Electricity

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May 8, 2020

Have you ever thought about where electricity comes from or who invented it? Electricity is all around us even if you don't know it. Electricity has been improved and has gotten so much better, for instance with car companies now making electrical cars. Electricity is getting used in almost everything, so don't forget that.

Electricity is defined as energy that is in positive and negative forms, like lighting. There are two different types of power: Direct Current (DC) and Alternating Current (AC) are used for different things. We learned in our Physics block that AC power was not the first type of power to be invented; it was DC power (Richardson). Kyle Sorensen is an electrician and my mentor for this project. He taught me that there are a couple of differences between AC and DC. One of them is that DC is Direct Current which means that the power is flowing in one direction, DC is used for motors because motors need one way of flowing current, not many. AC is Alternating Current, which means it goes back and forth, which is why you see the city sparkling at night.

According to the website *SolarSchool.net*, "there are many ways to make electricity. Here are a couple examples. A turbine is turned really fast. This requires a lot of energy, such as heat, wind or moving water. The spinning turbine causes a shaft that spins making large magnets inside copper wire coils to move these are the generators. The moving magnets inside the coil of wire cause electrons with charged particles to move inside the wire: this is electricity" (SolarSchool).

How does the power get to your home? First they are put on power lines, with telephone wires, and sent all through the city. Some cities are big enough to have more than one. Then the telephone wire goes to a building or a home and transformers which can convert the power to increase or lower the voltage, depending on the building or home. Other good ways of making power are solar power and wind (Richardson).

Power is everywhere and even if you are off the grid you still need power. Even if you don't know it, electricity is in our everyday lives. We use it with our phones, our lap top computers, in our homes with lights, and even with our TVs. According to the website Solarschool.net, if you are on a power grid that probably means that you are in the city and that you are connected to the city's power plant. ""Off the grid"" means that you are not connected to the city's power plant and also means that you probably have to use a different form of generating power, like solar or turbine. In physics class we learned that if you were going to another country and you wanted to plug in your phone charger, it wouldn't work. That's because other countries on the other side of the world have different voltages, so you will have to bring a converter.

Electricity was invented by many people. According to *Biography.com*'s article "Thomas Edison," he was the person who invented DC power. Thomas Edison was an American inventor, and he invented the light bulb. The invention of the light bulb was an amazing thing for the electrical industry because it was the first time people wanted electricity in their homes. While Edison was not the first inventor to invent the light bulb, he came up with the technology to bring it to the masses. "Edison became embroiled in longstanding rivalry with Nikola Tesla, an engineering visionary with academic training who worked with Edison's company." Edison and

Tesla parted ways and Tesla started working for Westinghouse electric. In Biography.com's article “George Westinghouse”, “George Westinghouse was one of the most prolific inventors and businessmen of the Industrial Revolution. After serving the Union Army and Navy, he patented several devices, particularly for railroads. He would eventually start the Westinghouse Electric and Manufacturing Company to improve alternating current (AC) power generators.” According to Biography.com’s article on Tesla, Nikola Tesla was an engineer and scientist known for designing the alternating-current (AC) electrical system, which is the “predominant electrical system used across the world today.” He also created the “Tesla coil,” which is used in radios. In physics class we learned that the “Current Wars” happened because Westinghouse Electric and Edison Electric tried to get their inventions all around the United States. The winner of the Current Wars was Westinghouse, because his AC power spreads higher voltage power further than DC power.. We still use DC today to power electronics like phones, computers, etc because most things need that type of current.

Why can birds land on telephone wires without being shocked? According to the website Sciencing.com, electricity does not go through their bodies. Let me explain a little bit more. Electricity needs a full circuit to shock somebody with, but since the bird has both of his feet on the wires and is not touching anything else, there is no full circuit. However, if I touch the wire I will get shocked because I am on the ground, meaning there’s a full circuit.

For my artistic piece I’m doing an electrical model house. To start my artistic piece, I took some wood and cut out the outer walls and sanded them. Then I tried cutting out the windows with the drill press, but that didn’t work so I tried the dremel. The dremel worked much

better and faster. Then I had to file it down to smooth the edges. Next, I measured the inner walls of the house.

Electricity is a part of our everyday life. When you charge your phone or laptop, you are using it. My last thought is don’t forget that you are using electricity because you are.

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