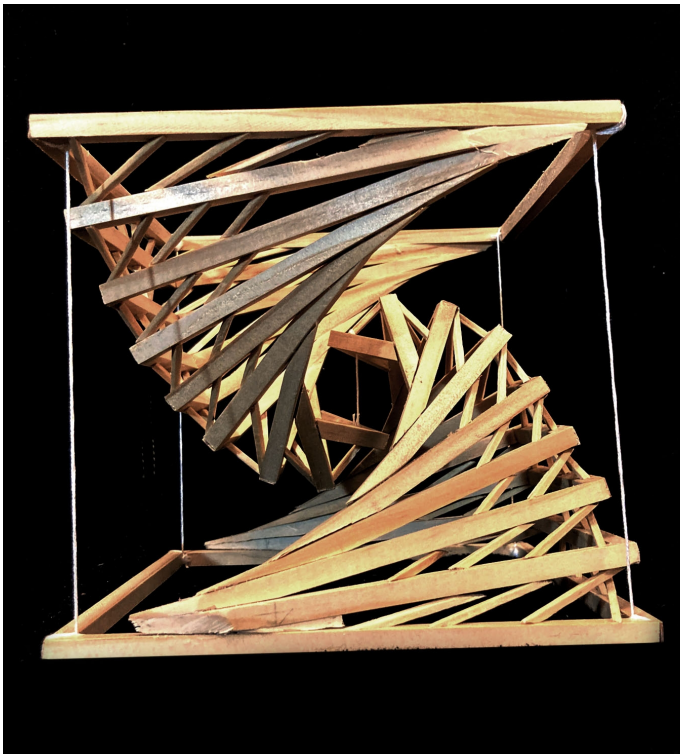


The Tensegrity Waves

By: Graham



The Tensegrity Waves are two spiraling structures, one above the other, that are held together by only string. The inspiration for this model is the idea of creating arcs and curves out of only straight lines, an idea that I explored heavily in my initial 12 box assignments. I was originally driven by the idea of nesting and stacking equilateral triangles, each at a constant angle above the one before, until it created a wave-like structure reminiscent of the **Fibonacci sequence**. These structures were made with the intention to connect them with tensegrity, an online structural concept derived from **"tension"** and **"integrity"**, where one piece of the structure can be held above the other by using one main string support in the center, and multiple string along the outside to balance it. This idea really fascinated me and allowed me to bring a new dynamic structural element to this project, while abstractly redefining the idea of primary, secondary, and tertiary components. Depending on how you define the ideas, the string can be considered the primary structure of the piece, since it's tension allows the entire model to stay together. Finally, I was very interested in integrating a wide variety of angles in this piece, With **17 unique angles**, all mathematically calculated, making up the 1/4 inch structure, and many more unique angles making up the tertiary 1/8 inch structure. These angles were created with the intention of creating slightly different shapes in each segment of each wave, allowing the piece to have a unique dynamic flow while relying on geometric calculations throughout.

