Wright Brothers First Flight

'Flying machine soars 3 miles in teeth of high wind over sandhills and waves at Kitty Hawk on the Carolina coast.'

This was the title of the Virginian-Pilot newspaper that had arrived at people's doorsteps on the quiet morning of December 18th, 1903. The day before two brothers named Wilbur and Orville Wright had successfully piloted a powered flight. This event changed the history of aviation forever.

Being able to pilot and design a powered flight was a task that took over four years of research, graphs, and tests for the Wright brothers to figure out. It all started in a small bicycle shop in Dayton, Ohio. The brothers decided to try their shot at flight for the first time at a beach in Kitty Hawk. The strong winds at this beach helped to lift off the glider planes which the Wright brothers had successfully piloted over 700 flights of. After this success, they decided to push their limits even more. A powered flight was not created yet and so the brothers decided to take on the challenge. With hard work and success, they were able to create a powered flight that changed the face of aviation forever.

The Wright brother's success has affected our society today in a numerous amount of ways. First of all, airplanes are used nowadays for many things. They can be used for entertainment such as vacation, but can also be used to defend our country with military use. Powered airplane flights also make it possible for people to get from place to place in a much shorter amount of time. Airplanes are the only rapid transportation option. This makes it essential for worldwide business. They generate economic growth, create tourism, and provide jobs and a workplace for many others. Those were just a few of the reasons the Wright brother's invention of a powered aircraft had changed the idea of aviation forever.

Alongside the rapid transportation that the Wright brothers' invention has provided, it has also provided a severe impact on engineering forever. From the years 1903 through the early 1920s, the Wright brothers were able to successfully develop propulsion systems. They created thin high-speed propellers that we're the best at the time. Their design was based on an early internal combustion system designed for an automobile. On June 12th, NASA test pilots at the Dryden Flight Research Center are continuing the pioneering work of the Wright Brothers as an informative project to how their work changed engineering.

To be able to understand how great they accomplish are you need to be able to understand the mechanics of an airplane. To start, thrust and lift are the two most important things you need to be able to fly an airplane. Thrust is a forward momentum that if it is at the right speed can create a lift. Thrust can also overcome drag. Lift on the other hand is created by the difference in air pressure above and below the airplane wing. Another scientific way to say this is Bernoulli’s principle.

Another thing you need for an airplane to function properly is a drag. To show an example of drag imagine you sticking your hand out of a car while it is moving. The size of your hand, the shape your hand is in, and the speed of the car are all factors of drag. If you put your hand in a

block shape there would be more pressure on your hand. This is the shape of most trucks or larger cars. Next, put your hand in a flatter more curved shaped. You will feel the pressure decrease by a lot. This is the shape of a lot of racecars. When making yourself “smaller”, it will reduce the drag and pressure. This is the same reason why skiers bend down when going down a steep hill. Less drag means more speed.

The last basic thing you need for an airplane is aerial navigation. Navigation is basically how an airplane turns in the air, how it arises, and how it dives. To start the angle of the wing is important. The greater the angle is then the greater the lift, and vice-versa. It’s funny though because it is easier for an airplane to climb in altitude than it is for it to stay at the same altitude for a long period. A regular wing though always has a negative attack so it receives zero lift. Another part of aerial navigation is airfoil flaps. These are the flaps you always hear coming out during takeoff and landing. These are there to alter the shape of the wing. During takeoff the create more lift, and during a landing, they increase drag to help slow the airplane down.

All of these factors are important to know because it helps better understand the hard work that the Wright brothers strived to put in their airplane.

Not only were the Wright brothers very engineers, but they also were great together as a team. They had a conceptual design and were particularly good at being able to stay focused on goals for a long time. Another thing is that they were extremely motivated to learn how to fly and made thousands of gliding (not powered) flights to master the concept of flight controls and piloting skills. As well as that they were an outstanding team who shared responsibilities and a common vision to succeed at their goal. Lastly, their family had a certain financial advantage that was able to help them undertake campaigns and build a numerous amount of test flights.

To sum up, my essay the Wright brother's invention of the airplane has severely affected society in a numerous amount of ways. Not only does it provide travel and military usage but the airplane itself is one of the safest ways to travel because of the very few occurrences of airplane accidents. As well as that their demonstration of teamwork and ability to have patience is an example to all. Overall I think this event is one of the most important in history.