

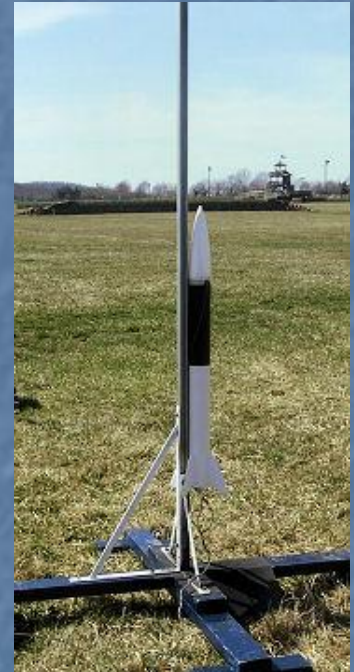
Explorer Post 1010 Team 8186 Research Presentation

Ben Fann, Mattie Bryant, Disa Yu, Kathleen Yu
Samantha Steckel, Becca Foster, Jon Boruch



Design and Construction Process

- We used RockSim to aid in the design process
- BT80 body tube
- We designed our own fins
- We used tools such as drills, glue, and a Dremel to build the rocket
- We used a PNC-80k nose cone
- We used a F24-4W motor
- We used a 70" x 7" streamer on the cargo unit and nose cone
- During the design process, we considered cost and availability of materials



Teamwork

- We all contributed to the design, development and test launching of the rocket
- Jon constructed the body tube
- The construction of the egg compartment was mainly done by Disa, Ben, and Mattie
- The streamers were shaped and ironed by Samantha and Becca
- Disa and Kathleen worked on the fins



Flight Testing Process

- Fin Design
- Cargo section weight
- Streamers entangled
- Used every launch opportunity
- Record and analyze performance
- Used video and altimeter data
- Modifications as needed



Lessons Learned

- A weight concentration towards the center of the rocket will cause it to descend with a horizontal tilt, increasing flight time
- Design and development time
- Altitude inconsistency may be controlled by adjusting rocket's mass

