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Green Cars

The topic I chose to do a research on is on green cars. The reason I chose this topic is because green I think cars are extremely important to mankind and I believe that they're able to help us prevent global warming from happening. Another reason I chose this topic is because I am interested in all kinds of cars. Also, I want to learn more about our environment. I want be able to explain how dangerous it is to our environment if we continue the use of fossil fuel cars and how green cars can help prevent them from happening. There are many types of green cars. These types include hybrid cars, solar powered cars, biodiesel cars and fully powered electricity cars. In this essay, I am going to explain briefly about each type of car. I will be talking about the history of hybrid cars, how they function, and how they will be able to help our environment. So far, I know that there are many car companies in the world today that produce the four types of green cars. Hybrid cars are able to fuse gasoline and electricity in order to function without using a huge load of gasoline. Solar powered cars are able to gather up energy from the sun to function.They also have a motor that can be powered by only solar power gathered from the sun. Biodiesel cars are able to use renewable energy from used vegetable oil as a source in order to run. Fully powered electricity cars require a huge a battery in order to run. The reason no one want to buy these cars is because they provide bad maintenance and these cars are really expensive. The average price of hybrid cars or electricity-powered cars are about $25,000 - $35,000 U.S dollars. They may be pricey, but people don't know how helpful these cars can really be.

The first person to build a hybrid car in the United States was Ferdinand Porsche in 1901. Even though he was not the first one to come up with the idea of using electricity in vehicles, he was able to manage to use the idea of it to create something similar and better, such as a hybrid car. The person who came up with the idea of combining electricity and gas together was from a Scottish inventor named Robert Anderson in 1839. Anderson came up with the idea of using electricity as a source for vehicles. Even though Anderson came up with this idea, he was unable to use it in a car. The type of hybrid vehicle he was able to fuse electricity and gasoline was on an electric carriage. *(The New York Times Company, 1997)* Porsche was the first to make it to reality. He was the first person able to put all the pieces together to form a 4 by 4 vehicle that can actually run on electricity with gasoline. He wasn't as old as Anderson, in fact, he was only 23 years old! *(Feldman, 2008)* Ever since then, Porsche was known as the first person to build a front-wheel-drive vehicle that can consume electricity. He named his invention the "Lohner Electric Chaise" The reason he wanted to build a hybrid car is because he wanted less pollution for the world, but after the car was invented, was it in use? No his invention just sat there until a hundred years later. Hybrids were forgotten until pollution became so bad that in 1966 Congress recommended electric vehicles as a solution. They were inspired in making more hybrid cars because the Arab oil embargo in 1970, when the embargo made the gas price go high up. *(Hamel, 2010)* Ever since then, more car companies started to produce hybrid cars of their own based on Anderson's and Porsche's plans and ideas. During that time, people started to get more interested in hybrid cars, but not interested enough.

In 2007, there weren't as many car companies that produce green cars comparing to today. Green cars are known for the saviors of our planet, and the saviors of our wallets. On average, there are over 220,000,000 people in the United States that drives per day! The United

States have over 300,000,000 people, that's nearly over 75% of the country's population of people who drives! *(Langer, 2005)* They started to realize how bad air pollution was getting. They wonder how many car companies in the world produce green cars. During this time, not that many car companies were interested into making them because they know people wouldn't want to buy a green car. They're either uncool, ugly, or lame. People like driving the fancy cars such as BMW, Mercedes Benz, Lamborghini, etc. Once people hear the word "hybrid" the first thing that comes to mind is the price. But they don't know that they can help save gas by combining electricity and produce less carbon dioxide.

People have always polluted their surroundings ever since, but throughout much of history, pollution was not a major problem. The warming of "greenhouse effect" we are now experiencing is a result of carbon dioxide we have dumped into the air. Many people don't know what carbon dioxide is. Carbon dioxide is a clear and odorless non-toxic that can harm people's health, kill plants, and damage people's properties.*(Hopwood. (n.d.))* Air pollution and global warming are normally caused from pouring hundreds of millions of tons of gases out into the air and they mix into the atmosphere that includes the major greenhouse gases such as methane, nitrous oxide and of course, carbon dioxide. Fossil fuel cars take a huge role of producing carbon dioxide. The only way to solve this problem is to use as little gasoline as possible. Hybrid cars can be one of many solution to this problem. They are able to cut the use of gasoline in half by using the other half with electricity. An all electric car in fact, is able to decrease a huge amount of carbon dioxide produced, but the risk of an all electric vehicle is too high. Very little people trust their safety on an all electric vehicle because an all electric vehicle uses high electricity, which may cause explosions in minor accidents and the risk of harming others lives around them.

