

# Electrical Circuits

## CONTENTS

### Think About . . .



What Is Electric Charge? . . . . .	2
What Is Electric Current? . . . . .	3
What Is a Circuit? . . . . .	4
What Are Series Circuits? . . . . .	5
What Are Parallel Circuits? . . . . .	6
What Are Circuit Diagrams? . . . . .	7
How Do Magnets Work? . . . . .	8
What Is an Electromagnet? . . . . .	10
What Is a Generator? . . . . .	11



### People in Science

Thomas Alva Edison . . . . .	12
Alexander Graham Bell . . . . .	12
Lewis Howard Latimer . . . . .	13
Electricians . . . . .	13

### Did You Know?

About Water Power . . . . .	14
About Using Energy at Home . . . . .	15

<b>Glossary</b> . . . . .	16
---------------------------	----



## Glossary

**atom** building block of matter

**attract** to pull toward each other

**battery** source of electrical energy

**battery terminal** place on a battery where electric charge enters or leaves the battery

**circuit** path along which electric current flows

**closed circuit** complete path along which an electric current flows

**conductor** material through which electric current passes easily

**discharge** jumping of electric charges between two objects

**electrical energy** one form of energy; energy is needed to do work

**electric charge** property of matter; charge can be positive or negative

**electric current** flow of electric charges

**electricity** electrical energy

**electric motor** device that changes electrical energy into mechanical energy

**electromagnet** temporary magnet made when electric current flows through a wire wrapped around an iron core

**energy** ability to do work

**filament** part of a light bulb that glows when electric current passes through it

**generator** machine that uses an energy source and a magnet to make electricity

**insulator** material through which electric current does not pass easily

**magnet** object that pulls iron and steel objects to it

**magnetic field** space around a magnet where magnetism acts

**magnetic poles** places on a magnet where the magnetism is the strongest

**magnetism** force around a magnet

**open circuit** circuit in which electric current cannot flow because the path is not complete

**parallel circuit** circuit that connects several objects in a way that the current for each object has its own path

**repel** to push away from each other

**resistance** how well electricity flows through a material

**series circuit** circuit that connects several objects one after the other so that the current flows in a single path

**static electricity** electricity at rest, that is produced by rubbing two objects together

**switch** device used to start and stop the flow of electric current in a circuit

**volt** unit used to measure voltage

**voltage** push that moves electric charges from one place to another

**watt** unit used to measure the energy used by an appliance in a certain amount of time