

Name: _____ Teacher: _____ School: _____

Grade 5: Lesson 6

Students will use the text *Electrifying Personalities* to understand the history behind and the basic components of electricity with a focus on how the use of electricity has changed lives since its discovery.

Electrifying Personalities: Introduction

If it's dark and you want to read a book, you switch on a light. If you want to listen to music, you turn on the radio. If you want to talk to a friend, you pick up the telephone and call.

If you were living before the late 1800s, however, you couldn't do any of those things! The lightbulb, the radio, and the telephone had not yet been invented. Those inventions – and many more – weren't possible until scientists understood how to use electricity.

In simple terms, electricity is a form of energy that exists in nature. Although electricity is all around us, people didn't know how to use it as a source of energy until the late 1800s.

In the 1800s, scientists began to learn more about electricity. They learned that electricity is related to tiny particles called electrons. They discovered that in order to use electricity, electrons must flow through a closed loop called a circuit. They also discovered that magnetism is related to electricity and can be used to make electrons flow through a circuit. These early discoveries paved the way for the beginning of the Electrical Age.

Inventors began to apply some of the new discoveries to their own work. Alexander Graham Bell knew that scientists had succeeded in sending messages electrically over wires as a series of dots and dashes. But the sound of the human voice had not yet been transmitted, or sent using electricity. Bell was determined to be the first to do it – and he was. He invented the telephone, connecting people as never before.

Thomas Alva Edison, who is credited with the invention of many electrical devices, is probably best known for the lightbulb. It is hard to imagine the world without the electric light.

Around the turn of the 20th century, Guglielmo (gool-YAY-moh) Marconi figured out how to send electric signals without using wires. This remarkable discovery paved the way for the invention of the radio.

Much has changed since the invention of these devices. Scientists and inventors have built upon the early ideas and created thousands of devices that define modern life.

Although the original lightbulb, the first wireless sound transmission, and the early telephone seem "simple" and old-fashioned, they have dramatically changed our world. Just as early electrical pioneers built upon discoveries that came before them, the creators of today's cutting-edge electronic technology build upon the discoveries of Bell, Edison, and Marconi.

Student Independent Practice:

Imagine that you are living in the early 1900s and have an interview to work for an inventor. Bell, Edison, and Marconi have already begun their important work with electricity and you have been following their early discoveries, especially what makes up a basic electric circuit.

To prepare for your interview, you create a speech to share with your potential boss in hopes that it convinces him that you know your stuff when it comes to electricity, particularly how it has, and can continue to, change people's lives. Of course, you'll have to mention Bell, Edison, and Marconi to impress him! But don't forget, you don't want to leave without the chance to wow him with your knowledge of the electric circuit! Write your amazing, and convincing speech below!