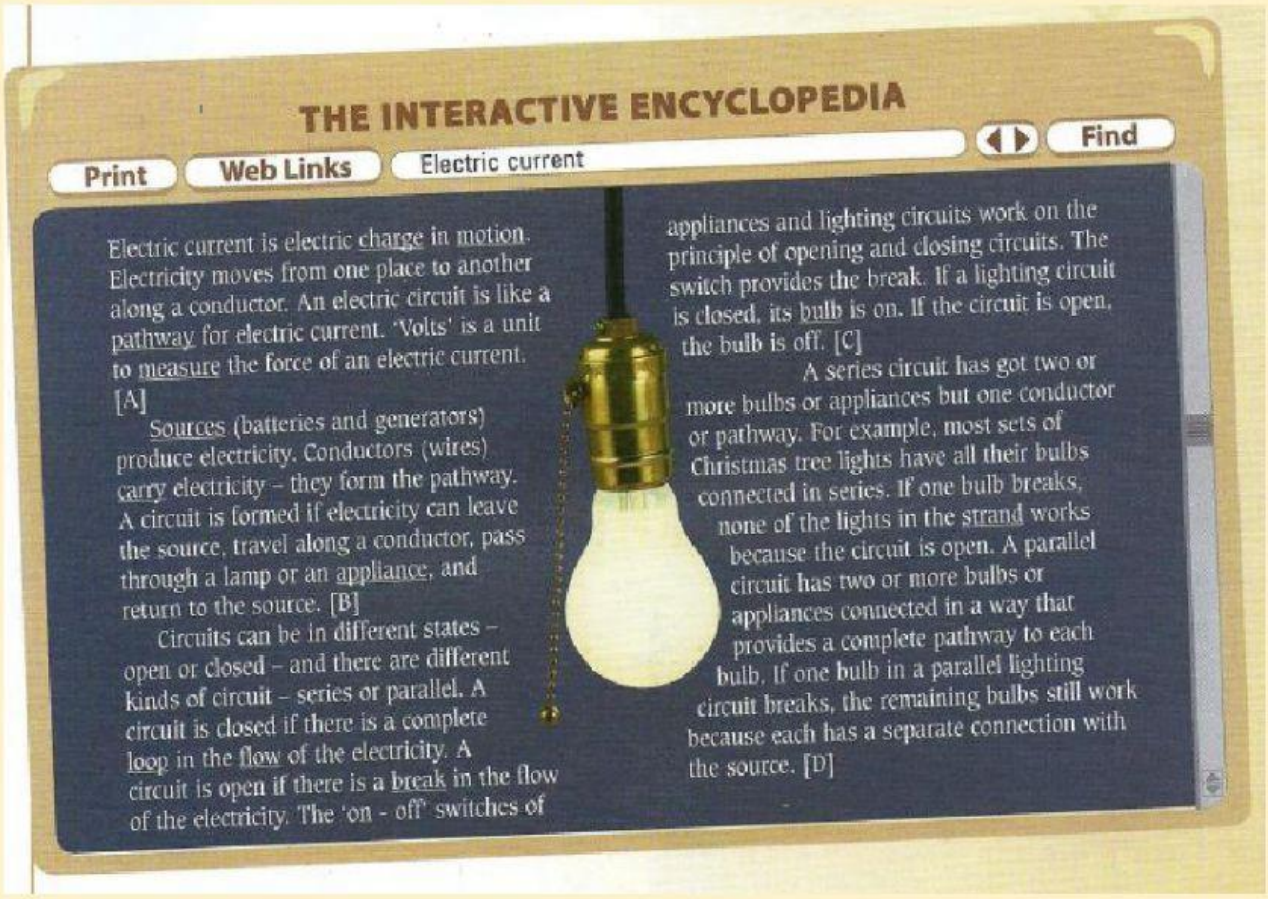
Electric Circuits: Types

1. **Read** this interactive encyclopedia entry about electric current.



THE INTERACTIVE ENCYCLOPEDIA

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Electric current is electric charge in motion. Electricity moves from one place to another along a conductor. An electric circuit is like a pathway for electric current. 'Volts' is a unit to measure the force of an electric current. [A]

Sources (batteries and generators) produce electricity. Conductors (wires) carry electricity – they form the pathway. A circuit is formed if electricity can leave the source, travel along a conductor, pass through a lamp or an appliance, and return to the source. [B]

Circuits can be in different states – open or closed – and there are different kinds of circuit – series or parallel. A circuit is closed if there is a complete loop in the flow of the electricity. A circuit is open if there is a break in the flow of the electricity. The 'on - off' switches of appliances and lighting circuits work on the principle of opening and closing circuits. The switch provides the break. If a lighting circuit is closed, its bulb is on. If the circuit is open, the bulb is off. [C]

A series circuit has got two or more bulbs or appliances but one conductor or pathway. For example, most sets of Christmas tree lights have all their bulbs connected in series. If one bulb breaks, none of the lights in the strand works because the circuit is open. A parallel circuit has two or more bulbs or appliances connected in a way that provides a complete pathway to each bulb. If one bulb in a parallel lighting circuit breaks, the remaining bulbs still work because each has a separate connection with the source. [D]

2. **Write** in the boxes the letter of the corresponding paragraph in exercise 1.

