cold sealed the mouth and shrank the steam to drops; almost nothing inside pushed out while the whole atmosphere pushed in.** Weak crush = flip earlier next time? No — wait for a prouder plume and flip faster.