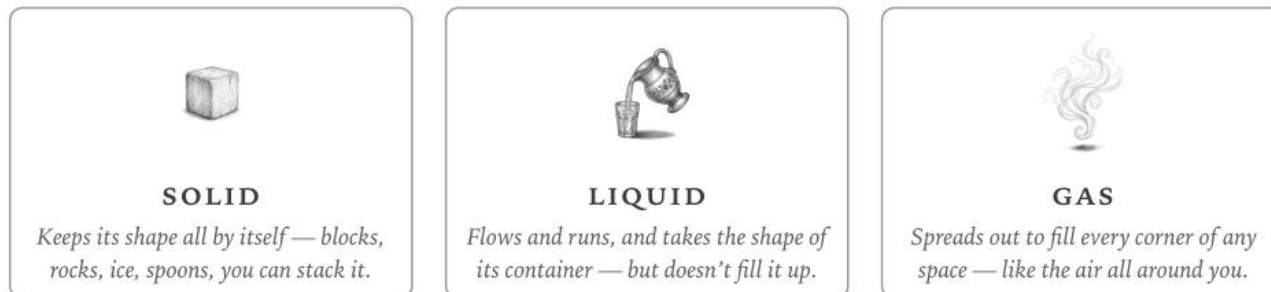




Everything you can ever touch is a **solid**, a **liquid**, or a **gas** — and all of it together is called **matter**. The only thing that moves matter from one state to another is **temperature**.



THE SHAPESHIFTER — THE SAME WATER, THREE WAYS

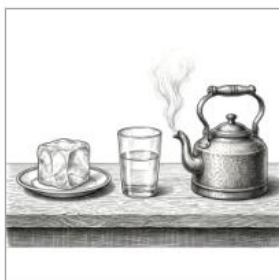
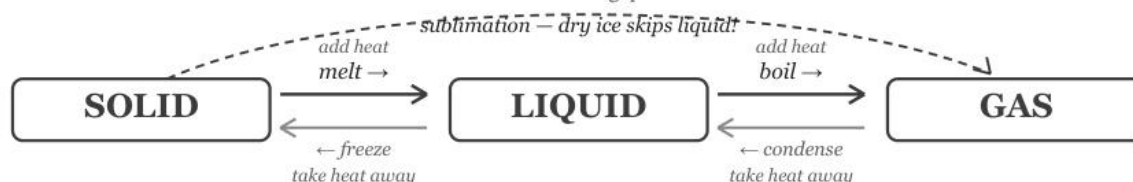


Fig. 1 — one substance, three states: ice (solid), water (liquid), and water vapor (gas) — the white puff is tiny drops; the true gas is invisible, in the clear gap.



WORDS TO KNOW

solid

liquid

gas

matter

melt

freeze

boil

temperature

sublimation

matter — solids, liquids, and gases all together; everything that has weight and takes up space · **melt** — heat turns a solid into a liquid · **freeze** — cold turns a liquid into a solid · **boil** — heat makes a liquid turn into gas fast · **temperature** — the number that tells how hot or cold · **sublimation** — a solid goes straight to gas, skipping liquid

WATCH FOR THIS IN EVERYDAY LIFE

- Butter in a hot pan at dinner. *What is the heat doing to it?*
- An ice cube shrinking in a summer drink. *Which state is it leaving?*
- Water going into the freezer at night. *What will the cold turn it into?*
- Any smell, anywhere — every smell is something in its **gas** state. *What is your nose catching?*
- Look at the whole world: land, ocean, sky. *Solid, liquid, and gas — can you name all three?*