Science 14

Unit A: Properties of matter

Elements and compounds

An element and a compound

- Copper conducts and can be drawn into wire, which fits a metal.
- Water can be split into hydrogen and oxygen, which fits a compound.

Element and compound

- Copper is an element: one kind of atom, and it can be drawn into wire.
- Water is a compound: hydrogen and oxygen joined in a fixed ratio.

Key terms

element

A pure substance made of one kind of atom, such as copper or oxygen.

compound

A pure substance made of two or more elements joined in a fixed ratio, such as water.

subscript

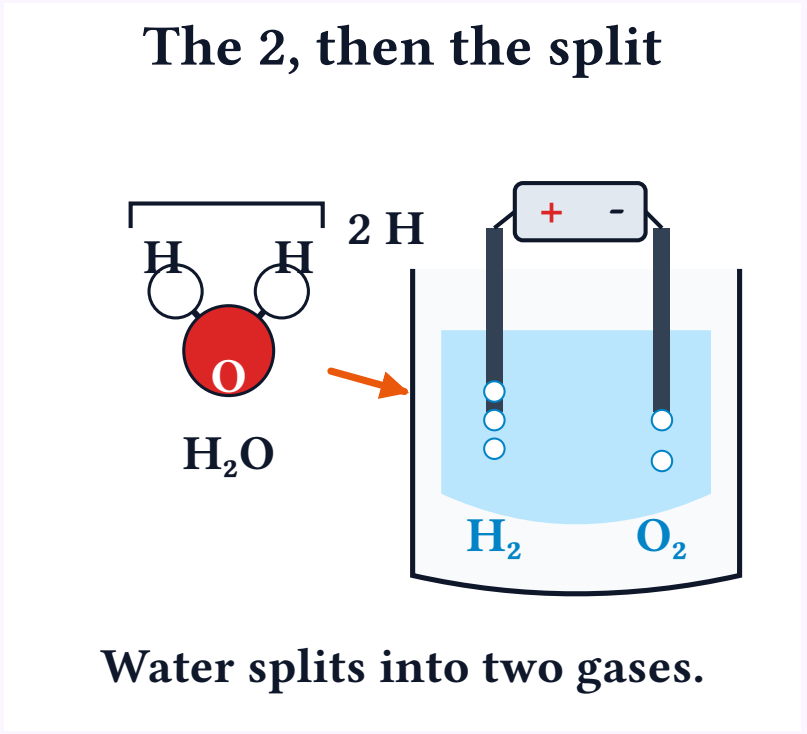
The small number after a symbol that counts atoms of that element in the formula. (H_2O)

metalloid

An element whose properties sit between typical metals and typical nonmetals, such as silicon.

Symbols and subscripts

- In H_2O the small 2 counts hydrogen atoms in one water unit.
- Electrolysis splits water into hydrogen and oxygen, so water is a compound.



A brittle grey solid

- Poor conductivity and brittleness point toward the nonmetals.
- The periodic table is where you confirm the name.

Solids are a mixed group

- State, shine, conductivity, and malleability belong in the decision together.
- A brittle solid that fails to conduct stays with the nonmetals or metalloids.

Copper and oxygen

- Copper can be drawn into wire. Oxygen is a gas in the room.
- Say which one is the metal and name the property you used.

Evidence for a compound

- Shine, conductivity, and brittleness point to a region of the table. The table names the element.
- Read the symbols in the formula. A sample that splits into elements was a compound.