

Exercise 1: "Electricity"

1. The French scientist Charles François de Cisternay du Fay was the first to make clear the two different types of electric charge: positive and negative.
2. Benjamin Franklin's famous experiment with a kite proved that atmospheric electricity, which causes and thunder, is identical to the electrostatic charge on the Leiden jar.
3. Italian physicists Luigi Galvani and Alessandro Volta conducted the first important experiments with electric currents.
4. Priestley also demonstrated that the electric charge is evenly distributed over the surface of a hollow metal sphere and that there is no charge or electric field inside such sphere.
5. Faraday, who made a great contribution to the study of electricity in the early 19th century, was also responsible for the theory of electric lines of force.
6. The Dutch physicist Hendrik Antoinine Lorentz first put forward the electronic theory which is the basis of modern electrical theory in 1892.
7. Around 1840, James Prescott Joule and German scientist Hermann Ludwig Ferdinand von Helmholtz demonstrated that electrical circuits obey the law of conservation of energy and that electricity is a form of energy.
8. The widespread use of electricity as an energy source is largely due to the work of such innovators American Thomas Alva Edison, Nikola Tesla and Charles Proteus Steinmetz.

Exercise 2:

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1. There are two types of electric charges: positive and negative.
2. His experiments proved that atmospheric electricity which causes the phenomenon of lightning and thunder is identical to the electrostatic charge of the "Leiden jar".
3. The force between electric charges varies inversely proportional to the square of the distance between the charges.
4. This scientist made a great contribution to the development of the doctrine of electricity.
5. Electricity is a form of energy.
6. Electrical circuits obey the laws of conservation of energy.
7. Properties of electromagnetic waves.
8. The widespread use of electricity as an energy source occurred at the beginning of the last century.
9. The flow of electrons from a point with a lower potential to a point with a higher potential.
10. The resistance in the network limits the amount of current.
11. When an electric current passes through the wire, the temperature of the wire rises.
12. The compass needle located next to the wire will deviate in the direction perpendicular to the wire.
13. Ohm's law can be expressed as the following algebraic equation.