As more people started to get interested in green vehicles, more companies started to

produce them to grant their wants. The world famous Prius for example, it was made by Toyota. This hybrid was first introduced in Japan in 1997 and in the US, 2001. Many companies started producing green cars a little after, such as Volvo, Volkswagen, Nissan, and Lexus. J.D Power and Associates, an automotive research company expects the population of hybrid cars on the road will triple as of 2015. As of 2007, there was only 2% of green vehicles on the road, 2008-2009, 3%. Couple years later, the population of green cars started to raise. The reason is because more and more people are getting interested on green cars. Hopefully we can achieve that goal on tripling the amount we have now.

As time passes by, people started to wonder what was the cause of the release of the greenhouse gases, so they did a little research. 19.6 pounds of carbon dioxide is produced from a fossil fuel car PER gallon! *(Nowak, 1984)* Now, for a fact there are millions, possibly even billions of drivers everyday around the world. If you do the math, that means there are tons of carbon dioxide gas produced everyday just from cars! For example, United States of America, by itself, there are over 220,000,000 drivers everyday and an estimate of only 4,400,000 hybrid cars on the road. That's the 3% of drivers in the United States that drives a hybrid vehicle. That sums things up to a estimation of 215,600,000 drivers who drives a regular fossil fuel car everyday! An average person in the United States drives around 50 miles a day, which is about 1.3 gallons of gasoline used. This only means that over 4,225,000,000 pounds of carbon dioxide is released in the air just from the United States by itself! And this is only an estimation of drivers that drive in the United States. Chances are, there can be millions or billions more drivers everyday which means more carbon dioxide would be poured into our atmosphere. But imagine this, if every single driver in the United States starts to drive a hybrid vehicle, the amount of carbon dioxide will possibly drop from 4,225,000,000 pounds of carbon dioxide per gallon to about

1,100,000,000 pounds per gallon. Hybrids are known to be about 60-80% cleaner than any regular ordinary cars. Every pound of carbon dioxide in the air harms a tree; each mature tree can only absorb up to 48 pounds of carbon dioxide a year. *(Nowak, 1984)* Now, there are not enough trees in the world to absorb all the carbon dioxide released from our daily use of cars. If we don't do something about it now, the environment will be in danger in the future.

On my research about green cars, I found out there are also some advantages and some disadvantages. Although you may think having some disadvantages is a bad thing, it's really not. All these disadvantages from green cars got good explanations. Hybrid cars, electric cars, biodisel cars and solar powered cars are expensive. They cost thousands more than regular cars, but there is a reason. The main reason green cars require more money is because of their battery. The battery is the main part of these vehicles. Even though the car itself is a lot more expensive, in long terms, you'll be saving more money than those who drives fossil fuel cars because you won't have to buy as much gasoline as them and not only that, you'll be one of the millions who is trying to help our environment by driving a green car. At the same time, you can be saving tons of cash and be able to do a great favor for our environment.

But there might several severe risks in driving these cars. It is extremely dangerous if there's an accident because the battery may explode. Even though there's a very slight chance of that happening, if the battery overheats, it may explode and it may cause heavy damage to you and to those who are around. As of today, many huge car companies are creating new models of hybrid vehicles to reduce those risks as much as possible. *(American Energy Renaissance, 2010)* They are also creating new models and looks for hybrid cars so more consumers will be more interested. The reason why they didn't start this earlier is because they didn't think that the visual appearance of the car will effect the consumer's decisions of whether buying the car or not.

