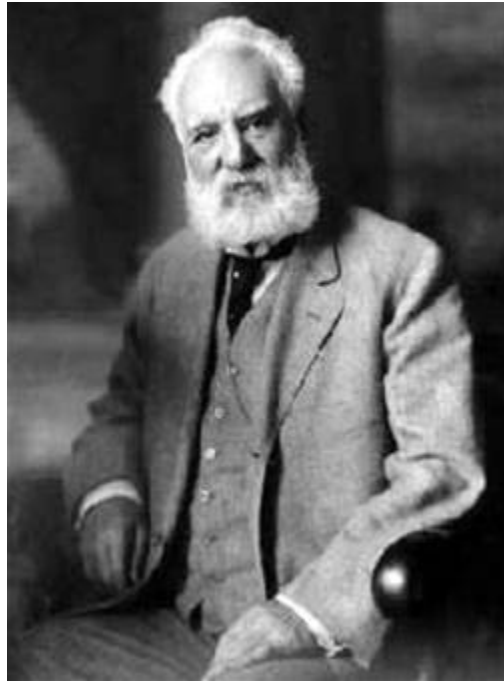


# Alexander Graham Bell

## Noah Remnick



Alexander Graham Bell was in his laboratory, working on a device that would allow people to talk to one another through wires, even when they were not in the same room, or even the same city. Today, we take for granted that we can communicate in real time with people around the corner and around the globe. But in the 1870's, when Bell was experimenting with his new project, such an idea was like a fantasy.

On March 10, 1876, that fantasy came to life. It is unclear what exactly unfolded that day, but one story says that while working on his voice transmitter, Bell accidentally knocked over a bottle of transmitting fluid, burning his skin. Instinctively, he called out to his assistant, Thomas Watson, to come help: "Mr. Watson. Come here. I want to see you."

Watson heard those words and was startled. They had come crackling across the earpiece of what the two inventors had labeled the telephone. The experiment was successful. It was the first telephone call.

Alexander Graham Bell's interest in communications devices traced back to his childhood in Edinburgh, Scotland. He was born on March 3, 1847 to a father who was an expert in speech production and a mother who was a gifted pianist despite being profoundly deaf. The perseverance and success of his mother in the face of such adversity taught young Alexander that problems were surmountable and that he could help people to overcome them.

From a young age, Alexander's curiosity propelled him to find solutions to problems. When he was 12 years old, he came up with his first invention. While playing in a grain mill with a friend, he was frustrated by the lengthy time it took to remove the husk from the wheat grain. He went home, thought about it, and created a gadget that used rotating paddles and nail brushes to strip the husk off the grain. It was the first of dozens of varied devices that Bell would invent.

Bell's curiosity and ingenuity were nurtured by his grandfather, a teacher of speech and elocution. When Bell was 15 years old, he went to live with and care for his grandfather, who

was aging and ailing. The two grew very close, and the grandfather encouraged Alexander to pursue his inventive streak.

In 1870, the Bell family's life changed rather abruptly when they moved to Canada. Bell's two older brothers had died of tuberculosis, and Alexander's health had been failing, too. His parents were convinced that America would be a healthier environment and moved, first to Ontario, Canada, then to Boston. Bell thrived. His health improved. Eventually, he began to tutor deaf students in Boston.

The parents of two of his students were excited by Bell's idea to invent a device that transmitted multiple signals over a single wire. One of the parents learned, however, that another inventor, Elisha Gray, was working on a very similar project at the same time. To encourage Bell and to help rush his work along, the parent hired an electrician by the name of Thomas Watson to be Bell's assistant. He hoped that between Bell's clever ideas and Watson's practical skills, the two men would succeed quickly. However, instead of focusing on a multiple-signal transmission device, Bell and Watson focused much of their time on a device to transmit the human voice over wires. To protect their experiment, Bell and Watson's voice-transmitting device was registered with the United States patent office. Their patent was well timed: Gray attempted to file for his own "telephone" the very same day, but he was turned away because the idea was already protected and owned by Bell and his supporters.

