



## Sunshine and Yellow Leaves

by Sabrina Carlson

Outings planned for late autumn in Flagstaff, especially when traveling to the Peaks for leaf viewing, can be gorgeous, sunny and warm or cold, rainy and grey. The forecast was uncertain as we headed up the mountain on October 13, 2015 with 22 students from Joe Caslin's 5th grade class at Killip School. Concerned about possible rain bursts, Mr. Caslin wisely packed a pop-up tent to serve as a "home-base" for the students in the event of inclement weather.

Before boarding the bus, the students gathered some school yard data. Our goal was to notice the difference in tree size and species as well as soil and air temperature at different altitudes beginning at the school and ending at the base of the Snowbowl ski area. After noting altitude, temperature readings and tree observations from the playground, the students headed in for a last-minute gear check. Once we were sure everyone was prepared for the day, we loaded the bus and headed up the hill. Our gracious driver agreed to stop briefly at the bottom of Snowbowl Road for a second reading.

Even though our altitude had increased by about 800 ft., the air temperature had RISEN! This surprised many of the students as they had learned from their Junior Explorer Handbooks that temperature typically drops as altitude increases. We gave them some time to discuss some possible explanations for this anomaly. Piecing together observations from several of the students and drawing from their prior knowledge, we were able to conclude that altitude was not the only variable at work. Since over an hour had passed from our first reading, the air had warmed significantly in that time and the increase in altitude hadn't been enough to compensate for the warming effect of the mid-morning sun. While this may seem like an obvious connection for an adult to make, remembering that there are many variables to consider in scientific inquiry is a huge skill for a young citizen scientist to understand.

After being dropped off at Aspen Corner near passage 34 of the AZT, we took another data reading and then set about exploring the surrounding forest. At this altitude, the plant species had become quite diverse and the tall aspens interspersed with limber pine, blue spruce and Douglas fir created a magical canopy that commanded the students to explore and imagine. As Mr. Caslin and I watched them melt so seamlessly into imaginative exploration of the woods, we both knew that academic



*Magical Forest*

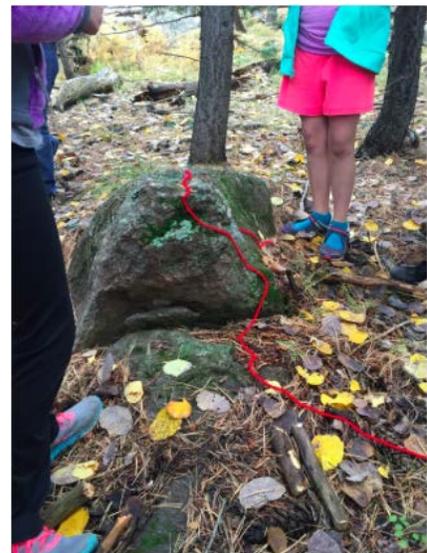
agendas would have to wait for now; there was much more important work happening at that moment.

After about 20 minutes of exploration we regathered the class to set out for a hike. We proceeded north for about 1 mile along the trail toward Aspen Loop. While our original goal had been the Snowbowl parking lot for a final reading, we didn't want to get too far from the lunch coolers at base camp. So we paused in a clearing ringed by conifers and passed out tree identification books to small groups. Each group headed out to use the books to identify different species of trees and learn any other facts they could about the trees. When we regathered, each group reported back to the rest of the class and took turns teaching their peers what they had discovered.

After lunch the class wanted to play "predator/prey stalking" a physical game in which two students start out as the predators (in this case, mountain lions) and the rest are prey (mule deer). The deer try to move from one side of the playing field to the other without getting "eaten" by the lion. Any deer who get tagged in one round, become lions on the next. They had loads of fun expending energy and running through the woods, while reinforcing understanding of food chains and the balance of predator to prey ratios.

As we waited for the bus, we took out lengths of string and distributed it to the students in small groups. They used their string to lay out mini "micro trails" of their own design. As time was short, the teacher photographed the designs so that they could do some story creation with them back at school.

Despite our worries about the weather, the day turned out to be perfect. Warm golden sun highlighting perfect yellow autumn leaves. A day of true perfection.



*This Trail is For Experienced Hikers Only!*



*Beautiful Sunny Day!*

This outing was made possible by grants from



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