

Who is the Better Inventor?

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Individual Paper

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Process Paper

My History Day Project topic is about the Thomas Edison and Nikola Tesla and the debate about who is the better inventor. I really like all kinds of animals and enjoy watching movies and shows about them. I decided on this topic because I found out that I had to still do a History Day Project later than everyone else because I attend Career Tech in the fall. Since I had a shorter amount of time to research a topic, I shared the research that I found with my brother, and he shared his with me. This just seemed like the easiest and less stressful thing to do because of the time. It relates to the topic because the debate over who is the better inventor is still being discussed today by people. Some like Tesla better while others like Edison.

To conduct my research, I read two books about Tesla and Tesla and Edison. I also watched two videos that my dad brought home from his work. My dad is an electrical teacher and shows these videos to his students at school about Tesla and Edison and the history of electricity. I also read websites that talked about the life of both men.

I did the research and shared what I found with my brother, and he did the same. I began writing my paper, and we watched the videos at home as a family and discussed them together. I continued to write my paper even though I struggled understanding the terms. I asked my parents for help with the electrical terms and proofreading my paper.

My historical argument is that even though both men were really good inventors but to pick a winner you have to look at their backgrounds and the decisions that they made. Both men helped improve our lives and many of the things that we have today are from their inventions.

My topic is significant to history because it allows people to see both Tesla and Edison as men and inventors and to be able to debate who is the better inventor. Edison had a lot more patents than Tesla, but Tesla was honorable in his interactions with people. One man was obsessed with electricity while the other jumped from invention to invention. Both men did very well, but when choosing a winner, it can be hard to have a clear winner without debate.

Nikola Tesla and Thomas Edison were two great inventors that contributed a lot to society. The two men are famous for having different views on how to do a similar task. What started as an employee - employer relationship would turn into a war over power supply? But which inventor is the better of the two? Which one had a great impact on our world? Which man would have inventions that would change the world? To determine who was the better inventor, Thomas Edison or Nikola Tesla, it is important to understand the upbringing and backgrounds of both men, the outcome of the Current Wars, and their accomplishments.

A question on the game show, *Family Feud*, asked, "Name someone who's known for inventing something." The top two answers were tied at 32 people naming Albert Einstein as a well-known inventor. The other was Thomas Edison (Harvey). Edison was not only an inventor but also a telegraphist, physicist, engineer, and businessman. Today, people with these types of jobs need a lot of education, but that was not true for Edison. Born on February 11, 1847, Edison only went to school for a few weeks because he was considered difficult by the teacher since he was a hyperactive child who was very easily distracted ("Edison Biography"). Since his mother was a teacher, she taught him at home and by the age of 11, he learned how to self-teach himself through reading books ("Thomas Edison").

Edison began working as a telegraphist at the age of 15. In 1868, he began working for Western Union in Boston. This let him work more on his inventions which he was doing full-time by 1869. That year was when he received his first patent for the electric vote recorder, moved to New York City to improve printer machines, and formed the Pope, Edison and Company "advertising [the business] as electrical engineers and constructors of electrical devices" ("Life of Thomas Alva Edison"). This new business let Edison improve the telegraph and receive several patents for the improvements. Edison's business deals grew by merging his

business with The Gold and Stock Telegraph Company, establishing the Newark Telegraph Works, and forming the American Telegraph Works (“Life of Thomas Alva Edison”). Over the next six years, Edison developed the quadruplex telegraph, the electric pen, and opened a laboratory in Menlo Park (“Life of Thomas Alva Edison”). One of Edison’s biggest accomplishments happened in 1877 when he was working on improving Alexander Graham Bell’s telephone transmitter. His experiments with the telephone helped Edison invent a device that made him well-known and gave him the nickname of “The Wizard of Menlo Park” (“Life of Thomas Alva Edison”). The invention was the phonograph. Not long after his discovery, Edison started The Edison Speaking Phonograph Company, but soon he became less interested in the phonograph and more interested in other areas.

The other invention that Edison is well-known for is the light bulb. In November 1878, The Edison Electric Light Company was started. The purpose of the company was to create an incandescent bulb and an electrical lighting system for an entire city. The key piece to making the light bulb work was “a filament of carbonized thread” (“Life of Thomas Alva Edison”). Pearl Street in Lower Manhattan was where the first electric light system was put into action. By 1883, there were “513 customers using 10,300 lamps” in the system which was also set up at the “Paris Lighting Exposition, the Crystal Palace in London, and the coronation of the czar in Moscow” (“Life of Thomas Alva Edison”).

Over the next sixteen years, Edison tried out other types of businesses. He started the Edison Ore-Milling Company to “extract various metals from ore” and in 1899, he created the Edison Portland Cement Company to support the use of cement (“Life of Thomas Alva Edison”). Both businesses were not successful because either there was not an interest in the product, or the idea was ahead of the times. Edison also got involved in making films. His company

received patents for a motion picture camera, called the Kinetograph, and a motion picture peephole viewer called a Kinetoscope. In April 1896, Edison introduced a revamped projector for showing movies and renamed it Vitascope. (“Life of Thomas Alva Edison”).

