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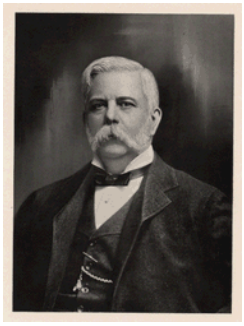
8th. Grade Social Studies

Inventors

Thomas Alva Edison was both a scientist and an inventor. Born in 1847, Edison would see tremendous change take place in his lifetime. He was also to be responsible for making many of those changes occur. When Edison was born, society still thought of electricity as a novelty, a fad. By the time he died, entire cities were lit by electricity. Much of the credit for that progress goes to Edison. In his lifetime, Edison patented 1,093 inventions, earning him the nickname "The Wizard of Menlo Park." The most famous of his inventions was an incandescent light bulb. Besides the light bulb, Edison developed the phonograph and the "kinetoscope," a small box for viewing moving films. He also improved upon the original design of the stock ticker, the telegraph, and Alexander Graham Bell's telephone. He believed in hard work, sometimes working twenty hours a day. Edison was quoted as saying, "Genius is one percent inspiration and 99 percent perspiration." In tribute to this important American, electric lights in the United States were dimmed for one minute on October 21, 1931, a few days after his death.

A pioneer in the field of telecommunications, **Alexander Graham Bell** was born in 1847 in Edinburgh, Scotland. He moved to Ontario, and then to the United States, settling in Boston, before beginning his career as an inventor. Throughout his life, Bell had been interested in the education of deaf people. This interest lead him to invent the microphone and, in 1876, his "electrical speech machine," which we now call a telephone. News of his invention quickly spread throughout the country, even throughout Europe. By 1878, Bell had set up the first telephone exchange in New Haven, Connecticut. By 1884, long distance connections were made between Boston, Massachusetts and New York City.
Bell imagined great uses for his telephone but would he ever have imagined telephone lines being used to transmit video images? Since his death in 1922, the telecommunication industry has undergone an amazing revolution. Today, non-hearing people are able to use a special display telephone to communicate. Fiber optics are improving the quality and speed of data transmission. Actually, the ability to access internet information relies upon telecommunications technology. Bell's "electrical speech machine" paved the way for the Information Superhighway.



George Westinghouse
In 1866, perhaps the year that changed his life, George was riding a train suddenly brought to a halt to avoid colliding into a wrecked train on the rails ahead. Inspecting the sight, he mused that there must be a safer way to stop a heavy train. Existing braking systems were inadequate.
Based on compressed air - the idea used to power rock drills while tunneling - George began to experiment with a new type of braking system for trains. At 22 years of age, he developed the air brake, a device that stopped trains using compressed air. Legendary success insured, he pressed on.
By 1881, he had perfected the first automatic, electric block signal, a device designed to avoid wrecks, save lives and help move rail traffic. Westinghouse's safety devices instilled passenger confidence and provided operational efficiency to rail owners. The materialization of a colossal Railroad industry resulted. But, railroading was not the only business touched by his prowess. From patent rights purchased from Nikola Tesla, the brilliant intellect who discovered the basis for most alternating-current machines (the rotating magnetic field), Westinghouse helped spearhead the development of alternating current. The Age of Electricity was thus set in motion.

And, from the workings of a simple well in his back yard, he figured out an efficient way to transmit clean, natural gas to homes - for lighting and heating - and to industry for fuel. The natural gas industry owes its existence to George Westinghouse. After that, in Pittsburgh, about 1905, Westinghouse showed his new alternating current electric locomotive. Not long after, his new engine was seen everywhere. Ships were next; Westinghouse marine turbines began a new era of power on the seas.