Activities

1. What **is** **voltage** in an **electric circuit**?
   a. The **number of electrons** passing through a point in 1 second
   b. The **resistance** of a circuit
   c. The **difference in electrical energy** between two points
   d. The **opposition** of components to **electric flow**

2. How **is** **current** **represented** and **measured** in the **I**nternational **S**ystem of Units?
   a. V, volts
   b. I, amps
   c. R, ohms
   d. A, amperes

3. What does a **voltmeter** **measure** in an **electric circuit**?
   a. Resistance
   b. Current
   c. Voltage
   d. Energy efficiency

4. Which **law** **describes** the **proportional relationship** between **voltage, current**, and **resistance**?
   a. Newton's Law
   b. Ohm's Law
   c. Boyle's Law
   d. Kepler's Law

5. How **can** we **reduce** the **impact** of **electrical energy consumption** on the **environment**?
   a. Increase energy consumption
   b. Use renewable energy sources
   c. Waste electricity
   d. Improve energy efficiency

6 **Choose** the correct option.

We **can use**	a) a **pipe** (tubería) or a **container** (contenedor, recipiente)...	to **create** the **voltage** that **maintains** the **current**.
	b) a **battery** /bateri/ or a **generator** /yenereita/...	
	c) an **electron** /elektron/ or a **charge** /charch/ ...	

7 **Complete** the **sentences**.	a) **Voltage** **is measured** in _____ b) **Current** **is measured** in _____ c) **Resistance** **is measured** in _____ d) **Power** **is measured** in _____ e) **Electrical energy** **is measured** in _____

8 What **is** the **difference between** an **analogue** and a **digital measuring device**? **Complete** the sentences and **listen to** the conversation to check your answers.

a) An **analogue** **measuring** **device** **shows** us the **measurement** with _____.

b) A **digital** **measuring** **device** **shows** us the **measurement** with _____.

9 **Look** at the **circuit** with a **bulb** /bolb/, a **pencil lead** (/led/ mina) and a 4.5 V **lamp battery** (it can be 1.5 V or 3 V). **Answer** the questions.

a) How does the **illumination** of the **bulb** **vary** /veri/ if you **reduce** the **battery voltage** to **3 V**?

b) How does the **illumination** of the **bulb** **vary** /veri/ if you **move** the **yellow clip** to the **far end** of the **pencil lead** and **keep** the **voltage constant**?

c) Can you **find** a **relationship** between **V, I** and **R**?

10 What **current** **flows** through a **bulb** /bolb/ which **has** a **resistance** of 9 in a **circuit** with a **voltage** of 4.5 V? **Draw** the circuit.

11 **Find** the **missing** **quantity**. **Write out** *(escribe)* the **calculations** in your **exercise book**.

a) **V=9V**; **R = 4.5 Ω** ; **I=_____**. b) **R=4 Ω**; **I= 3 A**; **V= _____**. c) **V= 1.5 V**; **I = 0.5 A**; **R=_____**.

What **is** **Voltage** /voltich/ and how **is** it **represented** in the ***International System*** of **Units**?
How **is** **Current** /karent/ **defined** and what **are** the **units** **used to measure** /meshad/ it in the **SI system**?
Explain the **concept** of **Resistance** /rizistens/ and how it **is quantified** in terms of **units**.
What **is** **Ohm's Law** and how **is** it **mathematically** **expressed**?
What **are** the three **ways** **mentioned** in the text to **reduce** the **impact** of **electrical energy consumption** on the **environment**?