- **a** Examples of open and closed circuits. ☐
- **b** Differences between parallel and series circuits. ☐
- **c** Definition of electric current. ☐
- **d** Elements of an electric circuit. ☐
- **e** Definition of a circuit. ☐

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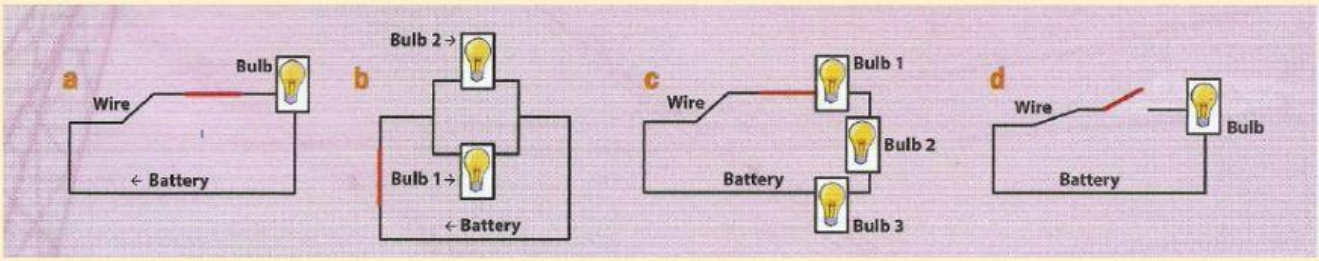
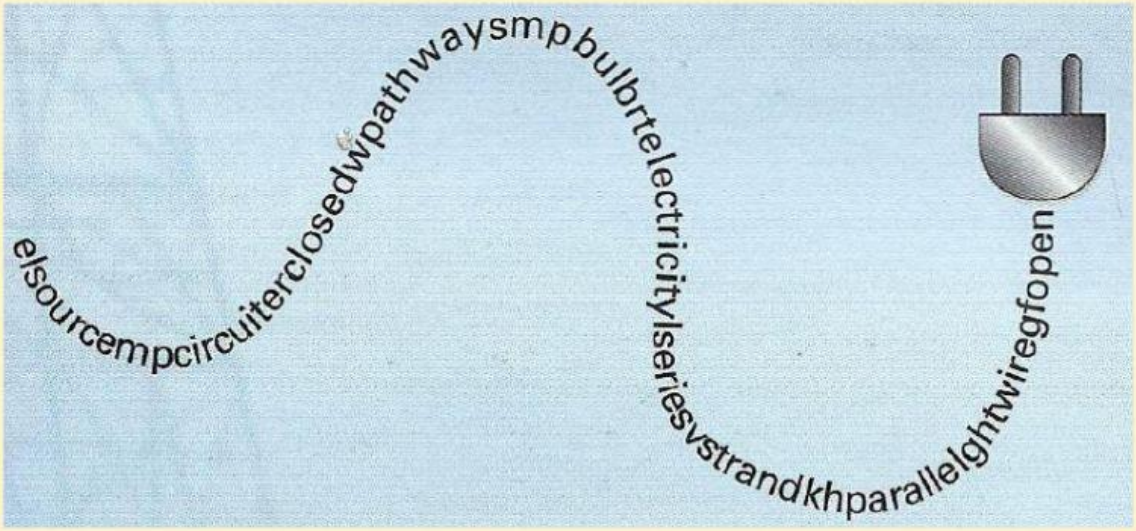
3. ***Label*** *the diagrams of the types and states of circuits described in the text.*



4. ***Find*** *in the cable eleven words related to electric circuits and* *write them down in your folders.*



5. ***Write*** *the words underlined from the text in 1 next to their Spanish translation. Then,* ***identify*** *their grammatical categories - noun or verb.*

English	Translation	Category
	lamparita, bombita	
	carga	
	flujo	
	medir	
	lazo	
	vía de circulación	
	interrupción, corte	
	fuentes	
	movimiento	
	transportan	
	artefacto	
	rama, hilera	

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6. **Complete** the sentences to form a summary of the text in 1.

Electric current is _____.
Batteries and generators are _____
_____.
Wires are _____.
There are different kinds of _____
_____.

If a lighting circuit is open, its bulb _____.
If a lighting circuit is closed, _____.
If a lighting circuit has got two bulbs and one pathway, it is
_____.
If a lighting circuit has got two bulbs and two pathways,
_____.

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