

Saline Valley, just west of Death Valley and many miles from AC power lines, is one place where you and I never met. I didn't get there until this spring.

My friend and I arrived at the hot springs after fifty miles of trucking over severe washboard when we finally saw the little desert airstrip. My first thoughts were of you and Mark and the numerous radio conversations we had those mornings after the VLF monitoring was done. We compared notes on the whistlers heard, particularly huge sferics or late-lingering tweeks.

That evening, up to our necks in hot water, my friend and I along with several strangers were treated to the vision of ISS arcing brilliantly across the sky, followed on a different trajectory a few minutes later by the Shuttle. For my companions it was an interesting event. I had a feeling they took it for granted, while I was moved to tears. I remembered Bill Taylor sitting at our kitchen table at the Ranch (he was Chief Scientist of ISS back then) explaining gravity, of ISS and the importance of the Russians to my sons. I remembered, years later, going to shoot video at the Very Large Array on the morning when Challenger came over our heads in pieces.

There, in Saline, watching the shuttle slowly crossing the sky, I was awed once again by the fragility and the courage of it, knowing that people like you and me were up there doing those jobs, enjoying that view, taking risks; performing a magnificent human feat. It was such a joy to see the Station in place with people coming and going, and such a prayer for their well-being and the well-being of us all on this wondrous little world.

My head is abuzz with the past. Now that darkness has come on the mountaintop there's a chill in the air. Scatters of stars glimmer through dispersing clouds and I'm remembering our last conversation, not long before I went to Saline Valley. We spoke about INSPIRE and a new generation receiver, of Bill Taylor and ISS and what a good idea it would be to do the experiment again. This time from ISS, we're at it, how about another go at Active? How about getting some students up there? That's what it's for, our little house in the sky.

Thank you, Jim, for sharing the journey.

Mike



All Science Teachers Should Go to Space Camp *INSPIRE Scholarship Recipient Shares Her Experience*

Ellen McLean

Last January while I was working with our strategic consultant, Eva Kloostr, putting together the 2009-2010 programs schedule, she told me she was going to the next Space Shuttle launch and was beyond excited. That reminded me of all the time I spent in Huntsville, AL accompanying William when he went to work on projects with his colleagues at Marshall Space Flight Center. I remembered visiting the Space and Rocket Center and reading about the various Space Camp programs offered. And of course I remembered my first and only Shuttle launch from Kennedy Space Flight Center many years ago. Eva's enthusiasm combined with my memories turned my thoughts to wouldn't something like Space Camp for Educators be a natural program for INSPIRE to award. I felt that it would be a motivating tool for teachers. They could take their hands-on space experience back to their classrooms hopefully assisting them with getting their students additionally enthused about science. So I decided that INSPIRE would add Space Camp for Educators to our programs. I'm delighted to say that we had a great success in the guise of Ellen McLean. Ellen embraced her experience and brought her Space Camp for Educators story to our Workshop at Gallaudet last October with gusto! So now it is a privilege to present to you Ellen's article. ~ Kathleen Franzen

"This summer I went to space camp". Can you imagine the reaction of students when you greet them at the door wearing a NASA flight suit and have videos of toys in space playing when they sit down? What better way to grab their attention! As it turns out, it is also a great way to keep their attention. Being sent to Space Camp for Educators by The INSPIRE Project has given me valuable experiences and materials I use daily, a new energy in my lessons, and a fun factor in my classroom that goes through the roof nearly every day. I truly believe that every science teacher should go to Space Camp for Educators.

Last March one of the usual “opportunities for professional development” emails came to me. I opened it, planning to close it quickly, but something stopped me. Maybe it was the name, The INSPIRE Project, because I was surely in need of some inspiration. I had been trying to think of some new way to start the next year with a bang; to grab them the minute they came into the classroom. When I clicked the link and read about what you get to do at space camp, I started smiling immediately. “I have to do this!” I thought to myself. Well, one essay, two recommendations, and four months later, I was on a plane for Huntsville Alabama and SPACE CAMP!



I felt like a kid the whole time I was there. Not only did I get to dress up in (and keep) real NASA flight suits, but I met astronauts and test pilots, was given mountains of free stuff, built and fired rockets, constructed and flew balloons, made and burned up heat shields, trained for and completed two simulated shuttle missions (awesome!), was spun around along all axes, propelled backwards from great heights down a zip line and into the water. Did I mention being spun around along all axes, free stuff, and meeting astronauts? And please don't think that it is in any way like going to an amusement park. The whole time you are at space camp, you know it is the real thing. You can feel the living history all around you. There are rockets everywhere you turn: big ones, small ones, old ones, new ones, rockets that have been into space, and even the dreams of rockets yet to come. For it is in imagining that the true lesson of space flight can be found. How can we get there? What will we find? How will it change us? I brought all of this back to school with me in September and it has made all the difference.



For a teacher, one of the best things is being given lessons, activities, and materials for free! At Space Camp we attended two or three workshops a day learning about ways to cultivate in our students the different skill sets used by NASA. We didn't have to take notes; all the activities were included in a CD set given to us upon graduation at the end of the week. Fully differentiated, multimedia, and 100% hands-on, the activities given to us are a highly qualified teachers dream! My group was contained of elementary, middle school, and high school science teachers, right through AP Physics, and we were all delighted with the lessons and materials and were eager to bring it all back to the classroom and really start to have fun.



Many of the activities I brought back I use daily for team building and to increase students mental math skills (you know, math without a calculator!). Other activities I am incorporating into the lessons as I go. Using NASA videos to introduce a topic on acceleration, inertia, or momentum is a great way to both demonstrate large concepts, and to give real life applications to the work we do in class. I also apply the differentiated nature of the space program in my classroom. There are so many ways to be involved in the space program, and anyone can be a part of it, engineer or not.



Space Camp gave me much more than just a week away from home, and I am grateful to The INSPIRE Project for sending me. I have gained a renewed spirit of adventure, love for the space program, hope for the future, and new ideas and materials for the classroom. Being able to share with students the intrinsically positive point of view associated with space exploration is an excellent way to blend science, math, and engineering with citizenship, leadership, creativity, and the purely human ability to dream. Even high school juniors and seniors get a bit dreamy eyed when you design a lunar settlement and tell them they are just the right age and could well be on such a mission, if they so choose. Sharing my experiences at space camp with my students began creating the bond I have with each of them. They know that teacher is fun-loving, adventurous, and does really cool things during class. What student can resist that combination? None, as far as I can tell. And that is why all teachers should go to space camp. Just go to The INSPIRE Project website and apply!