Mr. Hesselberg

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World History Fair

Leonardo da Vinci

Leonardo da Vinci was and is known today as a renowned and skillful painter, a trailblazing inventor, and an adventurous scientist . Living from 1452 to 1519 Leonardo had a colorful life and traveled from place to place. Leonardo was basically good at everything, probably because he was interested in everything. Leonardo da Vinci was a very fascinating and curious intellectual. He studied and questioned everything, and believed that “Learning never exhausts the mind.” Leonardo is considered a genius and a leading light of the Renaissance. Along with impacting the Renaissance period, he also affected the world after his death. Leonardo da Vinci’s art and ideas influenced the world during and after his life by creating art different from others, inventing new machines, and advancing scientific knowledge.

Leonardo da Vinci is well known for his art, and changed the course of the art world with his techniques and how all of his other work and interests connect to his pieces. Leonardo’s most known painting techniques are Chiaroscuro, a technique that uses light and shadow to define 3 dimensional objects and Sfumato, a technique that uses fine shading to make lines between colors and tones faint and undetectable. By Leonardo using these techniques in his work, it made them more popular and used. Shortly after Leonardo da Vinci bringing Chiaroscuro to its full potential in paintings such as his Adoration of the Magi, Chiaroscuro became a primary technique amongst painters and in the 17th century it was commonly used to describe art that needed vast amounts of gradation of light and darkness to get it’s effect. Along with observing and recording data during his studies, Leonardo also spent time dissecting faces and people’s emotions and how they were portrayed by people. Using this information, he was able to paint emotions clearly and flawlessly in his pieces. A famous example of this is the Mona Lisa or the La Gioconda. That by using all of his knowledge about science and art itself created her mysterious and ever famous smile.

Along with being an artist, Leonardo da Vinci was also an inventor and military engineer and paved the road for many machines we have today. Leonardo thought differently from others about machines. He believed that by understanding how every separate machine part functioned, he could then combine them in many ways to improve or create machines that haven’t been made before. This sort of thinking led him to create similar sketches of the bicycle, the helicopter, the airplane and many more inventions we have today. Leonardo also worked as a military engineer for Duke Sforza. He designed war machines such as a chariot with scythe blades on it’s sides, an armored tank powered by two men cranking a shaft, and a huge crossbow that needed to be operated by a small army of men. He furthered his engineering career by briefly working as a military engineer for Cesare Borgia in 1502 and 1503. Leonardo traveled outside of Florence and oversaw military construction projects, sketched city plans, and sketched topographical maps as well. Leonardo also made plans, possibly with Niccolo Machiavelli, to redirect the Arno River away from Pisa, it's rival, so that they did not have access to the sea. Sadly, most of Leonardo’s ideas weren’t built or even funded so his inventions didn’t have much effect on the Renaissance time period. Though after this period, his ideas influenced many of the machines/inventions we have now such as the helicopter and parachute.

Although Leonardo’s studies did not affect scientific knowledge during the Renaissance, in the future they would help bring a new and better understanding of the human body, optics, hydraulics, and many other subjects. Leonardo had always been interested in nature and testing scientific laws. Instead of working on art pieces and projects, he was mostly in nature, studying it. He had many questions, theories, and observations and decided to keep them in notebooks. Now, these notebooks are mostly the only information historians have about his thinking and ideas. These notebooks are scattered across the world in museums and libraries, and are very valuable. His main and broad four themes of all his notebooks were painting, mechanics, architecture, and human anatomy.

Based on his drawings, there were plans in his notebooks for a book about the human body. Leonardo wanted to learn how the body work from life up until death, he wanted to know and understand how each system worked. He dissected a few animals and even humans to obtain his knowledge about the body. He drew what he saw and had about 1,500 three dimensional, multi-layered drawings from his anatomy research. The results of these were the first attempts at accurate illustration of human organs, muscles, and bones in history. His drawing have affected medical textbooks thus far. His interest in anatomy led to another study, optics. Although his knowledge was limited about optics, he still tried to break new ground in the study. Most people at the time believed Plato’s theory, that things are seen because of eyes projecting light onto them and then being reflected back into the eye, creating an image. Leonardo questioned Plato and began to do tests. After doing a test, watching water in glass being struck by sunlight, seeing that when the sunlight penetrated the glass, it separated into different colors. He concluded that the colors or the changes in light were not because of what the eye was “projecting” but because of the water in the glass. He kept doing tests and tried to come up with his own theories and ideas. After doing another experiment, tossing stones in a river and watching the ripples it made, he theorized that light traveled in waves. It is said that Leonardo was the first person to realize this but he was confirmed to be the first to right about the difference between peripheral and central vision. Along with anatomy and optics, Leonardo also studied hydraulics and learned theories such as the moon’s effect on tides and sketched machines on how to control water and obtain its power. Leonardo was never able to publish his work and after his death his notebooks were scattered all over the world. His work didn’t advance scientific knowledge during the Renaissance period but after, his drawings that accurately depicted the human body helped people gain an understanding of anatomy.

Leonardo da Vinci was a person ahead of his time. Although he was a bit odd, he was an absolute genius. He had a lot of ideas that weren’t shared to the world until after he died or not all. He didn’t finish many of his projects but the ones he left are extraordinary and are treasured. Leonardo’s work in art, inventions, and science is seen and admired by people all around the world. Most people think of and know him as just an artist but he was more than that, so much more. Leonardo da Vinci’s art and ideas influenced the world during and after his life by creating art different from others, inventing new machines, and advancing scientific knowledge.