Rocket Data Sheet and Launch Record

Rocket Description

Owner:	Casey and Ryan
Rocket Name:	Cy
Type:	Big Sharky
Length: (inches)	22.625 in
Diameter: (inches)	1.645 in
Fins:	1/8 in Balsa
Listed Mass: (g)	70.8738 g
Date of Construction:	

Recommended Motors: (G only)

C6-5, C6-3

Center Gravity(CG):	14.93 in
Center Pressure(CP):	
Estimated Cd:	
Predicted Altitude:	385 Ft

Prediction Notes

Compared rocket design materials, mass, etc.

Launch Information

Date:	10/10/2013
Time of Launch:	10:00:00
Location:	Driving Range
Rocket Mass:	68.8 g
Motor:	C6-5
Motor Mass:	25.1 g
Altimeter Mass:	6.7g
Liftoff Mass:	100.6 g
Wind Direction:	North
Wind Speed:	13 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

Duct tape was applied to the engine in place of the forgotten engine block. Our rocket was angled as straight up and down as possible, and it flew probably the straightest in the class.

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:

North, probably about 50 yards away.

Recovery Notes

No noticable damage to the exterior. Parachute did not deploy all the way, probably due to wrapping it up without thinking and being packed too tightly. Our descent speed was relatively low, which means that our parachute did a better job than some of the others.

Lessons Learned

Maybe use duct tape instead of the engine block? Nose cone paint can look bad, and it will chip easily. Shooting rockets into the wind is a bad idea, as drag will make it go farther into the wind.

Altimeter Two Data

Apogee Altitude:	447 Ft
Top Speed:	98 mph
Burn Time (burn):	2.1 s
Peak Acc (Pacc):	10.5
Avg Acc (Aacc):	2.2
Coast Apogee (C2AP):	3.6
Apogee to Eject (AP2E):	2
Ejection Alt. (EALt):	404 Ft
Descent Speed (dESc):	14 mph
Flight Duration (durA):	26.6

Altimeter Data Analysis

Our rocket only went 1 mph faster than another groups, but we went the highest in our class. It's possible that the weight that we didn't have due to not putting in the engine block propelled ours to go higher, even though it didn't go durastically faster than others. Top speed is not necessarily correlated with top apogee alititude, even though it was in our case. Others had a high speed but didn't go very high. Our flight duration was about average as well.

Post Launch Information

Rocket Damage

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

Describe any damage to the rocket:

None.

Flight Grade

¨ Excellent
¨ Good
¨ Poor

Rocket Project Suggestions

Put more thought into how you place the parachute into the rocket, and try to angle the rocket as straight up and down as possible before launching (barring wind).