

# Rocket Data Sheet and Launch Record

Rocket Description		Recovery Information		Altimeter Two Data	
Owner:	Brittany Williams	<b>Ejection Occurred</b>		Apogee Altitude:	926 ft
Rocket Name:	Pop Rocks	•• During Ascent	•• At Apogee	Top Speed:	198 mph
Type:	Sumo	•• After Apogee	•• During Descent	Burn Time (burn):	1.25 s
Length: (inches)	39 in	•• Ejection Failure		Peak Acc (Pacc):	8.8 g
Diameter: (inches)	4 in	<b>Parachute Deployment</b>		Avg Acc (Aacc):	7.2 g
Fins:	4	•• Full	•• Partial	Coast Apogee (C2AP):	5.6 g
Listed Mass: (g)	907 g	•• Did not deploy		Apogee to Eject (AP2E):	-0.4 s
Date of Construction:	3/1/2016	<b>Parachute Descent</b>		Ejection Alt. (EALt):	859 ft
Recommended Motors: (G only)	G40-4W, G80-4T, G35-4W, G38-4FJ, G64-4W	•• Stable Descent	•• Tangled lines	Descent Speed (dESc):	15 mph
Center Gravity(CG):	25.5 inches	•• Some swaying	•• Sprial descent	Flight Duration (durA):	45.5 s
Center Pressure(CP):	29.5 inches	<b>Reason for Recovery Failure</b>		<b>Altimeter Data Analysis</b>	
<b>Building Notes</b>		•• Damaged Chute		The apogee is much larger than I previously predicted. The data seems very reliable and because the rocket went straight up, it makes more sense for the apogee to be higher. I thought that the apogee to eject would be negative because of the type of engine I used and	
The fins were a struggle to put on so a considerable amount of work was required to make them fit. All pieces were included		•• Tight Upper Body tube			
		•• Improper setup			
		•• Chute Separated			
		•• Motor Ejected			
Estimated Cd:		•• Unplanned Separation		<b>Prediction vs Actual Analysis</b>	
Predicted Altitude:		•• Other		The difference in my apogee prediction and what I actually ended up with is 76 feet. I predicted 850 but the rocket did go 926 feet into the air. The wind did not affect my launch very much because my rocket did not go very far from the launch pad and went straight up when I launched it.	
<b>Prediction Notes</b>		<b>Descent Speed</b>			
I rounded out the prediction that came from the spread sheets to about 850 ft because the engine I chose has plenty of sudden thrust that I am confident will carry my rocket a decent ways into the air if		•• Slow	•• Average speed		
		•• Very fast	•• Ballistic		
		<b>Landing</b>			
<b>Launch Information</b>		•• Soft	•• Water		
Date:	5/3/2016	•• Tree	•• Caught on Wire		
Time of Launch:	10:00 AM	•• Hard	•• Crash		
Location:	Carroll Highschool	•• Landed on Building		<b>Lessons Learned</b>	
Rocket Mass(g):	1100	<b>Recovery</b>		Don't launch when its been rainy the last few days, mud is a pain to get off and can remove the paint off your rocket when you go to clean it off. Also, pertaining to the rain, wear boots so my shoes dont get absolutely soaked like they did at the beginning of the day, water soaked shoes and socks is so unbelievably uncomfortable.	
Motor:	G75-4	•• Full Recovery	•• Lost		
Motor Mass(g):	131	•• Not Recoverable	•• Parts lost		
Altimeter Mass(g):	9.9	Distance & Direction from pad:			
Liftoff Mass(g):	1240.9	Rocket was the closest to the pad when landing.			
Wind Direction:	NW	<b>Recovery Notes</b>			
Wind Speed:	9 mph	Rocket was sticking out of the mud and had it stuck to the cone, wings, and on some parts of the cup.			
Igniter:	first fire	<b>Post Launch Information</b>			
No. of tries to ignite:	1	<b>Flight Grade</b>			
<b>Ignition</b>		•• Excellent			
•• Successfull	•• Blow Out	•• Good			
•• Caught on clips	•• Motor Failure	•• Fair			
<b>Trajectory</b>		•• Poor			
•• Straight-Up	•• Spinning	•• Rocket cannot launch again			
•• Corkscrew	•• Non-vertical	<b>Describe any damage to the rocket:</b>			
•• Into the wind	•• Unstable	There was no damage, just quite a bit of mud.			
<b>Launch Notes</b>		<b>Rocket Project Suggestions</b>			
Launched with the first press of the button. The rocket launched straight up without any complications.		Save enough pork burgers for all of us!!!!			