There are many facts on green cars on how they can help our environment. One obvious fact is that green cars are able to help save gasoline, which can cause the gasoline price to drop. Also, it can reduce the conflict between countries. Countries wouldn't want to declare war with each other for gasoline anymore if it doesn't worth as much. This can also make the world a better, safer and peaceful place. If my theory of green cars is correct, nobody will be putting their life through war just for gasoline. Another fact that I mentioned is that they are able to produce less carbon dioxide than regular fossil fuel cars. This helps us save tons trees and produce less toxic waste while transportation. Green cars can also help us financially. Everyone who owns a green car would save thousands of money overtime. The more money they are able to save, the wealthier the country becomes. I would buy a hybrid car when I grow up just to ensure that our planet is not in danger of global warming. Earlier, I saw a commercial on T.V that the car company Chevron, is also helping our environment. They are attempting to plant thousands of new trees to absorb carbon dioxide cars produce daily. Its great to know that new and old car companies are trying to find new ways to reduce carbon dioxide cars produce and ways to help prevent global warming.

The only problem is that it is very expensive to build a hybrid car, and since then Honda has ground their production down to near zero. So there is a response to the short-term, but it's just under whelming. If people were willing to pay more for gas, why didn't they pay more to buy a hybrid vehicle? It would be better if Americans use their money to buy a hybrid vehicle than spend extra on gas because that way, Americans wouldn't have any problem with air pollution. If Honda and Toyota is able to produce hybrid cars such as the Honda Insight and the Toyota Prius, other companies should be able to as well. If your favorite car company produced a new hybrid car and they highly recommend this vehicle, whether if its hybrid or not, of course

you would want to give it a try, right? Car companies should start doing this, so that it would attract more car buyers into buying hybrid cars. Therefore, as time passes by, we will start noticing that those hybrid cars are decreasing carbon dioxide. Also, you'll realize that they extremely smooth and they produce less smell than ordinary cars.

Now, more people started to get more interested in hybrid and electric cars because they are starting to worry about the carbon dioxide fossil fuel cars produce everyday. On average, hybrid cars are able to travel up to 30 miles per gallon. They mainly run on electricity, each and every hybrid has a battery inside that supports the car, making the car run on little fossil fuel. The more miles the car is able to travel per gallon, the less carbon dioxide your car will produce. Companies such as Toyota and Honda are trying to achieve their goal, making a car capable of driving up to 50 miles per gallon.

Green cars is the future of air pollution control. The current vehicles most of us use daily that are powered by gasoline pollutes the air, but as technology improve, the human way of life changes alternatively. The more we use hybrid cars, the better outcome we'll get. These vehicles are developed to achieve better gas mileage and to help slow the production of the gasses that cause global warming. The hybrid vehicle is one of the best and most popular alternatively powered vehicle. These vehicles are known to save a lot in the long run with a little mixture of both gasoline and electricity. Hybrid electric vehicles are energy efficient cars or trucks that run on an internal combustion engine of a gas vehicle with the battery and electric motor from an electric vehicle. This results the use of gasoline being halved. These hybrid electric vehicles consume fewer natural resources such as fossil fuel gas than any regular vehicles and produce almost no emission fumes. Hybrid cars is one of the best solution to preserving air quality for the future.

The creation of hybrid cars did not only help global warming, but it also helped improve battery technology. Before the hybrid car was created, there was a downfall in battery technology. The batteries that were being made could not produce enough power to provide enough energy to support hybrids. These batteries couldn't sustain on long trips. The new batteries created for hybrids can help them sustain in long trips and also decrease the use of fossil fuel oil on transportation vehicles, which also improved battery technology.

The main source of hybrid vehicles is the electric motor. The speed and travel hours the hybrid vehicle can run is based on the electric motor. When the car begin to lose some of it's energy, that is where the gasoline is put in use, the gasoline starts to pour in, in this way, it'll be functioning by using both electricity and a little of gasoline to power the car. The hybrid car function is similar to how fossil fuel cars work, but instead it uses the engine's power to recharge the battery. After the power supply is replenished the gasoline engine shuts down again so that it limits the use of gasoline when it is not needed. Also, when the hybrid car reaches higher speed, the gasoline engine starts and uses it's power where the added horsepower is needed, this also helps saving gas from time to time. Hybrid cars are mostly dependent on its battery inside them, fossil fuel is like an extra boost to make the car able to run longer.

