## Unscrambling definitions – teachers notes

***Education in Chemistry***July 2019[rsc.li/30H4UGW](https://rsc.li/30H4UGW)

Improve chemical understanding with these two vocabulary-based activities

*Unscrambling definitions* is much harder than it looks. Students need to pick a ‘piece’ from each column to make coherent definitions for all of the terms. This is great for starting a revision lesson on a particular topic, ensuring that before students dive into the questions, they have a good understanding of the terms they will be facing.

Unscramble the following sentences (phrases can be used once, more than once, or not at all):

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **A** | **B** | **C** | **D** | **E** |
| An acidA baseAn alkaliA saltNeutralisationA protonThe pH scale | is a substanceis is the chemical reactionis an ionic compoundis a measure | that producesof the concentration of in whichthat neutralisesbetween an a | H+ ionsacidsCO32- ionsthe H+ ions in an acidacid andhydrogen OH- ions | a baseto form a salt and waterion when dissolved in waterin a solution have been replaced by metal ions |

*Connective completion* asks students to use logical connectives they are less familiar with to complete an explanation. These are excellent plenary activities as students need to be familiar with the logical argument made in the lesson to be successful. As they become more confident using a range of connectives themselves, their accuracy in interpreting exam questions develops too.

Potassium is more reactive than sodium \_\_\_\_\_\_\_\_\_\_\_\_ a potassium atom is larger, \_\_\_\_\_\_\_\_\_\_ the force of attraction between the nucleus and the outer shell is weaker \_\_\_\_\_\_\_\_\_\_ the greater nuclear charge in a potassium atom.

Choose the correct combination of words from the table below:

| A | hence | so | despite |
| --- | --- | --- | --- |
| B | since | thus | in spite of |
| C | nevertheless | consequently | in spite of |
| D | because | consequently | in accordance with |

### Answers

*Unscrambling definitions:*

An acid is a substance that produces H+ ions when dissolved in water.

A base is a substance that neutralises acids to form a salt and water.

An alkali is a substance that produces OH- ions when dissolved in water.

A salt is an ionic compound in which the H+ ions in an acid have been replaced by metal ions.

Neutralisation is the chemical reaction between an acid and a base.

A proton is a hydrogen ion.

The pH scale is a measure of the concentration of H+ ions in a solution.

*Connective completion:*

B: Potassium is more reactive than sodium **since** a potassium atom is larger, **thus** the force of attraction between the nucleus and the outer shell is weaker **in spite of** the greater nuclear charge in a potassium atom.