On that March morning in 1876, Bell's dream was achieved when the words "Mr. Watson. Come here. I want to see you" traveled from the room Bell was in to the room Watson was in across telephone wires. The two men took their incredible telephone device on the road, demonstrating its proficiency in city after city. The year after his telephone came to life, Bell married Mabel Hubbard, one of the deaf students whose fathers supported Bell's dream of inventing the telephone.

Bell was challenged dozens of times in lawsuits by people trying to discredit his patent, especially by other inventors who claimed to have invented the telephone before him. He won every time. Bell created the Bell Telephone Company, and in the first 10 years of its existence, telephone ownership in the United States grew to more than 150,000 people. Bell improved the device over the years. For example, he added a microphone that amplified the voice. He also went on to invent and patent many other devices that would have pleased his mother because of the way they helped people to solve problems.

When Bell died on August 2, 1922 in Nova Scotia, Canada, the entire telephone system was shut down for one minute in tribute to the man who revolutionized communications.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. How did Alexander Graham Bell revolutionize communications?

- A He invented the telephone.
- B He invented the hearing aid.
- C He invented the grain mill.
- D He invented the television.

2. What does the author describe in the passage?

- A how Bell's mother overcame her difficulties
- B why Bell chose to tutor deaf students
- C how the telephone was invented
- D the rules of the United States patent system

3. Bell and Watson were not expecting the telephone to work the day that the first telephone call was made. What evidence from the text supports this conclusion?

- A "But in the 1870's, when Bell was experimenting with his new project, such an idea was like a fantasy."
- B "Watson heard those words and was startled. They had come crackling across the earpiece of what the two inventors had labeled the telephone."
- C "Alexander Graham Bell was in his laboratory, working on a device that would allow people to talk to one another across wires, even when they were not in the same room."
- D "It is unclear what exactly unfolded that day, but one story says that while working on his voice transmitter, Bell accidentally knocked over a bottle of transmitting fluid, burning his skin."

4. If Bell had not invented the telephone, what would probably have happened?

- A Someone else would have registered a similar device with the United States patent office.
- B The modern telephone would not have been invented for another hundred years.
- C Mabel Hubbard would have married Watson instead of Bell.
- D The parents of Bell's deaf students would have hired someone to replace Watson as Bell's assistant.

5. What is this passage mostly about?

- A the life of Thomas Watson, Alexander Graham Bell’s assistant
- B the challenges faced by deaf people
- C the invention of the telephone
- D Alexander Graham Bell’s childhood in England

6. Read the following sentence: “The perseverance and success of his mother in the face of such adversity taught young Alexander that problems were **surmountable** and that he could help people to overcome them.”

What does “**surmountable**” mean?

- A able to be solved
- B able to be warmed up
- C able to fly
- D able to survive underwater

7. Choose the answer that best completes the sentence below.

Elisha Gray attempted to file a patent for his telephone design; \_\_\_\_\_, the idea had already been patented.

- A moreover
- B as a result
- C however
- D later on

8. At what age did Alexander Graham Bell come up with his first invention?

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9. Why did Alexander Graham Bell begin inventing?

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10. How did Alexander Graham Bell's childhood and upbringing influence him as an inventor?

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## Teacher Guide &amp; Answers

Passage Reading Level: Lexile 1070

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8. At what age did Alexander Graham Bell come up with his first invention?

**Suggested answer:** Alexander Graham Bell came up with his first invention when he was twelve.

9. Why did Alexander Graham Bell begin inventing?

**Suggested answer:** Alexander Graham Bell began inventing because he was curious. He wanted to find solutions to problems and help people overcome their difficulties.

10. How did Alexander Graham Bell's childhood and upbringing influence him as an inventor?

**Suggested answer:** Alexander Graham Bell was inspired by his mother's perseverance in the face of adversity. He learned that problems can be solved, and was moved to try to help people. Bell's grandfather nurtured his creativity and encouraged him to pursue his inventive streak.