Atomic model

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

Answers

Also supplied on the accompanying PowerPoint slides.

Unscrambled definitions answers

Atomic number is the number of protons in the nucleus of an atom of a particular element.

Mass number is the total number of protons and neutrons in the nucleus of an atom of a particular element.

Relative atomic mass is the average mass of an atom of an element taking into account the naturally occurring percentages of its isotopes.

Relative mass is the mass of a particle relative to $^1/_{12}$ of the mass of a ^{12}C atom.

Isotopes are atoms with the same number of protons but different numbers of neutrons.

Relative charge is the positive (+) or negative (-) charge of a particle compared to the charge of a single proton.

Connection completion answers

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

D	Therefore	by	since

Completed sentences:

Mass number tells us the total number of protons and neutrons in the nucleus of an atom. **Therefore**, the number of neutrons can be calculated **by** subtracting the atomic number from the mass number, **since** atomic number tells us the number of protons in the nucleus of an atom.

Other key terms support resources

This resource is part of the key terms support for the topic of **atomic model**. Find the following accompanying resources at rsc.li/3XTkheu:

- 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.