

## **Ionic bonding**

1) Define an ionic bond.

2) An element on the far left and an element on the far right of the periodic table form a chemical bond. Determine the type of bond they would form and explain your reasoning.

3) Describe the lattice structure of NaCl.

**Answers:**

- 1) An ionic bond is the electrostatic attraction between oppositely charged ions.
- 2) An element on the far left is likely to be a metal, an element on the far right is likely to be a non-metal.

Metals and non-metals on opposite ends of the periodic table have a big difference in electronegativity (1.8 units or greater), therefore they form an ionic bond.

- 3) The sodium and chloride ions are held together by their opposite charges (+ and -).

Each sodium ion is surrounded by six chloride ions.

Each chloride ion is surrounded by six sodium ions.