



It is a Fact Man Can't Fly: The Wright Brothers at Kitty Hawk and Diligence

Handout A: Narrative

BACKGROUND

The late nineteenth and early twentieth centuries were a time of great innovation and invention in America. Some of the most famous inventors were Thomas Alva Edison, Alexander Graham Bell, and Henry Ford, who all helped modernize American industry and life. They also sparked revolutions in communication, business, industry, and travel.

Wilbur and Orville Wright of Dayton, Ohio, were two mechanically-inclined individuals who enjoyed tinkering and owned a printing press and a bicycle shop. Inspired by the belief that humans could fly, they diligently pursued the invention of powered human flight. They were not the only ones. French-born Octave Chanute built a bi-plane glider and had discussions about powered flight with the Wright brothers. The head of the Smithsonian Institution, Samuel Pierpont Langley, received a \$50,000 grant from the War Department, but his airplanes flopped into the water when they were launched from barges on the Potomac River.

Due to intensive study and a persevering attitude, the Wright Brothers solved the problems and were the first humans to fly an airplane.

NARRATIVE

In the late summer of 1896 in Dayton, Ohio, twenty-five-year-old Orville Wright lay prostrate on his bed recovering from deadly typhoid fever. His brother, Wilbur Wright, was reading accounts out loud of a German glider enthusiast named Otto Lilienthal who had crashed and was killed while flying. The two started reading several books about bird flight and even discussing the possibility of powered human flight.

On Tuesday, May 30, 1899, Wilbur sat down at his sister's desk to compose a letter to the Smithsonian Institution in Washington, D.C. He wrote, "I have been interested in the problem of mechanical and human flight ever since I [was] a boy." He added, "My observations since have only convinced me more firmly that human flight is possible and practicable." He requested a reading list and any materials that the Smithsonian might be willing to offer. He received a prompt reply and a packet full of the latest pamphlets and articles including those of the Secretary of the Smithsonian, Samuel Pierpont Langley.

Despite the fact that many people were raising the question of human flight with the first zeppelins and discussing powered flight, many naysayers pessimistically doubted that any attempts would be successful. The Washington Post, for example, announced that "It is a fact that man can't fly." The Wright Brothers would not be so easily deterred. Their mother had indulged their tinkering with mechanical inventions since they were boys. They had owned a

NARRATIVE

printing press and now a bicycle shop and were highly skilled mechanics. They did not have the advantages of great wealth or a college education, but their father had instilled in them good work habits and perseverance. As they would later write, the books they read filled them with “unquenchable enthusiasm and transformed idle curiosity into the active zeal of workers.” They had a dream, and the dedication and discipline to achieve it.

The Wright brothers diligently studied birds and read voraciously about flight. As a result of all of this intense study, they built a glider that would fly and allow them to acquire vast knowledge about the mechanics necessary to fly. They were patient and diligent while they followed the necessary series of steps toward powered flight.

The Wright brothers found a suitable location to test out their glider flights in Kitty Hawk, North Carolina because that site had the right combination of steady, strong winds and soft sand dunes on which to land with less threat of bodily injury. On October 19, 1900, after several unmanned flights with a kite, Wilbur climbed aboard a glider and flew it during a clear, sunny day. He was exhilarated to feel the rush of wind as he flew nearly 30 miles per hour for up to 400 feet. While they were there, they continued to study different birds and how they flew. Armed with this knowledge, they made changes to the glider during the winter and returned to Kitty Hawk the following summer.

The summer of 1901 was very successful in acquiring mounds of new data and constantly taking test flights and tinkering more on the design. They faced countless challenges that were overcome with constant diligence, hard work, study, and debate. The brothers certainly had their share of doubts that they would be successful. During one low moment, Wilbur lamented that “not in a thousand years would man ever fly.” However, they encouraged each other and confidently returned home to continue their work. Orville stated that “there was some spirit that carried us through.” During that winter, they built a homemade wind tunnel and continued to re-design the glider based upon their practical discoveries in Kitty Hawk and theoretical experiments in Dayton.

During the fall of 1902, they returned to their sparse shack and camp at Kitty Hawk, where the brothers worked day and night. During one sleepless night, Orville lay awake thinking and came up with the idea for a movable rear rudder for better control. They used his idea and achieved even greater success with the glider flights with the modifications. They knew they were finally ready for a motor and might achieve the impossible dream of humans flying through the air in what would become an airplane.

The Wright brothers spent hundreds of hours testing motors, developing propellers, and finding solutions to problems. Orville admitted, “Our minds became so obsessed with it that we could do little other work.” In December 1903, they reached Kitty Hawk and unpacked their powered glider for reassembly at their camp.

On December 17, five curious locals braved the freezing cold and came out to watch Orville and Wilbur Wright as they prepared their flying machine. They turned away as sand blasted into their eyes from the nearly gale force winds. Wilbur set up their camera on its wooden tripod a short distance from the plane. Dressed in a suit, tie, and dress shoes, Orville climbed aboard

NARRATIVE

the bottom wing of the bi-plane and strapped himself in while the motor was warming up. At precisely 10:35 a.m., Orville launched down the short track while Wilbur ran besides, helping to steady the plane. Suddenly, the plane lifted into the air, and Orville became the first person to pilot a machine that flew under its own power. He flew about 120 feet for nearly twelve seconds. It was a humble yet historic flight. When Orville was later asked if he was scared, he joked, "Scared? There wasn't time." A half hour later, after they readied it for another flight, Wilbur joined his brother in history by flying "like a bird" for approximately 175 feet. They flew farther and farther that day, and Wilbur went nearly half a mile in 59 seconds. They sent their father a telegram sharing the news of their success, and as he read it, he turned to their sister and said, "Well, they've made a flight."

One witness of the Wright Brothers' first flight noted what made them successful. "It wasn't luck that made them fly; it was hard work and common sense; they put their whole heart and soul and all their energy into an idea, and they had faith." President William Howard Taft also praised the diligence of the Wright Brothers in working hard to achieve their dream. "You made this discovery," he told them at an award ceremony "by keeping your noses right at the job until you had accomplished what you had determined to do."