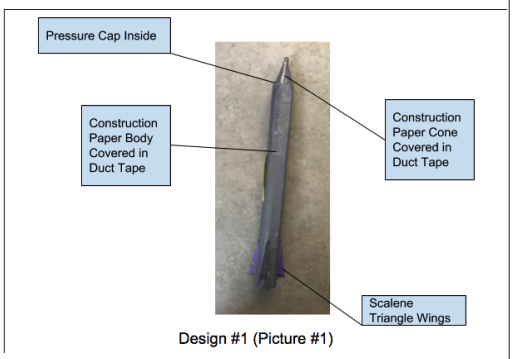
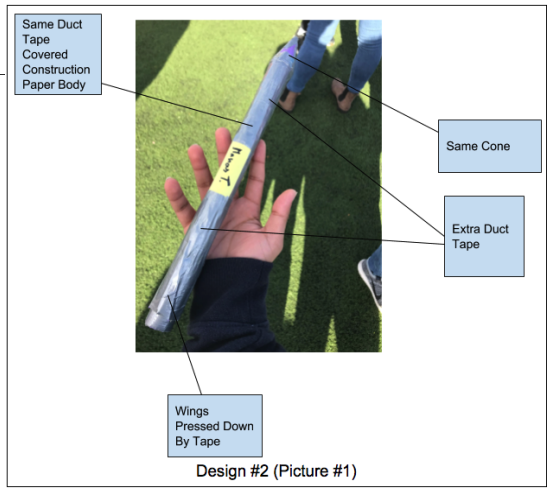
Aerodynamic Design

1/11/18 -1/27/18, Principles of Engineering

This project's objective was to create a rocket that could fly as far as possible using an air pump. My teammates were Shyam Pandya and Rahul Sura. The rocket had to fit over a PVC pipe, and therefore have a diameter of 3/4". The rocket also had to have a cone, had to have a wingspan less than 24", had to have a body length between 10"-15", and had to be made of teacher approved materials, which were construction paper and duct tape in my team's case. Each student had to make two rockets or have two versions of a rocket ready for testing. The second rocket/second version was tested approximately a week after the first. Along with the actual flight testing came data gathering, and therefore documentation. The data that was recorded on the spot was the flight time, launch angle, and distance. These were later used to calculate height and initial velocity, with all of the data being put into a final graph. The documentation consisted mostly of data, explanations, and analysis. Since this was a project in which each member did their own work and only worked together on the documentation, I did build my 2 versions of a rocket and I did my part of the documentation. The project was not very intense or difficult for any member of the group, and since us 3 are all very close friends, we got along and worked together quite well.



Design #1 (Picture #1)



Design #2 (Picture #1)