## Unscrambling definitions – teachers notes

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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 acid  A base  An alkali  A salt  Neutralisation  A proton  The pH scale | is a substance  is  is the chemical reaction  is an ionic compound  is a measure | that produces  of the concentration of  in which  that neutralises  between an  a | H+ ions  acids  CO32- ions  the H+ ions in an acid  acid and  hydrogen  OH- ions | a base  to form a salt and water  ion  when dissolved in water  in a solution  have been replaced by metal ions |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A salt is an ionic compound in which the H+ ions in an acid have been replaced by metal ions.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.