For the first structure, I folded the index card into thirds and then coiled it into rings. The center ring was slightly bigger than the four outer rings. I then ripped the sixth index card into four stripes and used it to attach the outer rings to the center. The idea behind this was to try to create a wide surface to displace the weight that would be placed upon the structure.



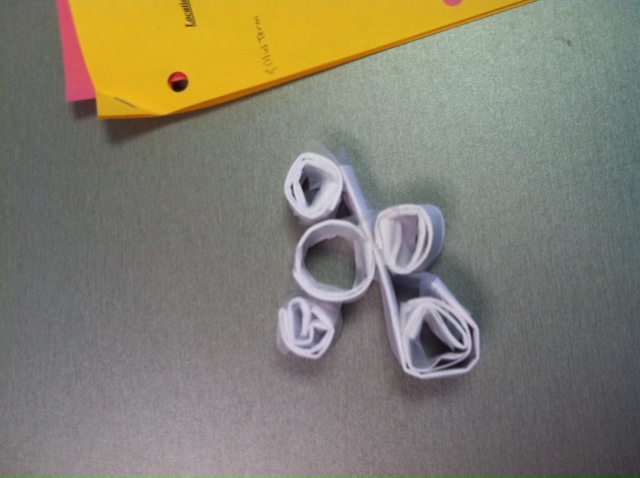
The first structure was able to withstand a weight of 470 lbs. Afterwards, it was flatten on the top and bottom of the rings and one of the strips holding an outer ring partial broke apart.



When creating the second structure, I wondered if spacing the rings apart had created a weakness instead of a strength, so I decided to try the opposite design on the second structure. I folded the index cards the same why as the first structure, but I coiled the rings tighter to reduce space in between the rings. I used the sixth index card to create a tighter hold by folding it four times and using it to connect only two outer rings. The other two rings were held on with just tape. Additionally, I used more tape than I had used in the first structure.



The second structure was stronger and able to withstand 560 lbs. In conclusion, that was 90 lbs more than the first structure. The top and bottom of the rings were flatten again, but this structure did not break apart.



From this I learned that the tighter things are held together and the thicker they are the more they can withstand.