Blurt it

Step 1

Name _____ Date _____

1. Cover your notes and put your phone face down.
2. Set a timer for 5 minutes.
3. Write down everything you remember about bonding, structure and the properties of matter: facts, key words, equations, practicals, and mistakes to avoid. Diagrams count too.

Stuck? Start with one of these: ionic bonding · covalent bonding · delocalised electron

When the timer ends, turn over and check what you remembered.

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Check it, fix it, space it

Steps 2, 3 and 4

Check it

Tick each idea you wrote down, even in your own words.

- [ ] Ionic bonding: metal atoms transfer electrons to non-metal atoms, making oppositely charged ions
- [ ] Ionic compounds are giant lattices with high melting points; they conduct only when molten or dissolved
- [ ] Covalent bonding: non-metal atoms share pairs of electrons
- [ ] Small molecules have weak forces between molecules, so low melting and boiling points, and they do not conduct
- [ ] Giant covalent structures (diamond, graphite, silicon dioxide) have very high melting points
- [ ] Metallic bonding: a giant structure of atoms with delocalised electrons that are free to move, so metals conduct
- [ ] Alloys are harder than pure metals because different sized atoms stop the layers sliding
- [ ] The stronger the forces between particles, the higher the melting and boiling points
- [ ] Graphite has layers that slide and delocalised electrons that conduct; graphene is a single layer of graphite
- [ ] Fullerenes are hollow carbon structures; carbon nanotubes are long, thin cylinders

Higher only

- [ ] The simple particle model has limits: real particles are not solid spheres with no forces between them

Key words to use: ionic bonding · covalent bonding · metallic bonding · electrostatic force · delocalised electron · dot-and-cross diagram · giant ionic lattice · intermolecular force · polymer

I remembered _____ out of 10. **Higher only: _____ out of 1.**

Fix it

Pick 3 ideas you missed. Look them up, then write each one correctly.

1

2

3

Space it

Blurt again on a fresh sheet. Gaps help you remember for longer.

Tomorrow

Date _____
Score _____ / 10
Higher only _____ / 1

In 3 days

Date _____
Score _____ / 10
Higher only _____ / 1

In a week

Date _____
Score _____ / 10
Higher only _____ / 1

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