

# Thomas Edison



Thomas Alva Edison was born on February 11, 1847, in Milan, Ohio. He was the youngest of seven children of Samuel and Nancy Edison. His father was an exiled political activist from Canada, while his mother had been a school teacher and a major influence in Edison's early life. An early bout with scarlet fever as well as ear infections left Edison with hearing difficulties in both ears as a child and nearly deaf as an adult.

In 1854, Edison's family moved to Port Huron, Michigan, where he attended public school for a total of 12 weeks. A hyperactive child, prone to distraction, he was deemed "difficult" by his teacher. His mother quickly pulled him from school and home schooled him. At age 11, he showed a voracious appetite for knowledge, reading books on a wide range of subjects. In this wide-open curriculum Edison developed a process for self-education and learning independently that would serve him throughout his life.

At age 12, Edison convinced his parents to let him sell newspapers to passengers along the Grand Trunk Railroad line. Exploiting his access to the news bulletins sent to the station office each day, Edison began publishing his own small newspaper, called the *Grand Trunk Herald*. The up-to-date articles were a hit with passengers. This was the first of what would become a long string of entrepreneurial ventures where he saw a need and capitalized on the opportunity.

Edison also used his access to the railroad to conduct chemical experiments in a small laboratory he set up in a train baggage car. During one of his experiments, a chemical fire started and the car caught fire. The conductor rushed in and struck Edison on the side of the head, probably furthering some of his hearing loss. He was kicked off the train and forced to sell his newspapers at various stations along the route.

While Edison worked for the railroad, a near-tragic event turned fortuitous for the young man. After Edison saved a three-year-old from being run over by an errant train, the child's grateful father rewarded him by teaching him to operate a telegraph. By age 15, he had learned enough to be employed as a telegraph operator. For the next five years, Edison traveled throughout the Midwest as an itinerant telegrapher, subbing for those who had

gone to the Civil War. In his spare time, he read widely, studied and experimented with telegraph technology, and became familiar with electrical science.

In 1866, at age 19, Edison moved to Louisville, Kentucky, working for The Associated Press. The night shift allowed him to spend most of his time reading and experimenting. He developed an unrestricted style of thinking and inquiry, proving things to himself through objective examination and experimentation.

Initially, Edison excelled at his telegraph job because early Morse code machines punched dots on a strip of paper, so Edison's partial deafness was no handicap. However, as the technology advanced, receivers were increasingly equipped with a sounding key, enabling telegraphers to "read" message by the sound of the clicks. This left Edison disadvantaged, with fewer and fewer opportunities for employment.

In 1868, Edison returned home to find his beloved mother was ill and his father was out of work. The family was almost destitute. Edison realized he needed to take control of his future. Upon the suggestion of a friend, he ventured to Boston, landing a job for the Western Union Company. At the time, Boston was America's center for science and culture, and Edison reveled in it. In his spare time, he designed and patented an electronic voting recorder for quickly tallying votes in the legislature.

In 1869, at 22 years old, Edison moved to New York City and developed his first invention, an improved stock ticker called the Universal Stock Printer, which synchronized several stock tickers' transactions. The Gold and Stock Telegraph Company was so impressed, they paid him \$40,000 for the rights (that equals \$1,500,000 today!). With this success, he quit his work as a telegrapher to devote himself full-time to inventing.

By the early 1870s, Edison had acquired a reputation as a first-rate inventor. In 1870, he set up his first small laboratory and manufacturing facility in Newark, New Jersey, and employed several machinists. As an independent entrepreneur, Edison formed numerous partnerships and developed products for the highest bidder. Often that was Western Union Telegraph Company, the industry leader, but just as often, it was one of Western Union's rivals.

In 1871 Edison married 16-year-old Mary Stilwell, who was an employee at one of his businesses. During their 13-year marriage, they had three children, Marion, Thomas and William, who himself became an inventor. In 1884, Mary died at the age of 29 of a suspected brain tumor. Two years later, Edison married Mina Miller, 19 years his junior.

In 1876, Edison moved his expanding operations to Menlo Park, New Jersey, and built an independent industrial research facility incorporating machine shops and laboratories.

Thomas Edison listening to a phonograph through a primitive headphone.



In December 1877, Edison developed a method for recording sound: the phonograph. His innovation relied upon tin-coated cylinders with two needles: one for recording sound, and another for playback. His first words spoken into the phonograph's mouthpiece were, "Mary had a little lamb." Though not commercially viable for another decade, the phonograph brought him worldwide fame, especially when the device was used by the U.S. Army to bring music to the troops overseas during World War I.