

# 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**

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## 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 (-)

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## B. Measuring

## Ammeter

| to measure the size of an electric current

Unit

Ampere (A)

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## C. Heating effect

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