Rocket Data Sheet and Launch Record

Rocket Description

Owner:	Brooke Fleener and
Rocket Name:	Brooke and Callie's
Type:	Big Sharky
Length: (inches)	22.6 in
Diameter: (inches)	1.6 in
Fins:	3
Listed Mass: (g)	85 g
Date of Construction:	September 27th

Recommended Motors: (C only)

C6-5

Center Gravity(CG):	13 1/4
Center Pressure(CP):	
Estimated Cd:	0.5
Predicted Altitude:	319 Ft

Prediction Notes

I looked at rockets from last year and the one with glitter on it, like ours, only rised to 309 feet. That rocket was also slightly heavier, so I will predict that our rocket will reach an apogee of 319 feet.

Launch Information

Date:	10/9/2013
Time of Launch:	11:00:00
Location:	CHS
Rocket Mass:	93.1
Motor:	C6-5
Motor Mass:	25.1
Altimeter Mass:	6.7g
Liftoff Mass:	
Wind Direction:	North
Wind Speed:	12 mph
Igniter:	
No. of tries to ignite:	1

Ignition

¨ Successfull	¨ Blow Out
¨ Caught on clips	¨ Motor Failure

Trajectory

¨ Straight-Up	¨ Spinning
¨ Corkscrew	¨ Non-vertical
¨ Into the wind	¨ Unstable

Launch Notes

parachute opened a little late and it was twisted. It was a bit windy, but otherwise the launch went well

Recovery Information

Ejection Occurred

¨ During Ascent	¨ At Apogee
-after apogee	¨ During Descent
¨ Ejection Failure	

Parachute Deployment

¨ Full	¨ Partial
¨ Did not deploy	

Parachute Descent

¨ Stable Descent	¨ Tangled lines
¨ Some swaying	¨ Sprial descent

Reason for Recovery Failure

¨ Damaged Chute
¨ Tight Upper Body tube
¨ Improper setup
¨ Chute Separated
¨ Motor Ejected
¨ Unplanned Separation
¨ Other _____

Descent Speed

¨ Slow	¨ Average speed
¨ Very fast	¨ Ballistic

Landing

¨ Soft	¨ Water
¨ Tree	¨ Caught on Wire
¨ Hard	¨ Crash

¨ Landed on Building

Recovery

¨ Full Recovery	¨ Lost
¨ Not Recoverable	¨ Parts lost

Distance & Direction from pad:

Recovery Notes

Our parachute popped after apogee and was twisted when it was deployed. It only opened partially, but enough to give the rocket a soft landing. Most of the other groups struggled with the parachute as well. Some groups' parachutes didn't even open, so we were average for how our parachute deployed

Lessons Learned

I think it is safe to say that we will never use glitter again. It made the rocket a bit heavier, but more importantly, it was a mess! We also learned that we need to be careful of which way the wind is blowing, otherwise the rocket will not go straight up.

Altimeter Two Data

Apogee Altitude:	311 Ft
Top Speed:	76 mph
Burn Time (burn):	2.25 s
Peak Acc (Pacc):	7
Avg Acc (Aacc):	1.6
Coast Apogee (C2AP):	2.85 s
Apogee to Eject (AP2E):	1.9 s
Ejection Alt. (EALt):	267 Ft
Descent Speed (dESc):	12 mph
Flight Duration (durA):	21.5 s

Altimeter Data Analysis

We predicted 319 feet and we reached 311 feet. It curved a little bit, so the decrease in altitude makes sense. We also tilted the launch pad at too much of an angle, so it made the rocket curve more. Our ejection altitude makes sense because our parachute deployed after apogee, so the 267 feet must have been on the way down.

Post Launch Information

Rocket Damage

¨ No Damage
¨ Scuffed Paint
¨ Launch Lugs
¨ Engine Stuck
¨ Fins Damaged

Describe any damage to the rocket:

There was no damage to the rocket.

Flight Grade

¨ Excellent
¨ Good
¨ Poor

Rocket Project Suggestions