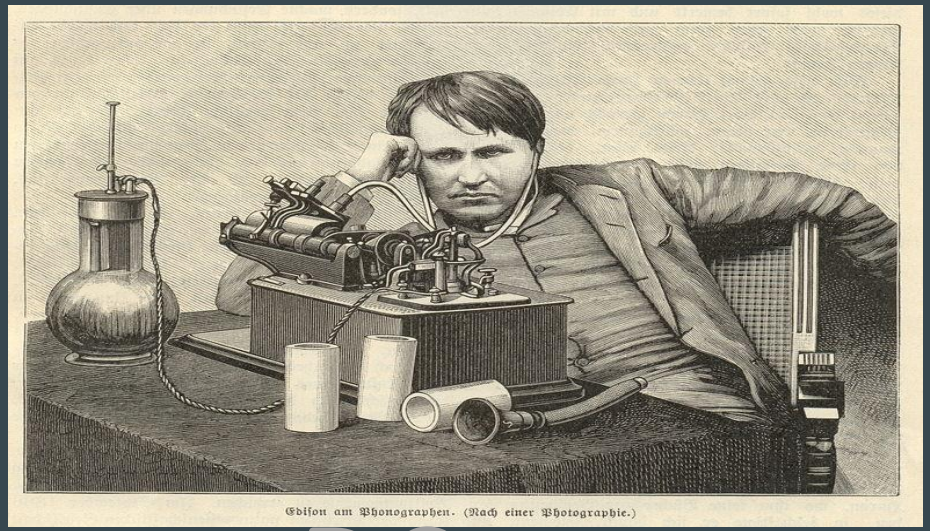
War of the Currents:

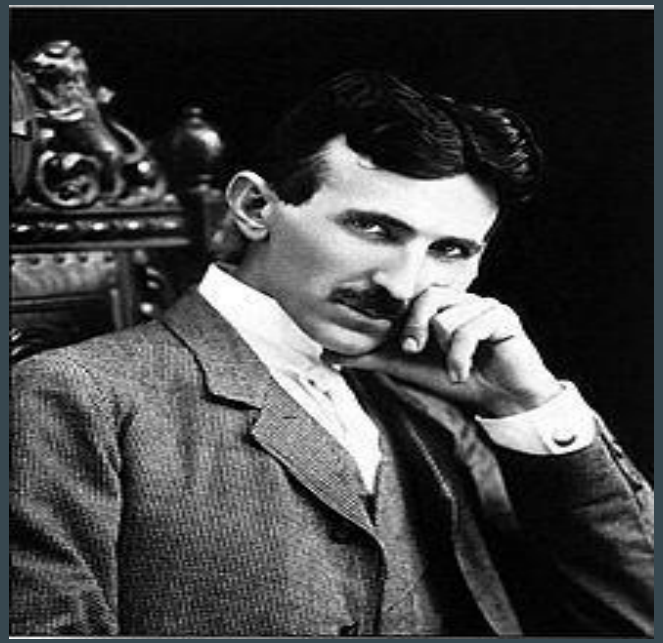


Edison am Phonographen. (Nach einer Photographie.)

DC

vs.

AC



Question 1: What Exactly Was the War of the Currents? When did it occur?

Canten, Jordan L., Leo, Zach

The war of currents took place in the late 1800's. The war had two opposing sides, Thomas Edison, who supported direct current vs Nikola Tesla and George Westinghouse who supported alternating current. The dispute happened over the which system would become standardized.

Source:"War of Currents." Wikipedia. Wikimedia Foundation, 21 Mar. 2017. Web. 22 Mar. 2017. <https://en.wikipedia.org/wiki/War_of_Currents>.

Question 2: Thomas Edison - Who was he and what side did he take?

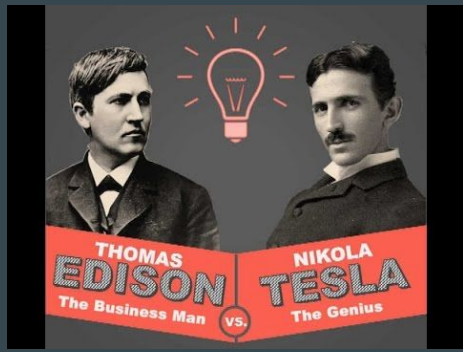
Katya, Whitney, Alia, Alan

- Edison took the DC side of electricity and had an anti AC stance. He destroyed the AC current by developing a lightning arrestor for high-tension power lines as well as a magnetic switch that could shut the system down in a power surge.
- Inventor Thomas Edison created such great innovations as the practical incandescent electric light bulb and the phonograph. A savvy businessman, he held more than 1,000 patents for his inventions.
- Thomas Edison became the first to project a motion picture in 1896, at Koster & Bial's Music Hall in New York City.

Question 3: Nikola Tesla - Who was he and what side did he take?

Jordan B., Brynn, Jason, Martin

- An engineer/inventor
- Tesla was in favor of AC over Edison's DC
- Received patents for his AC idea and then sold them to George Westinghouse
- Tesla's invention of the electric motor has finally been popularized by a car brandishing his name



Question 4: What was the original wiring system for the US? What prompted the war between the two?

- In the beginning copper was used in the United States for our wires. The insulation most commonly used was rubber insulation.
- Knob-and-tube wiring: an early method of electrical wiring in buildings most commonly used in North America from the 1880 to the 1930s.

Shark bait HOO HA HA

Question 5: Which system ultimately won the war? Why?

Michael, Chase, Keionna

Nikola Tesla won with AC because of its ability to expand as society grows. Westinghouse won a contract to supply electricity to the 1893 World's Fair in Chicago. Westinghouse also received an important contract to construct the AC generators for a hydroelectric power plant at Niagara Falls; in 1896, the plant started delivering electricity all the way to Buffalo, New York, 26 miles away. The achievement was regarded as the unofficial end to the War of the Currents, and AC became dominant in the electric power industry.

Question 6: What are some pros and cons of DC and AC?

- Pros DC
  - More Efficient: can move more power over long distances with less electrical loss
  - Lower Cost: higher efficiency means lower transmission cost
  - No inductance or surges (high voltage waves for a short time)
- Cons DC
  - Unable to produce power at high voltage
  - Limit to switches and circuit breakers (costly)
  - Voltage cannot be changed easily so the desired voltage for electrical and electronic devices cannot be achieved

Cons AC

- Expensive in cars
- Need for insulation
- causes heat and sparks
- causes a need for inverters

- Pros AC

- Efficient power transmission: Westinghouse and Tesla create high voltage lines that address the loss of power that had previously been a problem
- Gives power generation: AC generator was invented along with AC current that was much simpler than mechanical DC generation
- Available: availability of AC current is much more abundant than DC