On October 18, 2017, twenty-three students from Mr. Doerfler's 5th grade class at Kinsey Inquiry and Discovery School traveled to Aspen Corner near the San Francisco Peaks Passage (Passage 34) to hike 2 miles and cultivate their skills in close observation.

We began our outing reading a story called “Squirrel and John Muir.” This is a historical fiction story recounting the possible friendship between John Muir and a little girl who was the daughter of the sawmill operator and tour guide Muir worked for in Yosemite Valley during his time studying the geology of the area. The story recounts his scouting adventures in the wilderness looking closely at ants, moss and stones, and looking faraway at the hanging valleys. It was Muir's close observations that led him to the then heretical assertion that Yosemite Valley was formed by glaciers. We were able to notice the importance of observation in the story as well as the fact that good science is always changing in the face of new observations, much like John Muir did with the scientific world of his day and new geological information.

We took this as inspiration to explore the Arizona Trail as scientists ourselves. Along our hike we stopped to look for specific matching colors in nature. Not just green is green is green, but how very precise can we be about the exact shade and tone of green. We made notes of the differences between the leaves and needles of different trees. Which ones were shorter, longer, thicker. How many needles per petiole does each tree have?

We built our observation skills with touch and smell playing a game called “Meet a Tree.” One partner is blindfolded and guided by the non-blindfolded partner to a tree nearby. The blindfolded partner can then use their sense of touch and smell to gain as much knowledge about the tree as possible. They are then returned to their original spot before removing their blindfold. Once they can see again they use the information they gathered to guess which was “their” tree.
Finally, we put all of our observation skills together for a nature scavenger hunt. We looked for squirrel pencils, natural objects that make noise, different sized pine cones, different types of seeds and other details in the world around us.

By the end of the day we had learned two of the most important things about science, that keen observation is the starting point of data collection and good science is always changing.

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