Thomas edison2

Thomas Edison was a man who influenced America more than anyone else. Some of the inventions he pioneered are still used to this day. He was a man who spent almost his entire life working as a scientist, and receiving more than 1, 200 patents in his lifetime. (Anderson pg. 7) Thomas Edisons life was probably twice as productive as a modern day chemist, he was a firm believer of an eight hour work day, eight hours in the morning, and eight in the afternoon. Aside from his amazing history as an adult Edison lived an equally exciting childhood. Thomas Edison was born in Milan Ohio on February 11, 1847. At the time, his father was owner of a successful shingle and lumber company. However with new railroads being built through Milan his father lost customers to the bigger companies which began to open. The Edisons were forced to move to Port Huron, where he first began his education. When he was only seven years old his teacher, the Reverend G. B. Engle considered Thomas to be a dull student, and was terrible in math. After three months of school his teacher called him " addled," which means confused or mixed up. Thomas stormed home.(minot, pg1) The next day, Nancy Edison brought Thomas back to school to talk to Reverend Engle. He told her that Thomas couldnt learn. His mother became so angry at the strict Reverend that she decided to home-school him.(minot 1) After a while his mother, a former teacher herself, recognized his un usual abilities to reason. She quickly got him interested in History and Classic books. Thomas however was strangely attracted to the subject of science. By the age of ten Thomas Edison had already been experimenting and by now owned a sizable quantity of chemicals. Unfortunately his experiments were often quite expensive and he found it his duty to pay for them. Because he didnt go to school he had plenty of time to earn money by himself. When he was only

twelve, he began selling newspapers on the Grand Trunk Railway, he even printed the newspapers himself (Szhlmen, 1). He spent everything he earned on books and chemicals after about one year his mother became so sick of the noises of exploding beakers and the smell of burning flooded the house with smoke that he was no longer allowed to work in the house (Minot). Luckily h e was given permission to move to his lab into the train baggage car. He would be able to experiment during the long five hour layover in Detroit (Minot). Sadly one of chemicals fell off an unstable rack and caught fire. The fire was quickly spotted and only caused minor damage. Tom was then banned from experimenting on the train. Along with chemistry he began to work with telegraphy. When he was fourteen, he and another boy who lived nearby set up a telegraphic connection between their houses. By using the telegrapher so often Tom became equivalent to a second class which could earn a very steady pay. (Vanderbilt, 17). With his knowledge in telegraphy he began working as a full time operator soon after he made his first major invention it was a telegraphic repeating instrument that enabled messages to be transmitted automatically over a second line without the need for an operator. He had invented a machine that does the job he is hired to do. For a while Edison kept this invention secret. He began using it while at work, but was caught asleep with it on. After he was fired he moved to Boston, here he planned to dedicate all of his time to research for new inventions. Soon after he invented an automatic vote counter. Now the presidential votes could be counted in a fraction of the time it used to take. But the government didnt like it, it was too fast. Those who decided not to use it argued that people want time between the time that they vote and the time they hear the results. However, this machine is later used, and the

same design is still used today. Since his last invention didnt produce any profit, he was hoping his next invention would help him financially. Edison wandered from Boston to New York City in 1869 close to broke. He convinced an employee at the Gold Indicator Company to let him sleep in his office. While there he studied the Stock Ticker, a telegraph machine that was used to report the price of gold to brokers' offices. A few days later the machine broke down and couldn't be fixed by any of the employees. Edison surprised the manager by repairing it, and he received a job as a Supervisor, getting $300 a month. He continued to study the ticker and made numerous advancements on it. His new ticker would be able to print out fresh stock quotes and values on a thin piece of paper. This made it easier to stay updated and made the business a bit more competitive. Edison needed a good sized pay day and he expected to make around $4, 000 for the patent rights for the ticker. But the ticker had such a huge impact on the stock market, and they became so popular that he was able to sell the rights for nearly $40, 000. the stock ticker, was a great success. (Clark p. 25). This was his biggest payday ever, after he was given the check he just paced around his lab with amazement. He didnt believe that any bank would honor a check that size.(kanal 2) Rather than spend the money on new supplies, he let it grow in the bank while he made plans to open a new and improved lab in Newark, New Jersey. (Edison bio). He planned on continuing research with telegraphy he began improving his earlier devices which made it possible to send several messages over the same line. This greatly improved the productions of the existing telegraph lines. At the same time he was making improvements on Alexander Graham Bells phone, he invented a carbon telephone transmitter which improved the clarity and lowered the cost of the