Many people think that Thomas Edison was much older than Nikola Tesla, but actually Tesla was born on July 10, 1856, which makes him only nine years younger than Edison. Wanting to learn, he begged his father to let him go to Graz, Austria to study at Polytechnic Institute after he finished high school in Germany in 1874 (“Nikola Tesla”). Tesla received a scholarship that let him go to college, and he had great grades because he never missed a class his first year (“College Years”). The next year, he heard a lesson on electrical engineering and saw a “dynamo operating as a motor” (*MIT*). That is when he got his idea for the alternating current motor that didn’t use commutators or brushes. By the third year, he was overworking himself causing many severe health issues (Tesla). This led to him losing his scholarship and leaving Graz to finish his education at the University of Prague in 1880. While living in Prague, Tesla had his first job working as an assistant engineer (*MIT*). With his sensitive hearing at “over thirteen times more” than other people’s hearing, he went to Budapest in 1881 to work as an engineer where he invented a sound amplification device for the telephone (Tesla). It was in Budapest, in 1882, that Tesla came up with the idea for a “rotating magnetic field that uses multiphase currents producing it” and moved to Paris to work for Continental Edison Company (*MIT*). While working there, he made improvements to “Edison's dynamo-electric machines and his making of a voltage regulator,” helped start up a new electric power plant, and constructed his first model of the induction motor (*MIT*).

It is also during this time that Nikola Tesla is introduced to Thomas Edison. While working for Continental Edison Company, his employer, Charles Batchelor, writes to Thomas

Edison a recommendation letter stating, "I know two great men and you are one of them; the other is this young man" ("Nikola Tesla Timeline"). On June 6, 1884, Tesla travels to America to begin working for Edison Machine Works dealing with "simple electrical engineering" ("Nikola Tesla Timeline"). Tesla recalls the meeting with Edison as "a memorable event in my life. I was amazed at this wonderful man who, without early advantages and scientific training, had accomplished so much. Within a few weeks I had won Edison's confidence" (Tesla). When working for Edison, Tesla was given the task to resign the company's direct current generators with the promise of "fifty thousand dollars on the completion of [the] task. Tesla states that he "designed twenty-four different types of standard machines with short cores and uniform pattern, which replaced the old ones" (Tesla). When he finished the job, Edison refused to pay Tesla the bonus saying, "When you become a full-fledged American, you will appreciate an American joke" ("Nikola Tesla Timeline"). Tesla was in shock and quit immediately working for Edison.

The Current Wars was given this name because of the conflict that happened between Thomas Edison and Nikola Tesla. Shortly after Tesla quit working for Edison, he started a job in New York City digging ditches for power lines. Not long after, American investor George Westinghouse teamed up with Tesla to work on an AC current system (Raphael). Tesla was building generators that used his idea of the alternating current model. "With Tesla's design he could use a transformer to increase the voltage and transmit it over very long distances" (Munson). During this same time Edison was using generators to produce DC power. With Edison's model, a power plant or boosting station would need to be built every one to two miles (Raphael). Eventually the two men and their ways of creating power crossed paths creating conflict. Both men placed a bid to light up the 1893 World's Fair. Ultimately Westinghouse and Tesla won the bid, and they were going to use electricity and light bulbs to light up the worlds

fair. Because they won the bid Edison refused to let them use his light bulbs on the projects (Raphael). Tesla and Westinghouse were then required to create their own light bulbs. Around this time Edison was traveling across the United States giving demonstrations of the dangers of AC current. He would electrocute stray dogs and cats to show his point. He even electrocuted an elephant named Topsy. Another invention from Edison that was used to show the danger of AC power was the electric chair. A man who committed a crime and was given the death penalty was placed into the electric chair. The chair was turned on and the man did not die right away. It took many times for the man to finally die by electrocution (Raphael). Eventually Edison moved on from the war, and AC power became the popular choice due to it being cheaper than DC power.

Thomas Edison and Nikola Tesla have many great accomplishments between them. Edison is credited with many inventions including the Light Bulb, Automatic Telegraph, carbon Telephone Transmitter, Phonograph, Kinetoscope (Movie Camera and Viewer), the Alkaline Storage Battery, and many more. Tesla was nicknamed “The man who invented the 20th century” (Cawthorne 47). He is credited with AC Power (alternating current), Contributions in radio technology, Wireless electricity, First hydro-electric power plant, polyphase alternating current induction motor, and the fluorescent light bulb. Edison has over 1,000 patents and Tesla has over 300 (“Thomas A. Edison Papers”). Both men’s creations and improvements have made our lifestyles better today.

When deciding which inventor was better, it is not a simple answer. There are many different things a person could look at to make this decision. For example, Edison has over 1,000 patents while Tesla has just over 300. Edison would appear to win the war of patents. When looking at both men’s achievements, many of Edison’s inventions do not have a major priority in our lives today. There is not really a need for phonographs or automatic telegraphs while the

incandescent light bulb is becoming less used because of efficient types of bulbs. Tesla's accomplishments have an everlasting benefit to our lives such as the AC power grid, wireless technologies, hydro-power plants, and more energy efficient lighting such as neon and fluorescent. Tesla would seem to win the war of lasting accomplishments. Looking at The Current Wars history and today's power grid, they both show us that Tesla would be the winner over Edison in that category. In the area of business, Edison had started many successful businesses in his lifetime. These businesses made a lot of money and gave many people jobs. Even Edison's name is well-known throughout most of America while Tesla has only become popular and in recent history so Edison would win for recognition. The answer to the question of which inventor was better is a difficult one to decide. Many would say it is a tie. In making my final decision, I decided to choose Nikola Tesla as the winner. My reasoning for this decision came down to two things. First, he was very passionate and focused on his creations while Edison did not maintain a very long interest in his new inventions. Second, Edison did not pay Tesla the money he promised him for the work that was completed. Since Tesla did not cheat people out of what he promised and had some sense of ethics and morals, my vote goes to Tesla based upon those two criteria.

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