Table of Contents

1. Introduction

Welcome to the world of electricity and simple circuits! In this workbook, we will explore the basics of electricity and how it is used in our daily lives. We will learn about conductors and insulators, simple circuits, and how to build our own simple circuits. This workbook is designed for 8-year-old students and is intended to be a fun and interactive way to learn about electricity.

Introduction Activity (10 minutes)

Draw a picture of something that uses electricity in your home.

2. What is Electricity?

Electricity is a form of energy that is all around us. It is what powers our homes, schools, and devices. But what is electricity, exactly? Let's find out!

What is Electricity? (15 minutes)

Write a short paragraph explaining what you think electricity is.

3. Conductors and Insulators

Conductors are materials that allow electricity to flow through them. Insulators are materials that do not allow electricity to flow through them. Let's learn more about conductors and insulators!

Conductors and Insulators (20 minutes)

Sort the following materials into conductors and insulators: copper wire, plastic, wood, metal spoon, glass.

Material	Conductor or Insulator
Copper Wire	
Plastic	
Wood	
Metal Spoon	
Glass	

4. Simple Circuits

A simple circuit is a path through which electricity can flow. It consists of a power source, a conductor, and a device. Let's learn more about simple circuits!

Simple Circuits (25 minutes)

Draw a simple circuit using a battery, wire, and a small light bulb.

5. Circuit Components

There are several components that make up a simple circuit. These include the power source, conductor, and device. Let's learn more about each of these components!

Circuit Components (20 minutes)

Identify the different components of a simple circuit.

Component	Description
Power Source	
Conductor	
Device	

6. Building a Simple Circuit

Now that we have learned about the components of a simple circuit, let's build one! We will use a battery, wire, and a small light bulb.

Building a Simple Circuit (30 minutes)

Build a simple circuit using the materials provided.

7. Safety Precautions

When working with electricity, it is important to follow safety precautions. Let's learn more about how to stay safe when working with electricity!

Safety Precautions (15 minutes)

Read and discuss the safety precautions for working with electricity.

8. Activities and Questions

Here are some additional activities and questions to help you learn more about electricity and simple circuits:

Design a Simple Circuit (25 minutes)

Design and build a simple circuit that turns on a fan.

Research and Write (20 minutes)

Research and write about a famous inventor who worked with electricity.

9. Conclusion

Congratulations! You have completed the Introduction to Electricity and Simple Circuits workbook. We hope that you had fun learning about electricity and simple circuits. Remember to always follow safety precautions when working with electricity!

Individual Reflection:

1. What was the most surprising thing you learned about electricity and simple circuits?
2. How will this learning change your actions in the future?
3. What questions do you still have about electricity and simple circuits?

10. Glossary

Here are some key terms that you should know:

Glossary

- Conductor: a material that allows electricity to flow through it
- Insulator: a material that does not allow electricity to flow through it
- Simple circuit: a path through which electricity can flow
- Power source: the source of electricity in a circuit
- Device: the component of a circuit that uses electricity to perform a function