

Alexander Graham Bell

Born in Edinburgh, Scotland on March the 3rd of 1847, Alexander Graham Bell was educated in London and at the University of Edinburgh. At the age of 23 Bell moved to Canada and then to the U.S. a year later. In that same year he opened a school for deaf people who could not speak. These people were called deaf-mutes in the 1800s. He used a teaching system developed by his father in Scotland. Ultimately Bell's school merged into Boston University and he became a Professor of Vocal Physiology and Elocution there.



Bell wanted to develop a machine to transmit speech. The first designs involved the concept of a multiple telegraph. Over the months, Bell and his assistant improved upon their designs and on the 10th of March, 1876 the first transmission was made, "Watson come here; I want you." After more testing, in November of the same year, Bell and Watson demonstrated the machine's capability when quality transmissions were made from Salem to Cambridge, Massachusetts. In 1877, Bell and two investors, Gardner Hubbard and Thomas Sanders, formed the now famous Bell Telephone Company. Today the Bell Telephone Company is known as AT&T, American Telephone and Telegraph.

The history of Bell and the telephone is much more exciting than his scientific developments. The course of history was changed by the passage of a short period of time at the U.S. Patent Office. On the 14th of February, 1876, Bell's attorney formally applied for a patent for a telephone based upon the telegraph. Earlier on the same day, another man by the name of Elisha Gray applied for a Caveat to File a Patent for a telephone using water to transmit sound. However, the patent for the telephone invention was awarded to Alexander G. Bell because a Caveat to File a Patent means that the inventor desires to file a patent in less than three months, but wants patent protection for the concept. Thus Elisha Gray lost the title of being the inventor of the telephone.

But Elisha Gray distinguished himself as a renowned Professor of Dynamic Electricity at Oberlin College in Ohio. In 1888, Gray invented the facsimile machine that today we just call a fax machine. Elisha Gray, being older than Bell, died in 1901.

Meanwhile, Bell reaped financial rewards by his world recognized development of the telephone. Later Bell went on to invent the very first transmission of sound over a beam of light. Bell himself felt that this invention was the greatest of his life's work. This was the origin of the fibre optic transmission technology which is being used today.

Alexander Graham Bell is also recognized for his great research into hydro foils for boats. His work led to the development of a boat that set the world record speed in 1919. No one beat that speed until 1963. Bell's efforts in medical technology led to the development of the iron lung that saved many lives, especially during the polio epidemic of the 1950s. Bell eventually returned to his beloved Nova Scotia where he passed away in August, 1922.

Name: _____

Date: _____

Alexander Graham Bell

Who

What

When



Where

Why

How

Name: _____

Date: _____

Alexander Graham Bell
Multiple Choice Questions

Circle the correct answer.

1. Bell's original interest in hearing and speech was related to
 - a. Teaching deaf people
 - b. Wanting to talk to his family in Scotland from his school in London
 - c. Both a. and b. above
 - d. None of the above

2. Bell's designs for the telephone were based upon
 - a. Edison's light bulb
 - b. Morse's telegraph
 - c. Whitney's cotton gin
 - d. None of the above

3. Another inventor who was working on the development of a telephone at the same time as Bell was
 - a. Gardner Hubbard
 - b. Thomas Sanders
 - c. Elisha Gray
 - d. All of the above

4. The inventor of the facsimile machine or fax was
 - a. Alexander Graham Bell
 - b. Gardner Hubbard
 - c. Thomas Sanders
 - d. Elisha Gray

5. Alexander Graham Bell is known for
 - a. Inventing the telephone
 - b. His work on fibre optic transmission
 - c. Racing boats
 - d. All of the above

Name: _____

Date: _____

Alexander Graham Bell
Short Answer Questions

1. Physiology is the study of how a part of the body works. What is vocal physiology?

2. Bell was a Professor of Vocal Physiology and Elocution. What is elocution?

3. In the 1800s and early 1900s most students took elocution lessons. Why do you think that students today do not study elocution in school?

4. Why is having a patent for an invention so important?

5. How was Bell's idea for the transmission of sound different from Gray's idea?

6. Bell had two investors in his telephone company. An investor contributes money to the new business in hopes of getting a good profit later if the invention becomes successful. If the invention is not successful, the investor can lose all the money. Would you be willing to invest in a new invention? Explain why or why not.

7. What is the iron lung? A vaccine to prevent polio was developed after the polio epidemic of the 1950s so polio is not a problem in the U.S. today. What happened to people who had polio that they needed to use an iron lung?

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Answer Key

Multiple Choice

1. a.
2. b.
3. c.
4. d.
5. d.

Short Answer Questions

1. The study of the parts of the body needed for speaking.
2. Elocution is the art of speaking or reading correctly, clearly, pleasantly and forcefully, especially in public.
3. Individual response
4. A patent gives legal protection that the inventor is the owner of an idea or device so someone else can't copy it and sell it for a specified period of time.
5. Bell based his idea on the telegraph while Gray used water for the transmission of sound.
6. Individual response
7. An iron lung was a machine that helped people to breathe. A person would lie inside a large metal cylinder – that's why it was called an iron lung. Some forms of polio result in breathing problems.