



Impact Statement

Felice Khoo, Grade 9

***The One Who Uncovered the Secrets of the Ocean Floor*, 2026**

Colored pencil, graphite, marker on paper, 10 x 15 inches

Haas Hall Academy, Fayetteville, AR

Unsung Hero: Marie Tharp

Marie Tharp was only recognized for her groundbreaking work in the later years of her life and was often dismissed early in her career. Only in the twenty-first century was she recognized for all she had done and the vast effects it had on later research in the field. Men always doubted her abilities even when she proved them wrong again and again. Tharp was never mentioned once in school and was never mentioned on the topic of groundbreaking woman despite her accolades. This perseverance regardless of accolades or awards is what initially drew me to Tharp. She embodied courage, bravery, and dreams of doing what someone believes or enjoys, even when everyone around is doubting them. Hearing her story made me want to choose a career I wanted and not a career I had to because of my gender and the discrimination that often comes with it.

As an oceanographic cartographer and geologist, Marie Tharp's impact was groundbreaking in the field of the ocean floor. She was born on July 30, 1920, and was first introduced to the art of mapmaking by her father and his job. She was not initially drawn to art though. But in the era of increased women in STEM fields, Marie was given the opportunity to pursue a field she never thought possible. During this opportunity as a research assistant at the Lamont Geological Observatory in Columbia University in 1948, Marie was fully able to shine and her abilities were known but not recognized yet. At the Lamont Geological Observatory is where she met Bruce Heezen. He would become her trusted partner, and the pair worked perfectly together like salt and pepper creating the first map of the Atlantic Ocean floor and eventually the whole ocean floor. At first Tharp was not allowed on research boats, and her evidence was deemed as "girl talk". But through countless efforts, hours researching, and mapmaking, she was able to solidify herself as a great cartographer and a revolutionary woman in the field. Her and Heezen's maps proved the theory of plate tectonics and the Mid-Atlantic Ridge rift valley. Tharp's contributions are still important to this day.

My artwork tells the story of Marie Tharp through her map of the ocean floor. Through my research, I learned that her most famous map was her and Heezen's map of the entire ocean floor, which I thought would best represent her and her achievements. I built layers of the ocean floor using paper meant to represent how she built up her life and respect from her peers. There is also a mini graph of her data on the Mid Atlantic Ridge because it was her most famous finding on the ocean floor. The map is illustrated in alcohol markers, and she is the main focal point in pencil. I decided to leave her in black and white because of how she was often not acknowledged for her work, but her maps still shined through and made people believe in her

talents and abilities, hence why it is in color. Her map is supposed to be a story of her life and how over several years and through countless efforts, she was finally acknowledged. But most of her impact and talents are shone through her maps.

My research and creation of this artwork helped me realize what kind of person Tharp was. My artwork took several tries and in doing so it made me realize how many times Marie Tharp had to try to achieve what she did in her field. Most of all, Tharp never backed down from all the naysayers and strove to accomplish something that she was passionate about. Her mentality has motivated me in my life to strive for my ambitions and passions. I hope that by learning and creating this piece of artwork, I will carry Tharp's mindset and perseverance with me for the rest of my life.

References:

"About Marie Tharp | Lamont-Doherty Earth Observatory." [Columbia.edu](https://columbia.edu/marietharp), 2012, [marietharp.ideo.columbia.edu/about-marie-tharp](https://columbia.edu/marietharp).

Ekstrom, Megan. "Marie Tharp: Pioneering Oceanographer - Marie Tharp - the University of Chicago Library." www.lib.uchicago.edu, 20 May 2019, www.lib.uchicago.edu/collex/exhibits/marie-tharp-pioneering-oceanographer/.

"Marie Tharp." AAG, www.aag.org/memorial/marie-tharp/.