Elements compounds and mixtures

Unscrambling definitions is a fun way to test and consolidate learners' understanding of key terms and definitions. Instruct learners to piece together the definitions 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

Answers

These are also supplied on the accompanying slides.

Unscrambled definitions

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.

A **mixture** is two or more substances added together in any proportion; they are not chemically bonded, so they keep their own properties.

A **physical property** describes something about the behaviour of a substance that does not involve a chemical reaction, such as its melting point.

A **chemical property** describes something about how a substance reacts, such as its reactivity with water.

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.

Connection completion answers

Learners should choose row A as the correct connections for the sentences. If a learner chooses B or D, then they are demonstrating that they are not confident of the difference between a compound and a mixture.

A	Since	However	Additionally

Completed sentences:

Since both atoms of a hydrogen molecule are the same type of atom, it is called an element. **However**, when an atom of hydrogen and an atom of chlorine are chemically joined together, this is called a compound. **Additionally**, if hydrogen molecules and chlorine molecules are added together in any proportion, this is called a mixture.

Other key terms support resources

This resource is part of the key terms support for the **elements compounds and mixtures** topic. Find the following accompanying resources at rsc.li/42AcGmK:

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