

Impact Statement

Hadley Nelson, Grade 12

***Beneath The Surface*, 2026**

Unsung Hero: Marie Tharp

Colored pencil on paper, 18 x 24 inches

Roosevelt High School, Seattle, Washington, USA

I chose to represent Marie Tharp because of her perseverance and groundbreaking contributions to science despite facing discrimination as a woman in a male-dominated field. As one of the first people to map the Atlantic Ocean floor, she challenged long-held scientific beliefs and forever changed our understanding of the Earth. I admire her determination to continue pursuing her research even when her discoveries were dismissed simply because she was a woman. As a young woman interested in a STEM career, I find her courage, resilience, and confidence in her work especially inspiring. When I researched her work, I knew I wanted to represent her discoveries artistically to hopefully spread more awareness about her story.

Marie Tharp was an oceanographic cartographer who created the first comprehensive map of the Atlantic Ocean floor. While analyzing oceanographic data, she identified a rift valley running through the Mid-Atlantic Ridge and provided some of the first compelling evidence for continental drift and ultimately helped establish the modern theory of plate tectonics. Her work transformed geology and oceanography by revealing that Earth's crust is constantly moving, which changed how scientists understand our planet. Today, her discoveries continue to influence geological research, earthquake studies, and our understanding of Earth's history. Although she made significant discoveries, she was denied professional credit, research opportunities, and was doubted because of gender discrimination.

I wanted my art piece to depict her as she was mapping out the rift valley while also showcasing her awards and her connection with the ocean itself. The calm determined expression on her face represents her dedication and patience even when she was pushed aside by male colleagues. In the background, awards and honors hang on the walls of her office, recognizing the accomplishments that she earned after years of perseverance. I included the Lamont Doherty Heritage Award, Hubbard National Geographic Society Medal, Woman Pioneer in Oceanography award, and Outstanding Geologist from the Library of Congress. Also, by blending her workspace with the underwater world she revealed, I wanted to illustrate the connection between her scientific observation and the vast, unseen landscapes she helped the world discover. Knowing what I wanted to include, I sketched out a few ideas for my piece on scratch paper, referencing a black and white photograph of Marie. Then, when I had a finalized idea, I resized my sketch onto an 18in x 24in Bristol Paper. I then used Prisma colored pencils to create realistic textures in both the ocean and the maps. I wanted to contrast

the warm office lighting/setting and Marie's figure with cool ocean blues to make the ocean colors pop against Marie and highlight the connection between Marie's presence and the ocean she surrounded herself with. I researched photographs of Marie Tharp, historical maps, and the Mid-Atlantic Ridge to accurately represent both her work and the significance of her discoveries along with the honors she earned.

Marie Tharp's story reminds me that meaningful discoveries can often require a lot of perseverance, especially when others doubt your abilities. As a young woman who hopes to pursue a career in STEM, her resilience encourages me to trust my curiosity, work hard, and remain confident even when faced with obstacles or stereotypes. I hope my artwork inspires people to recognize the many innovators whose contributions have shaped our world but have not received the recognition they deserve. By sharing Marie Tharp's story, I want others to appreciate the importance of determination, scientific curiosity, and the impact that one person's courage can have on history. I have already shared my artwork with friends and family, along with Marie Tharp's story, and I hope they will continue sharing her story with others. In this way, I hope that my artwork can become more than a portrait and help keep her legacy alive.