This year, I checked the Toyota website for the price of their hybrid vehicles. It seems to be that the price of the Toyota Prius have dropped incredibly. It dropped from the price range of $28,000 - $30,000, to about $22,000 - $25,000. This is great news for America because this will probably increase the population of hybrid vehicles in the United States. The new 2011, Toyota Prius is great on mileage, they are able to run up to 51 miles per gallon, which means that the company Toyota achieved their goal in making a hybrid car capable of traveling up to 51 miles per gallon! With this incredible price and benefits, there is a possibility that more consumers will

be more interested on buying this product. If this becomes a success, hybrid cars will become the future of the next generation of cars.

Today, there are many varieties to choose from if you want to purchase a green car, As I mentioned on my essay, there are solar powered cars, all electric cars, biodiesel cars and hybrid cars. Solar powered cars require the sun's energy to run, which means unlimited supply of energy. A good fact about solar powered cars is that they don't have any emissions, which means they are also green. An all electric car is a car that is powered by only electricity. In order to get the electricity, you must charge it at home or at a place with an outlet. The battery is charged as if it is a phone. You plug it in and leave it over night so it'll have a limited energy for it to run the next day. A biodiesel car, is a car that functions from bio-diesel gas. Biodiesel gas can be made from any kind of fat, which includes vegetable oil or recycled cooking oil. Biodiesel can be used in all kind of conventional diesel engines. Also, biodiesel cars releases 78% less carbon dioxide than regular fossil fuel cars. *(Chewonki Company. (n.d.))* This can help reduce carbon dioxide released into the atmosphere by a lot! For those who want to save tons of money on fossil fuel gas, these cars may be right for you. Price shouldn't be the problem. The problem is the future of cars on our planet. If it costs a little more money to help our environment, it should be worth it.

I interviewed a friend of mine. His name is Kevin Ngo. He works for his dad at their auto-shop. He isn't an expert on green cars, but I figured that would know something about them. I asked him to tell me everything he knows about green cars. He doesn't know much, but he said he was willing to tell me everything he knew. While interviewing my friend, he was able to tell me the some differences between hybrid cars and regular cars. Kevin said "regular cars relied on internal combustion engines as long as they were invented. For hybrid cars, they're different.

They use electric engines and new technologies to function." I was confused because I didn't know the differences between an electric engine and an internal combustion engine. In fact, I didn't even know what they were! He broke things down in ways that I could understand it. An internal combustion engine are like bike pedals. They circulate around like bike pedals in order to create air to push out the gasoline to go into use. Electric engine is a engine that is combined with electricity, mainly for hybrid cars. Kevin drives a Toyota hybrid Camry as well. He said that his hybrid uses an electric engine and also, an internal combustion engine. The reason for that is simple. He said that the internal combustion engine is used for when the car is out of electricity from the electric engine. To regain electricity, the car must decelerate and regain the electricity from the heat and energy overtime. In the meanwhile, the internal combustion engine starts to kick, using a little of gasoline to give the hybrid a boost. He told me the reason why his parents bought him the hybrid car. The reason he only drives is because of school and work. That way, he can be saving more money on gas than anything else. Although, he told me that the reason he got the car wasn't because he was trying to prevent air pollution, it was because he just wanted to save money on gas because he drives a lot. After the interview, he gave me a little tip on choosing a green car. He said that the higher mileage per gallon the car is able to go, the better it is and the more benefits they give.

I realized that green cars are more important than I thought. Many car companies should reduce the production of regular fossil fuel cars and start to produce more hybrid cars because of the benefits they are able to give us and the gas we could be saving. Carbon dioxide is a serious matter that can destroy humanity because of the toxic waste they produce. Throughout all my research, I realized that during some time in life, carbon dioxide will take effect and will destroy our environment. Hybrid vehicles may not prevent global warming completely, but it reduces the

risk of it greatly. As years pass by, its great to know that old and new companies are gathering more information on figuring out new ideas on how to reduce the risk of carbon dioxide. Their solution now is to attract as many consumers as possible so they can increase their production on hybrid cars. People need to know that our environment is a lot more important than anyone thinks because if we're selfish this generation, the next generation will suffer. If everyone in the world starts to drive a hybrid car or any other kind of green car, air pollution wouldn't be a big problem today and global warming would have to wait until the next life cycle.

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