



## **Alexander Graham Bell: Voice of Invention Classroom Guide**

BIO presents the life story of Alexander Graham Bell (1847-1922), discussing his remarkable inventions, family life, and the individuals who influenced his work. Born in Scotland, Bell worked with his father, who had established an education system for the deaf. Bell moved to the U.S. in 1870 and taught at Boston University. Bell's experiments involving the transmission of sound by electricity led to the development of the telephone. Today, Bell is best remembered for helping invent the telephone and for founding the Bell Telephone Company in 1877. Combining archive photographs, drawings, and early film footage, the documentary also includes interviews with historians and descendants.

### **Curriculum Links:**

Recommended for middle school and high schools students, this program can be used in science, technology, history, and language arts classes.

### **Vocabulary:**

**Ask students to define the terms below and make their own list of terms to define as they watch this program.**

- aerodynamics
- congenital
- consonants
- elocution
- harmonics
- hydrofoil
- litigation
- monopoly
- patent
- rudder

### **Discussion Questions:**

1. When and where was Alexander Graham Bell born? What types of communication systems existed at that time?
2. How did Melville Bell influence his son's life? What about Eliza, his mother?
3. Why did the Bells emigrate to Canada when Alexander was a young man? What short term effect did this have on him?
4. When Bell was teaching in Boston, one of his students was a girl named Mabel Hubbard. How would this change his life? If he had never taught Mabel, would he have ever been as successful as he became later? What role did luck or fate play in Bell's career?

5. What was Gardener Hubbard's role in Bell's work? How did Hubbard help Bell? How did he hinder him?
6. Throughout his life, Bell found people to help him on projects who had different types of skills than Bell had himself. Why was this important? What skills did Thomas Watson have that Bell lacked?
7. Who patented Bell's invention of the telephone? Why?
8. How did Bell's experience as his father's assistant help the sales of the new telephone? How are new products marketed today?
9. In his middle age, Bell is described as "competing against his own fame." What does that mean? Do you think it was true? What happened as Bell grew older?
10. Who was Helen Keller? How did Bell help her? How did Bell value the perceptions of children?
11. In the early days of the movies, there was no talking by the actors. Why not? What special talent of Mabel Bell allowed her to enjoy silent movies more than most people in the audience?
12. How was Bell's death observed? Do you think this was appropriate? Do you think this would happen today? Why or why not?

**Extended Activities:**

1. Hearing impairment is a problem many people face today. But why did more people suffer from deafness in the nineteenth century? Research the advances in medicine that help prevent hearing impairment due to disease today. Create a chart showing your findings on a poster, or write a short research paper.
2. Bell is best known for his invention of the telephone. However, he worked on many other projects. Choose one of his areas of interest. In an oral presentation to the class, describe his contribution to this field.
3. Draw a diagram of Bell's first telephone. Label the different parts and explain their function.
4. How has the telephone changed our lives? What would it be like in an emergency without a phone? Pretend you lived in 1870. Write a story about facing an emergency and the communications problems that you encountered.

**Websites:**

Read more about Alexander Graham Bell on Bio.com:

<http://www.biography.com/articles/Alexander-Graham-Bell-9205497>

The Alexander Graham Bell papers from the Library of Congress:

<http://rs6.loc.gov/ammem/bellhtml/>