

U.8.3 Electric current

A. Basic idea

Each atom has a nucleus 原子核 surrounded by electrons 電子

| **nucleus = positive charge (+) 正極**

| **electrons = negatives charge (-) 負極**

Free electrons

In metals, some of electrons

- escape from the atoms
- move freely within the metals

Electric current

electric current

1. a metal is connected to an electric cell → form a closed circuit
2. free electrons are driven flow in a direction from negative pole 負電荷 (-)
→ (towards 向) the positive pole 正電荷 (+)

P.S. Flow of free electrons : negative pole → positive pole

Conventional current 傳統電流

Electric current

a flow of positive charges 正極 from the positive pole (+) → negative pole (-)

B. Measuring

Ammeter

| to measure the size of an electric current

Unit

Ampere (A)

C. Heating effect

| When an electric current flows through a conductor, some electric energy is converted into thermal energy.