

7. Worksheet: Model of electric circuit (why is it more or less resistive)

In this activity you are going to analyse how a simple direct electric circuit works and what happens when we connect several resistors into the circuit. You are going to work with your teacher and your peers in order to find out the answers to the following questions. Write down the final explanations.

1. When is the object electric?
2. What is an electric power source?
3. How does electric current flow through a conductor?
4. How does electric current flow through a resistor?



5. Why is the voltage on the current-carrying resistor?

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6. Model of the electric circuit.

Try to explain similarities between the stiff ring with a drive and brake and an electric circuit.

Stiff ring

Electric circuit

7. Simulation of current and voltage in a circuit.

Build up your own simple electric circuit using the interactive applet.

Explain the surface charges distribution in your circuit.

8. When do electrons pull together (resistors in series)?

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- Build up your own electric circuit with resistors in series using interactive applet.
- Explain surface charges distribution in your circuit.

9. How is the current divided in a junction?

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- Build up your own electric circuit with resistors in parallel using interactive applet.
- Explain surface charges distribution in your circuit.

10. What is the resistance of two resistors connected in parallel?

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