

Name \_\_\_\_\_

## Ions and Ion Formation

Atoms can gain or lose electrons to become charged particles called ions. When an atom gains electrons, it becomes negatively charged (anion), and when it loses electrons, it becomes positively charged (cation).

For example, when a sodium atom (Na) loses one electron, it becomes a positively charged sodium ion (Na<sup>+</sup>). On the other hand, when a chlorine atom (Cl) gains one electron, it becomes a negatively charged chloride ion (Cl<sup>-</sup>).

Ions play a significant role in chemical reactions and the formation of compounds. Oppositely charged ions are attracted to each other, forming ionic bonds.

## Questions

1. What are ions, and how do they differ from neutral atoms?
2. When an atom gains electrons, what type of ion does it become, and what is its charge?
3. Explain the charge and name of an atom that loses two electrons.
4. How do ions influence the formation of compounds?
5. True or False: Ions have the same number of electrons as neutral atoms of the same element.

