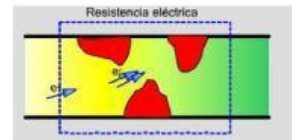
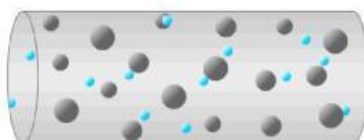
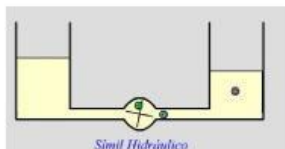


Electric quantities: Voltage, current and resistance

🔊 Voltage **is** the _____ between the _____ at two points in a circuit. The **charge** always _____ from the point where the **energy is** _____ to the _____ **point**. If there is no **voltage** there is no **current**.

🔊 Voltage **is represented** by the letter _____ and in the International System of Units (____) it is **measured** in _____ (V). This is also **called** _____.



Voltage /vɒltɪtʃ/ (V, **volts**)

Current /kərənt/ (I, **amps** /ɛmps/)

Resistance /rɪzɪstəns/ (R, **ohms**)

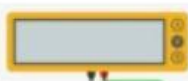
🔊 The **current is** the **number of** _____ that _____ through **a specific point in 1** _____. It **is represented** by the letter _____ and in **SI units is** _____ in **amperes** or **amps** (____).

🔊 The **resistance is** the _____ of the components of a **circuit to the flow** of the _____. It **is represented** by the letter _____ and in **SI units is measured** in **ohms** (Ω).

Measuring instruments

🔊 A **voltmeter** _____ the **electrical** _____. To **measure** the voltage of a **component** you **connect** the **voltmeter** in _____. Normally a **voltmeter** has several **scales** (*escalas*) - it can **measure** _____ or **millivolts**.

🔊 An **ammeter measures** the _____. To **measure** the **current** of a **receptor** you **connect** the _____ in _____. It can **measure** _____ or **milliamperes**.



Voltmeter /vɒltmɪtə/

Ammeter /æmɪtə/

Multimeter /mʌltɪmɪtə/

🔊 A **multimeter** (or **polymeter**) **measures** different **electric** _____ (voltage, current, _____) on different **scales**. You **can choose** the best **scale** for different **quantities** using the **rotating** /raʊteɪtɪŋ/ **dial** /daɪəl/.

Ohm's Law

🔊 The _____ **relationship** between _____, _____ and **resistance is** _____ **Ohm's Law**, and **is expressed** mathematically as: **$V = I \cdot R$**

🔊 This **shows** that **current** and **voltage are** directly _____ for any given _____.



Rational electricity use

🔊 Electrical energy _____ **has** a **serious impact** on the _____. **There are** three ways we **can help** to _____ this **impact**:

- 🔊 - **improve** the energy _____ of electrical **devices**,
- **reduce** _____ and
- **use** _____ **energy sources**