Brief history of electricity essay sample

Environment, Electricity

Electricity is important in our everyday lives. It is essential for almost everything in our modern world. The knowledge learned in the past about electricity enabled such things as engines, telephones, radios, computers, and much, much more.

As early as 600 B. C., the Greeks were already studying electricity. They noticed that if you rubbed a piece of amber with fur, it had a charge with the ability to attract small objects. Many years later, in the 16th Century, William Gilbert discovered many other objects had this same ability, and that these charges had two different kinds of electrical charge. He learned that electricity repels the same kind, and attracts the opposite kind.

It wasn’t until 1747 when Benjamin Franklin in America and William Watson in England both discovered that all materials have an “ electrical fluid” that cannot be created or destroyed. Rubbing two objects does not create electricity, but just transfers electricity from one object to another. Both of these men discovered that the total amount of electricity in an insulated area is constant throughout the area.

Franklin’s major experiment on lightening happened in 1752. During a thunderstorm, he flew a kite with a metal tip. Attached to the string holding the kite was a metal key. Franklin could put his hand near the key during the lightening and draw sparks. He concluded that the lightening was from an electrical discharge. Later, two other people attempted this same experiment but died from the electricity.

Luigi Galvani was another scientist who started working on electrical experiments. He fastened the legs of a dead frog to a copper hook, hung it

over an iron railing and discovered the frog’s legs twitched. He determined the frog has electricity and it was released when it touched the metal. Unfortunately, he figured it was a type of “ animal electricity” rather than the electrical type that Franklin had been experimenting with. This caused him to later create a theory that animal tissues create electricity.

Another Italian scientist, Alessandro Volta, proved Luigi Galvani’s theory wrong. He concluded that the brass and iron were actually the materials producing the electricity, and the frog’s legs were just conducting it. As he continued with more experiments, he learned that certain metal and chemical materials put together will produce electricity. Volta created the first battery ever, the Voltaic Pile. This stack of silver and zinc disks, separated by paper that had been soaked in salt water, produced and maintained a flow of electricity. Due to his discovery, he was given the privilege of naming the electrical units after himself, volts.

New findings were happening rapidly. In 1820, Hans Christian Oersted discovered that an electric current produced a magnetic field. Shortly after, French physicist Andre Marie Ampere showed that two currents attract each other if the flow is going in the same direction. Thus, the unit of electric current, the amp, was named for him.

About six years later, German Physicist Georg Simon Ohm found that there was resistance to the flow of a current in a circuit when heat was produced. The type of material involved effects this reaction. With this information he formulated Ohm’s law which is the basis of electrical relationships even today. It tells the relationship between volts, amps, and resistance. In 1831,

Michael Faraday experimented with electric currents producing magnetic fields. He proved that electric currents passing through a wire coil produce a magnetic field and electricity can be produced by magnetic fields. This started the basis of electromagnetism which is the basis of the modern electric industry today.

In 1879, electricity was becoming more available. To harness this power, Thomas Edison worked with a crew of several other people to invent new uses for electricity. His “ invention factory” in Menlo Park, New Jersey was his base research lab where people worked to put his ideas into practice. His biggest invention perhaps, was the light bulb. Two other people had also attempted this, but their bulb burned out quickly, while Edison’s stayed lit for a long time using his carbonized cardboard filament. With the help of wealthy investors, Edison helped create an electric power station in the business district of New York City in 1882. On the day Edison Electric Illuminating Co. opened, 85 customers could light their electric lamps. This was only the beginning.

Once people began to learn to harness electrical power, it revolutionized our society. Today we take the advantages of electricity almost for granted. Whenever there is a power outage, it doesn’t take long for people to realize how dependant they have become upon electricity.