

Name: _____ Teacher: _____ School: _____

Grade 5: Lesson 10 Students will learn about the history of electricity with a focus on the contributions of Guglielmo Marconi, specifically, his invention of a wireless communication system.

Electrifying Personalities: Guglielmo Marconi (1874-1937)

TEXT CONTINUED FROM LESSON 9

Marconi eventually figured out how to send an actual signal—Morse code—across the attic without wires. Soon he was sending messages from the attic to the patio, then half a mile away, then a mile away. He had started a revolution in communication.

To develop his wireless transmission system, Marconi needed more money. His mother's nephew, who was an engineer living in England, offered to help. He knew people at the British Post Office who were interested in Marconi's work. The young inventor went to England in 1896 and began demonstrating his wireless system. It could now send signals for miles. People were amazed. Suddenly, everyone was talking Guglielmo Marconi and his accomplishments.

Marconi continued to improve his wireless system. He expanded service across the ocean, and his company grew. In 1905, he got married. Around this time, he began having money problems. His wireless system had still not caught on completely.

Then one night in 1909, Marconi got a lucky break as a result of a disaster at sea. One ship had hit another off the coast of the United States. The wireless system on the heavily damaged ship survived well enough for the operator to signal for help. Seventeen hundred people were saved. Marconi was a hero!

In 1909, Marconi shared the Nobel Prize for Physics. Winning the prize was an impressive feat for someone without a university degree.

Marconi's next goal was to transmit human voices instead of Morse code over the airwaves. At the time, this was called "wireless telephony"—telephone without wires. Marconi and his staff weren't the only ones trying to figure out how to do this. There was a lot of competition. Marconi did not turn out to be the first to broadcast the human voice. However, he later became the first to get two ships at sea to exchange voice messages.

The start of World War I in 1914 spurred a great deal of development in technology. By the war's end in 1918, almost everything was in place for the first public wireless telephony broadcast—what we call radio today.

Radio became very popular after World War I. In 1919, Woodrow Wilson became the first U.S. president to make a public radio broadcast. In 1920, the first radio stations began broadcasting. By 1925, radio was a major source of news and entertainment in U.S. homes.

Marconi was not really involved in the radio industry. His contribution had been discovering how to send sound without wires, and then creating a worldwide wireless network. Yet the work he did with wireless technology made the radio industry possible.

In 1919, Marconi bought a yacht and made it his floating laboratory. He continued to experiment with his lifelong interest, electromagnetic waves.

In his later years, Marconi suffered from bad health. He wasn't able to work much of the time. On July 20, 1937, this amazing inventor died at the age of 63. His death was reported around the world over the wireless network.

That network was then briefly shut down—as telephones were for Bell and lights were for Edison—to mark the end of a life that significantly changed communication and the world forever.

Student Independent Practice:



Look at the picture. Now, imagine you are living in 1925 and people have been getting this really cool new gadget for their homes: a radio!

Your family lives on the outskirts of town and it's taken quite a while for all of those telegraphic cables to come down as wireless communication takes over. You've been following this invention from the start and have even clipped out every newspaper article about the great inventor, Guglielmo Marconi; he's the one that developed the *science* behind the wireless communication that has made it possible to listen to the radio in homes and businesses all over the world.

You come home from school one day and see that your family has a radio! You are so excited and ask your parents if you can invite some friends over to listen to it with you. Your parents tell you that your friends are welcome to come a little later this week. You decide that you're going to impress them with everything you know about this invention, including all that led up to it. You head into your room, pull out a notebook, and start making a timeline of everything you can remember about Marconi, his work towards a wireless communication system, and how the world has used what's now called the *radio*.

Use a clean piece of paper to create your timeline. Be sure to reference your organizer for facts and details.