GRADE 4 READING - SCIENCE

The Electrifying World of Electricity

Welcome to the electrifying world of electricity! Have you ever wondered how electricity powers our everyday lives? In this passage, we will explore the fascinating concepts of energy, circuits, and magnetic fields, and discover the importance of electricity in our modern world.

Energy is all around us. It is the ability to do work or cause a change. Electricity is a form of energy that powers our homes, schools, and cities. It flows through wires and provides us with light, heat, and the energy needed to run appliances.

To understand how electricity works, we need to explore circuits. A circuit is a path that electricity flows through. It consists of a power source, such as a battery or an electrical outlet, and wires that connect various components. When a circuit is complete, electricity can flow, but if the circuit is broken, the flow of electricity stops.

Electricity can also create magnetic fields. A magnetic field is an invisible force surrounding a magnet or a wire carrying an electric current. It is the reason magnets attract or repel certain materials. The relationship between electricity and magnetism is a fascinating connection that has led to many technological advancements.

1. What is electricity?
    A) A type of magnet
    B) A form of energy
    C) A type of circuit
    D) A type of wire

2. What is a circuit?
    A) A path that electricity flows through
    B) A type of magnet
    C) A power source
    D) A type of wire

3. What happens when a circuit is broken?
    A) Electricity flows faster
    B) The flow of electricity stops
    C) The circuit becomes stronger
    D) The wires become hotter

4. What is the meaning of the word "advancements" as used in the passage?
    A) Discoveries or improvements
    B) Obstacles or challenges
    C) Complications or difficulties
    D) Solutions or resolutions

5. What is a magnetic field?
    A) An invisible force surrounding a magnet
    B) A type of wire
    C) A type of circuit
    D) A power source

6. What is the relationship between electricity and magnetism?
    A) They are unrelated phenomena
    B) Electricity creates heat, not magnetism
    C) Electricity can create magnetic fields
    D) Magnetic fields can create electricity

7. Why is electricity important in our modern world?
    A) To create more circuits
    B) To conserve energy
    C) To power our homes, schools, and cities
    D) To eliminate magnetic fields

8. What does the word "components" mean in the passage?
    A) The flow of electricity
    B) The wires that carry electricity
    C) The parts that make up a circuit
    D) The path that electricity follows

9. What is the purpose of this passage?
    A) To explain the importance of recycling
    B) To describe different types of animals
    C) To explore the concepts of energy, circuits, and magnetic fields
    D) To discuss the history of electricity in ancient civilizations

Answers:

1. B) A form of energy
2. A) A path that electricity flows through
3. B) The flow of electricity stops
4. A) Discoveries or improvements
5. A) An invisible force surrounding a magnet
6. C) Electricity can create magnetic fields
7. C) To power our homes, schools, and cities
8. C) The parts that make up a circuit
9. C) To explore the concepts of energy, circuits, and magnetic fields

Explanations:

1. Electricity is a form of energy that powers our everyday lives.
2. A circuit is a path that allows electricity to flow from a power source to various components.
3. When a circuit is broken, the flow of electricity stops because there is a gap in the path.
4. "Advancements" means progress, discoveries, or improvements made in a particular field, in this case, advancements in technology related to the relationship between electricity and magnetism.
5. A magnetic field is an invisible force that surrounds a magnet or a wire carrying an electric current.
6. When electricity flows through a wire, it creates a magnetic field around the wire.
7. Electricity is crucial in our modern world as it powers our infrastructure, providing us with light, heat, and the energy needed for various appliances.
8. "Components" refer to the different parts that make up a circuit, such as wires, switches, and bulbs.
9. The purpose of this passage is to introduce and explore the concepts of energy, circuits, and magnetic fields, and their importance in the context of electricity.