

Name:

Electricity and Magnetism

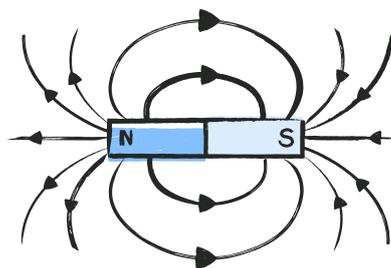
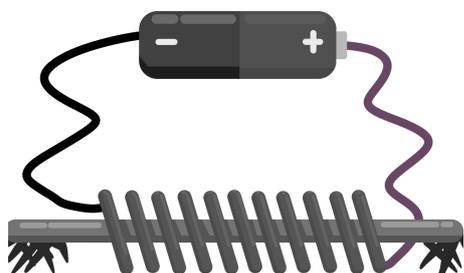
Electricity and magnetism are two important forces that help us in our daily lives. They are connected because moving electricity can create a magnetic field, and magnets can produce electricity. Together, they form the basis of electromagnetism, which powers many machines and devices.

Electricity is the flow of tiny particles called electrons through a conductor, such as a wire. Electricity can be used to power lights, computers, appliances, and machines. There are two main types of electricity: static electricity and current electricity. Static electricity occurs when electrical charges build up on a surface, like when you rub a balloon on your hair and it sticks. Current electricity is the continuous flow of electrons through a conductor, which we use in our homes.

Magnetism is a force that can attract or repel certain metals, such as iron, nickel, and cobalt. Magnets have two poles, a north and a south pole. Opposite poles attract each other, while similar poles repel each other. Magnets are used in compasses, motors, speakers, and even in some medical machines.

Electricity and magnetism often work together. For example, in an electric motor, electricity flows through wires and creates a magnetic field. This field makes the motor spin, which helps machines work. Electromagnets are magnets that are powered by electricity, and they are used in cranes, doorbells, and many other devices.

Understanding electricity and magnetism is important because it helps us use energy safely, create new technology, and understand how many devices around us work. By learning about these forces, scientists and engineers can invent machines that make life easier and more efficient.



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A. Multiple Choice (Choose the correct answer):

What is electricity?

- a) A flow of electrons
- b) A type of magnet
- c) A form of heat
- d) A light source

Which type of electricity occurs when charges build up on a surface?

- a) Current electricity
- b) Static electricity
- c) Magnetic electricity
- d) Electromagnetism

What happens when two opposite poles of a magnet are near each other?

- a) They repel
- b) They attract
- c) They disappear
- d) Nothing happens

What is an electromagnet?

- a) A magnet that does not move
- b) A magnet powered by electricity
- c) A permanent magnet
- d) A metal that attracts electricity

B. True or False:

5. Electricity can flow through conductors like wires. _____

6. Similar poles of a magnet attract each other. _____

7. Electric motors use both electricity and magnetism. _____

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8. Give one example of static electricity in daily life.

9. Name three metals that are attracted to magnets.

10. How do electromagnets work?

11. Why is it important to understand electricity and magnetism?

12. Give two examples of devices that use magnets and electricity together.
