Atom, element, molecule, compound, ion

Date _____ Topic 1/2

CUES · QUESTIONS

1. Element?
2. Molecule vs compound?
3. How do you spot an ion?
4. Atom?

Cover the notes. Answer each cue from memory.

NOTES

1 · Worked example Copy one example from the page. Next to each line write WHY in a few words.

2 · Fill in the blanks Cover the steps and redo it. Leave a gap where you are unsure.

3 · Your turn A new question. Then check it against the answer.

SUMMARY — IN MY OWN WORDS, TWO SENTENCES

Pure substances, mixtures, solutions

Date _____ Topic 2/2

CUES · QUESTIONS

1. Homogeneous vs heterogeneous?
2. Pure substance vs homogeneous mixture?
3. Another name for a homogeneous mixture? For a heterogeneous mixture?
4. Solute vs solvent in salt water?

Cover the notes. Answer each cue from memory.

NOTES

1 · Worked example Copy one example from the page. Next to each line write WHY in a few words.

2 · Fill in the blanks Cover the steps and redo it. Leave a gap where you are unsure.

3 · Your turn A new question. Then check it against the answer.

SUMMARY — IN MY OWN WORDS, TWO SENTENCES

🧩 Classifying Matter · Formula and trap sheet

Everything you need before a test, on the fewest pages. Fold it and keep it in your binder.

Atom, element, molecule, compound, ion

REMEMBER

- Charge → ion. Lone symbol / "one particle" → atom.
- 2+ atoms, one type → molecule + element (O_2). 2+ types → molecule + compound (H_2O).

WATCH OUT

- O_2 has 2 atoms so not an element → one type = element (and molecule).
- $SO_4{}^{2-}$ is a compound → the charge makes it an ion.

Pure substances, mixtures, solutions

REMEMBER

- Homogeneous = 1 phase; heterogeneous = more than 1 phase = mechanical mixture.
- Homogeneous splits: pure substance (constant composition) vs solution (variable composition).

WATCH OUT

- Clear liquid = pure → could be a solution (salt water).
- Compound = mixture (has 2 elements) → compound is pure (fixed formula).