

Three States Trio

TEACHER DEMO

RUN AT 9:45

15 MIN

The point

The SAME substance — water — sits on the table in all three states at once. State words describe how a thing is **right now**, and the same stuff can wear all three costumes.

Materials

- Bowl of ice cubes (frozen overnight)
- Bowl or clear jar of liquid water
- Mini ultrasonic humidifier, filled and running
- The oration tray (cube · water jar · air jar) stays in view

Steps

- 1 Set the trio in a row. Ask: **“What are these three things made of?”** (All water!)
- 2 For each one, kids answer the three test questions: **does it keep its shape? does it flow? does it spread out?**
- 3 Kids **name each state**: ice — solid. Water — liquid. And the humidifier’s breath…?
- 4 Precision moment: **watch one wisp of mist until it vanishes mid-air**. The white mist is tiny liquid droplets; where a wisp disappears, the water is still there — it has become invisible **water vapor**, the true gas.
- 5 Pass an ice cube; let it start melting in a warm hand. **“What is your hand’s heat doing?”** — the afternoon is coming.

Say: “Same stuff — three disguises. The only difference between them is how much heat energy the water has.”



Fig. 1 — one substance, three states, one table

TEACHER PREP

Freeze plenty of cubes the night before. Fill and test-puff the humidifier. Good light behind the mist makes the vanishing wisps easy to see.

What to watch for

- Kids applying the three test questions without help
- The mist visibly **vanishing** a few inches up — liquid drops becoming invisible gas
- Someone asking whether the air jar is really empty (it isn’t — A-3 hook)

EXPECTED RESULT

Kids sort all three correctly and say the sentence “ice, water, and vapor are the same water.” **State depends on heat, not on what the stuff is.**