Rocket Data Sheet and Launch Record

Rocket Description	
Owner:	Abby & Danielle
Rocket Name:	John Lennon
Type:	modelrockets.us
Length: (inches)	22.625 in
Diameter: (inches)	1.645 in
Fins:	laser-cut 1/8 in bals
Listed Mass: (g)	70.9 g
Date of Construction:	9/27/2013
Recommended Motors: (G only)	
Center Gravity(CG):	14.2
Center Pressure(CP):	
Estimated Cd:	
Predicted altitude:	350

Prediction Notes

We plan on adapting our rocket launch with the weather. If it is windy we will point our rocket towards the wind.

Launch Information	
Date:	10/9/2013
Time of Launch:	11:00 A.M.
Location:	CHS
Rocket Mass:	82.1 g
Motor:	C6-5
Motor Mass:	25.1g
Altimeter Mass:	6.7g
Liftoff Mass:	113.9g
Wind Direction:	North
Wind Speed:	15 MPH
Igniter:	Estes
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

Our launch was delayed due to the fact that our altimeter was dead. When we startedd our set up we made sure that our clips were connected acurately and that they were properly spaced. When released the rocket went straight up and the parachute came out perfectly.

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 50 m (roughly)

Recovery Notes

Nothing happened to our rocket to our knowledge. The deployment of our parachute was after the apogee. It landed perfectly and we had no damage.

Lessons Learned

If we could change something, I would say probably the angle that we put our rocket at during the launch. It posibly could have brought it to a higher altitude, but all in all our launch was really good for the first time. So there really isn't much we could change.

Altimeter Two Data	
Apogee Altitude:	420 Ft
Top Speed:	96mph
Burn Time (burn):	1.9s
Peak Acc (Pacc):	8.7
Avg Acc (Aacc):	2.4
Coast Apogee (C2AP):	3.6
Apogee to Eject (AP2E):	2.4
Ejection Alt. (EALt):	356
Descent Speed (dESc):	9mph
Flight Duration (durA):	33.4

Altimeter Data Analysis

Comparing our data to everyone elses, we noticed that both our apogee altitude and our speed fell second to Casey and Ryans. Our Burn time though was the lowest from everyone elses. But our average accleration was the highest out of them all. The peak accelration, apogee to eject and the coast to apogee was average. Our descent speed was slower compared to everyone else, but that was probably due to the fact that our parachute actually efected and was not tangled. And since our descent speed was slower, or flight duration was then one of the longer was. To some it all up, our flight went really well for Abby and I being first time fliers.

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

Before we went out we made sure that by pulling the nose cone our parachute would come out. I think that would be something to note for the other rockets that their parachutes did not eject correctly. I think that if we did not do that before our launch, our parachute