Introduction

We came into this project on December 17, 2009. We had just that day (the last day of the quarter) learned of the First Nations Launch and Gary immediately emailed Dan Hawk asking if we could be put on the notification list for next year's FNL. Dan replied and encouraged us to take part in this year's launch.

We decided to do so, even though only two of us had any prior rocket experience. Kyle as a pre teenager and Gary back in 1979. Gary quickly organized us, had us do research on rocket kits and then ordered them.

While waiting for the kits to arrive, we continued our experiments with water bottle rockets, learned and practiced with Rocksim and discussed as many aspects of high powered rocketry as we could such as safety, and the laws and regulations, the physics of rocketry and so on and so on. We learned procedures and check lists.

Gary decided that we should each build our own rocket. One reason is that most of us have never built anything on this scale. We would learn as individuals and be able to help each other out as we learned together. An example would be installing motor mount retaining bolts before gluing in the aft motor centering ring (kit instructions didn't mention motor retention). This was something that the first two rockets had to be retrofitted for. Another reason he wanted us to build our own was that he had in mind that we would attempt our level 1 certification. This would be an additional personal achievement for us.

We are amazed and pleased with how far we have come in four months! All of us worked very well together and all of us, including Dave Oreiro, our college's vice president, were Tripoli Rocket Association certified. Gary had earned his the prior week through the National Association of Rocketry.

Part of our learning process was driving five hours, one way, to witness the Washington Aerospace Club's rocket launch. The first time we got there in time to see one rocket launch. The second time we went, we saw several rockets being launched and Gary earned his Level 1. Mariya was just in the process of walking to the launch pad when the LCO stopped all launches because of the high winds. We almost got a chance to see if our rockets would fly! We did, however, enjoy a considerable amount of interaction, questions answered, and procedures observed, from the very helpful and friendly WAC members.

Our over arching goal for our experiments is to gather data, analyze the data, draw conclusions and communicate the results. Our belief is that this is almost as important as building and launching our rockets (not as exciting though). So, we built/assembled our electronics. Mariya and Kyle learned about resistors, microcontrollers, programming and soldering. Gary did most of the electronic work because he had previous students' projects to work with, and he had the most experience, being the teacher and all.

We had fun! We learned! We want more!

By the Team members of the Northwest Indian College Space Center.