existing models. By adding a carbon transmitter, it enabled people to talk, rather than shout into the receiver. On Christmas 1871, when he turned 24, he married Mary Stilwell, age 16, but that hardly affected his working life (Vanderbilt p. 24). He was then asked to improve the telegraph by increasing the maximum number of words able to be sent per minute. He increased it from 40-50 to around 200. In 1872 he received 38 patents. In 1873 he invented a working model of the duplex, and then the quadruplex lines. This invention saved $500, 000 for telegraphers. While studying for new paper for the telegraph, Edison came upon paraffin wax paper and introduced it as wrapping paper for candies. Because Edison was not very well studied in the world of business, he was having some problems like most inventors. He therefore moved to a place called Menlo Park, New Jersey, to continue research. There he started his own laboratories so no one could bother him with business problems, and started a new life where the only thing he would do would be to continue research and development. In this stage of life he made some of his most important inventions (Vanderbilt p. 28). In early 1877, Edison started working with things other than telegraphy. He invented the carbon transmitter, which made the invention of the phone possible. He stumbled into the invention of the phonograph. The invention of the phonograph made him famous and he was in the spotlight for the first half of 1878, he was tired and worn out by the second half and took a vacation. And as soon as he got back, he started working on the incandescent light. The idea came from a visit to William Wallaces shop in Connecticut. The hardest part was said to be creating the arc for the electrons to travel through. The metal either was a bad conductor, or burned too fast to be useful. It had been done; In 1812, Sir Humphry Davy took a battery and two pieces of

charcoal, connected them, and watched the glare of the flame; it just was completely impractical (Clark p. 89). So it was actually rather easy to make a light, but it was inefficient, and could only be used in large areas for it was an extremely strong light, around 4, 000 candlepower. They were now working on some manner of having a more practical, ten to twenty candlepower light (Friedel p. 7). Much had been done to try to accomplish a practical light, and Edison knew that. He had many theories as to how to make a light that would " meet all requirements of natural, artificial, and commercial conditions." (Clark p. 90. Paul Jablochkov lit up a boulevard in Paris, but Edison wanted to create a light that could be used in homes and offices. He was trying to find a substitute for gas, which was the chief means of lighting at the time. Edison credited hard work for his success, and had experimented with 6000 different materials for the filament in his light bulb before finding one that worked. He used to say that " genius is one percent inspiration and 99 percent perspiration". Edison tried everything, until one night he was messing around with a thin strand of lampblack and tar, when he decided to connect it to the bulb. It lit up and glowed for a few minutes. He figured out how to take the air out of the bulb and the wire. He used carbonized thread to light it up, and after many failures it did, for nearly two months. After this, he became known as the " The Wizard of Menlo Park". (minot 7) He soon discovered that platinum was the best element for an electric light. He made a light that worked with the same principle as a fuse: as soon as the filament got hot enough to melt, the light would short itself out to let the wire cool. This worked and Edison quickly got a patent on it, but he soon returned to using carbon, this time with a much greater vacuum. And when he turned the current on, the first real electric light was turned on.

This was such a great advance in technology that the papers had a full page, plus an additional column, devoted to this amazing discovery (Clark p. 98). Edison opened the laboratory to the public and the Pennsylvania Railroad ran special trains to Menlo Park. He hired people to help him make them, and he was now becoming a very rich man. Electric lights were growing in popularity so they needed someone to run them . 5 electric companies " including Edison's" supplied New York with power.. Edison had to find a source of electricity. Edison changed the design of the generator and made it twice as efficient at using fuel . Edison provided most of Europe with electricity . In 1882 Edison exhibited an artistic light show. That display shot business up and 100, 000 electric bulbs were produced and sold that year. Around 1878, Eadward Muybridge built a machine that used electrically triggered camera shutters to capture every movement. Muybridge had also invented a machine called the zoopraxiscope (an early form of a slide projector) and placed his photographs inside. He then used his zoopraxiscope along with a projector and was able to display his images of moving objects on a screen. In February of 1888, Eadweard Muybridge met with Thomas Edison. Edison is remembered as being " one of the many inventors who transformed photographic imagery from still frames to a moving, talking spectacle" (Williams 171). The meeting was set up by Edison to discuss linking Muybridges zoopraxiscope to Edisons phonograph.. Edison would have to go back to the drawing board. He needed to develop a new way to display photographic images. Thomas Edison patented a projector he called the kinetoscope in October of 1888. The same year, Edison met with a man named Etinne-Jules Marey. Marey had developed a camera capable of taking sixty photographs per second. Marey used rolled film that was only put on

the market on the market a month earlier by a man named George Eastman. Edison wanted to used Mareys camera to take photographs that he could use in his kinetoscope. His kinetoscopes were showing short " films" across America. Edison is remembered as being " one of the many inventors who transformed photographic imagery from still frames to a moving, talking spectacle" (Williams 171). People loved this new form of entertainment, but they still wanted more. Inventors from all over the world, including the United States, France, England, and Germany, continued to work as hard as possible to get these " movies" onto the big screen. Once Edison has his new invention working better then Muybridges zoopraxiscope, he tried once again to link his phonograph to the new version of a projector but failed. Edison had trouble making a new and improved projector so he settled for helping other inventors further develop theirs. Edison strongly backed the invention of the vitascope. The vitascope was a more efficient version of Edisons kinetoscope. This new projector was very popular in New York, however, cinematography quickly took its place in the eyes of the public. On the topic of cinematography, the feelings of the public can best be summed up by this quotation, " Moving pictures somehow seemed more important and exciting than seeing actors and actresses strutting around on a mere stage" (Allen 175).

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