

Spray and Bubbles

KIDS HANDS-ON

RUN AT 11:15 • OUTDOORS

20 MIN

The point

Liquids and gases are crowds of particles too. Water can be broken into flying bits that **join back into plain water**; air can be parceled into bubble “packages” of any size.

Materials

- Spray bottle per child, set to finest mist (from the A-8 kit)
- Glass of soapy water per child (water + a squirt of dish soap)
- Drinking straw per child

Steps

- 1 **Spray a fine mist at the sky** — the bottle breaks water into tiny flying bits.
- 2 Spray again and again **at one spot on your other hand**: the bits join back into drops, then a trickle — the same water, re-formed.
- 3 Ask it out loud: did the water change? **No** — **broken apart and joined back, same water.**
- 4 Now the air: **blow gently through the straw** into the soapy water.
- 5 Look close at the foam: big bubbles and **tiny, tiny ones** — each one a little package of air particles.
- 6 **Watch a bubble pop** — the package opens and its air particles fly free and mix back into the air.

Say: “You just took water apart and put it back together — and it came back exactly the same. Only the grip changed, never the particles.”



Fig. 5 — bubble packages of air; the mist bottle that breaks water into bits

TEACHER PREP

Set every nozzle to finest mist the day before. Mix soapy glasses just before heading out. Pick a wind-sheltered corner.

BLOW, DON'T SUCK

Practice straw-blowing on plain water first — a mouthful of soap ends the station. Hand out spray bottles only after the straw round, then allow one minute of free spray as the pressure valve.

What to watch for

- Mist re-forming into running drops on a palm
- Someone spotting the very tiniest bubbles unprompted

EXPECTED RESULT

Water: broken to bits, rejoined, unchanged.
Air: parceled into packages from fist-size to speck-size — and released again when they pop.