

Introduction. First Nations Launch teams need to provide a PFR. This questionnaire is designed to give the FNL Committee a snapshot of your teams' flight mission, and is due anytime on February 12th, email to: hawkd_0212@menominee.edu. The PFR is part of the overall FNL competition grade however, we ask that your team keep the PFR to no more than two pages. While writing the report please keep in mind that our focus is on having a Successful Flight Mission (SFM). In other words your teams need to successfully fly and recover their rocket and obtain science mission deliverables with no damage.

- List the top 1, 2, or 3 science experiments you might plan to fly as your science payload. And tell us in one or two sentences what the experiment is used for and what might you expect?

Air temperature – we hope to utilize our equipment here at Lummi Nation to monitor the air quality for our “Clean Air” classes.

Comparison of “homebuilt” altimeter to R-DAS – our robotics/electronics classes have developed multiple sensors and we’d like compare the ones that students built with commercial models

Homebuilt GPS module – test to see if we can get reliable and consistent data from a class-built GPS project

Video Camera – to see where we’ve been and where we’re going

- What size rocket(s) might your team be launching? Diameter, length, type and how many fins? Is the nose cone conical, round, or ogive? Will you be using small or large launch lug buttons?

	Rocket	Dia.	Len.	Fin Type	Fin #	Nose	Launch
1	PML Ariel	3	58	Clipped Delta	3	Ogive	3/8 thin wall brass launch Lugs
2	LOC Magnum	5.54	80	Swept Delta	3	Ogive	½” launch lugs
3	LOC Hi-Tech H45	2.63	49.75	Clipped Delta	3	Ogive	3/8 thin wall brass launch Lugs
4	LOC Hyper 835	3.9	74	Delta	4	Ogive	3/8 thin wall brass launch Lugs
5	PML D Region Tomahawk	3	71	Swept Delta		Ogive	3/8 thin wall brass launch Lugs
6	LOC Cyclotron	3	57	Tubular	6	Ogive	3/8 thin wall brass launch Lugs

- What size rocket motor(s) is your team thinking about using. H, I, J, or K. Your team has the option to use the more powerful L. Will you be choosing the L option? What is your best guess of highest altitude?

Rocket 1 H

Rocket 2 I or K

Rocket 3 H

Rocket 4 I
Rocket 5 H or I
Rocket 6 H

4. What size drogue and main parachutes does your team plan to use? Using RockSim9 does the parachute sizes match with safe descent speeds to prevent rocket damage upon landing.

Remember your team must have a SFM.

Rocket 1 36" parachute
Rocket 2 60" parachute
Rocket 3 28" parachute
Rocket 4 48" & 18" parachutes
Rocket 5 48" parachute
Rocket 6 36" parachute

5. Are you planning to use a piston or wadding for parachute deployment(s)?

Rocket 1 piston
Rocket 2 wadding
Rocket 3 wadding
Rocket 4 electronic w/wadding
Rocket 5 piston
Rocket 6 wadding

6. Are you planning on using an audible alarm or other rocket tracking device?

Rocket 1 audible alarm
Rocket 2 audible alarm
Rocket 3 audible alarm
Rocket 4 audible alarm
Rocket 5 audible alarm
Rocket 6 audible alarm

7. What will your pre-launch checklist look like? Who is responsible for what... a) science payload, b) drogue parachute system, c) main parachute system, d) who will arm and program the altimeters, e) launch team members, f) recovery team members? If your team creates a pre-launch checklist please attach it to the PFR as an amendment.