

Scientists A-Z

B Is for Alexander Graham Bell

Facts:

Alexander Graham Bell is known as the inventor of the telephone. He was born in Scotland on March 3, 1847. Bell's mother was almost completely deaf, and his father taught deaf students how to speak clearly and in a way that could be understood. In 1870, his family moved to Canada. In 1871, he moved to Boston, Massachusetts, and started working on a device for transmitting speech.

Bell's work was funded primarily by Gardiner Hubbard, one of the founders of the Clarke School for the Deaf, where Bell taught for a period of time. Bell worked to help Hubbard's daughter who was also deaf, and they eventually married. Bell's initial work was on the telegraph, and this led to his work on the telephone.

Bell started by working on harmonic transmission, which centered on sending signals at different frequencies through a telegraph wire. The idea was to send multiple telegraph signals at once, each one on a different frequency. From that point on, it was a simple leap to try to send the human voice over wires.

Bell was aided in his work by his lab assistant, Thomas A. Watson. Together, they worked on transmitting speech through a device.

Finally, on March 10, 1876, they produced speech. The first signal was from Bell to Watson. The message is remembered as something similar to, "Mr. Watson, come here—I want to see you."

Bell continued to refine his invention until it was ready to show at the Philadelphia Centennial Exhibition. In August of 1876, Bell took part in the first one-way long distance phone call, from Brantford, Ontario, Canada, to Paris, Ontario, Canada.

Gardiner Hubbard put together a group that started the Bell Telephone Company in 1877. Bell became rich from the company but sold most of his stock and moved on to study ways to help the deaf improve their lives.

Bell also went on to work on other inventions, such as an improved surgical probe that was used with success in World War I, and he experimented with flight.

Alexander Graham Bell died on August 2, 1922.

Questions and Activities:

1. Where was Alexander Graham Bell born?

2. What was the result they were trying for when they used harmonics to work with the telegraph?
3. What was Bell's lab assistant's name?
4. What was the first message produced over the telephone?
5. Create your own telephone with two paper or foam cups and a piece of string. Talk in one cup while someone listens in the other. This will demonstrate how sound can cause the string to vibrate and move. The sound travels along the string from one cup to another. You can also experiment by trying out different thicknesses and lengths of string/yarn.
6. This infographic shows you the inside of a telephone and how it is created. You will be surprised at how simple it really is.

<http://electronics.howstuffworks.com/telephone1.htm>

7. This activity will give you specific directions on how to build a model of the very first telephone that Alexander Graham Bell made!

<https://www.crayola.com/lesson-plans/can-you-hear-me-lesson-plan>