

## Structure and bonding

Unscrambling definitions is a fun way to test and consolidate learners' understanding of the key terms and definitions. Instruct learners to piece together the definitions of key terms and then use their understanding of the terms to complete sentences. Answers are given below and are also provided as slides. Like the accompanying Frayer models, unscrambling definitions probe learners' understanding and target the trickier terms in the key terms list.

### Ideas for adaptation

Integrate speaking and listening skills into this activity:

- Print the unscrambling definitions grid and cut around the individual boxes. Ask learners to each take a box and – as a class or group, arrange themselves into the various definitions. When everyone is ready, ask each learner to read out their own part of the definition in turn.
- Ask learners to read out the connection completion slide in full.
- For a quicker adaptation, consider doing a think, pair, share activity where learners discuss and decide on the correct definitions in pairs or small groups.

Provide more support by linking the term in column A to the correct entry in column B and perhaps the entry in column B to the correct entry in column C, for the first few key terms in the grid.

Read more about unscrambling definitions and their use: [rsc.li/3Gda32t](https://rsc.li/3Gda32t)

### Answers

Also supplied on the accompanying PowerPoint slides.

#### Unscrambled definitions answers

An **ionic bond** is an electrostatic force of attraction between oppositely charged ions in a regular lattice that forms between a metal and a non-metal.

A **covalent bond** is a type of bond formed by atoms sharing one or more pairs of electrons.

A **metallic bond** is an electrostatic force of attraction between delocalised electrons and the positive ions in a regular lattice.

An **element** is a pure substance made of only one type of atom.

A **compound** is a pure substance made of two or more different elements whose atoms are joined by chemical bonds; the atoms are in a fixed ratio.

An **atom** is the smallest possible particle of an element; atoms are made up of protons, neutrons and electrons.

A **molecule** is two or more atoms connected by chemical bonds.

**Intermolecular** forces are the relatively weak attractive and repulsive forces between molecules.

### Connection completion answers

Learners should choose row C as the correct connections for the sentences.

C	as a result	Conversely	since
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Completed sentences:

When a metal and a non-metal react, the metal loses one or more electrons and **as a result**, becomes a positively charged ion. **Conversely**, the non-metal gains one or more electrons to become a negatively charged ion. An ionic bond is formed **since** the oppositely charged ions are held together by electrostatic attraction.

### Other key terms support resources

This resource is part of the key terms support for the topic of **structure and bonding**. Find the following accompanying resources at [rsc.li/444TbFh](https://rsc.li/444TbFh):

- a key terms list – carefully selected vocabulary, with definitions, that learners will come across when studying this topic at this stage
- an accessible glossary – uses diagrams, examples, pronunciation guides and more to bridge the gap between key terms and definitions
- Frayer models – a way for learners to organise their understanding of a new piece of vocabulary by working through four conceptual quadrants with the key terms: explore, break down, explain, consolidate.