



Learning From Experts in the Outdoor Classroom by Sabrina Carlson

On October 4, 2016, 120 6th, 7th, and 8th grade students from Curt Craig's team at Mount Elden Middle School gathered at Aspen Corner to learn from teachers and other members of the science community.

We were blessed with excellent warm weather and not a cloud in the sky. When we arrived we

were greeted by Clare Stielstra, a hydrologist from Tucson, and Brenda Strohmeier of the US Forest Service. With a group this large, it is vital to divide the students into smaller groups to manage both lessons and impact on the environment. Even better when we can provide opportunities for the students to connect to the larger community to meet experts from a variety of fields and get a taste of career options they might one day consider.

For my part of the rotation we studied how landforms, like the Peaks, impact the formation of clouds and weather patterns. We reviewed the difference between weather and climate and observed that the weather today was indeed very rainy. Next we performed the "Dance of the Molecules" in which we acted out the actions of water molecules as they heat and cool to form ice, liquid, and vapor.



Hiking into the outdoor classroom.



Discussing the concept cartoon.

Then we split into groups to ponder a "concept cartoon." Concept cartoons are a popular formative assessment strategy that get the students thinking and talking, while helping the teacher identify possible misconceptions the students might have. The cartoons contained three possible explanations for the tendency of clouds to form over mountains more than other places. As I had done with another group a few weeks before, we began to act out the action of gasses and water vapor as it rises in the atmosphere. We had a new challenge this day however. Wind! Our previously successful game with balloons became a race to keep our lesson materials from becoming litter! A learning experience for us all. In the end we were still able to contemplate the action of wind, landforms and gasses in creating clouds.

One of the MEMS teachers lead a guided reading and journaling activity on the history of the Arizona Trail and its founder, Dale Shewalter. Our guest speakers led activities to

demonstrate how to measure the health of a forest ecosystem and why it is important, and how the health of trees, grasses and animals impact our water table and community.

It was a gorgeous day to connect with friends, teachers, and guests alike. And everyone agreed that our classroom had the best view of any in Arizona, perhaps the world.



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