



Impact Statement

Alessandra Garza, Grade 11

Architect of the Ocean Floor, 2026

Acrylic, colored pencil on canvas board, 20 x 16 inches

Pearland High School, Pearland, TX

Unsung Hero: Marie Tharp

The Unsung Hero I selected for my artwork is Marie Tharp. I chose her to be the hero represented in my artwork because I found her inspiring as she was the first American cartographer to create the first scientific map of the Atlantic Ocean floor yet was not credited for years because of her gender. As a young woman myself, her reason for being “unsung” being due to her gender made her stand out to me as a choice for my topic. She faced many challenges during her career due to her gender, but her passion for geography fueled her determination to prove herself as a cartographer. Her unwavering determination allowed her to have such an enormous impact on society by revolutionizing earth science through her discovery of the Mid-Atlantic rift valley and her production of the first comprehensive maps of the ocean floor that provided evidence for plate tectonics and continental drift.

During her time as a cartographer, Tharp was often excluded from boarding research vessels as women were often considered “bad luck” at sea during the 1950s. This meant that Tharp was not allowed on the vessels that collected the data she needed to map out the ocean floor. Despite this challenge, she refused to let it phase her research and she proceeded to use the raw sonar soundings to visualize the ocean floor that no one had ever mapped before with nothing but her drafting pen and her desk. When Tharp made her groundbreaking discovery of the Mid-Atlantic rift valley, her partner, Bruce Heezen, dismissed her discovery as “girl talk.” Heezen’s dismissal of Tharp’s discovery of the Mid-Atlantic rift valley solely because of her gender further emphasizes the challenges Tharp faced as a woman in a male dominated field where women were looked down upon. Despite her discovery being initially denied, it wasn’t until Howard Foster plotted the epicenters of seismic activity in the Atlantic, and alongside Tharp, started studying more until they eventually discovered the link between the mid ocean ridges and the earthquakes that Tharp had someone who believed her. Her discovery still faced skepticism, until explorer Jacques Cousteau led an expedition to prove Tharp’s discovery was false, which led to him to be proven wrong as his cameras found evidence that proved Tharp’s discovery was in fact true. I researched her journey on the “The Mariners’ Museum and Park” website, “Simon Fraser University” website, as well as the “Columbia University” website.

My vision behind my interpretation of her story was to make her larger than the world that tried to erase her. I wanted to serve her justice through this painting by portraying her as being a large figure of immense importance to compensate for the world failing her by denying her the credit she deserved despite her contribution to earth science being monumental. I portrayed her as larger than the earth to visualize how large her contribution to earth science through mapping

out the ocean floor was. Her presence in earth science is the reason as to why society understands ocean geography to a vastly larger extent and I wanted the image of her mapping the globe to highlight her importance to humanity's understanding of not only ocean geography, but planet earth as a whole. I wanted her to map the bare earth with nothing but her drafting pen and her equal spacing divider to reference how she would draw using the raw sonar soundings. I began my process with acrylic paint to first create the galaxy in the background and then layered Marie and the earth over to have them stand out as the focal point of my artwork. I then used Prismacolor pencils to refine the small details to further bring my interpretation of her story to life.

After learning about Marie Tharp's story, I want to embody her spirit of determination in my own life because despite having her scientific insights ignored for years, Tharp never gave up on doing what she loved. I want to remember when I am facing challenges about how Marie Tharp never gave up no matter how difficult it was to overcome the obstacles she faced. She proved that challenges can be overcome if you are truly passionate about what you love. I hope that my artwork conveys how important her legacy was to society and that this painting upholds her memory in a way that she deserves.