Documenting changes in understandings about the sun, earth, and moon. As a whole, my understanding has changed a lot. When asked in September why the moon seemed to have different shapes at different times, I said, "The earth shadows the moon from the sun." I was thinking that the earth must shadow the moon from the sun, much like an eclipse. I knew that the visibility of the moon had something to do with shadows, I just didn't know exactly what. When asked the same question in November, I responded with, "The moon appears to have different shapes because it is revolving around the earth, receiving sunlight in

only certain portions. (Light travels in straight lines, the illuminated portion is from our perspective)." I believe now that the illuminated portion of the moon has to do with our perspective here on earth. Because the moon is revolving around the earth, it is true that only certain portions receive light due to the moon's location around the earth. Not only has my understanding of the moon cycle increased, but I am now able to apply other scientific ideas to defend my ideas.

Documenting changes in understandings about the nature of scientific explanations. From September to November, my understanding of the nature of scientific explanation has remained largely the same. In September, I wrote that, "A scientific explanation is on that includes observations from an experiment." I understood that a scientific explanation was one that needed to be supported by observations. When asked again in November, I said that, "A scientific explanation is on that can be supported by experiments and evidence." I again realized that scientific explanations need to be supported by observations in the form of experimenting, but I added that evidence from these experiments was also needed. Though I came out with very similar ideas about scientific explanations as when I went in, I feel as though I have a better idea of how to ask better questions that lead into performing said experiments.

Documenting changes in understandings about inquiry approaches to learning and teaching. From September to November, my understanding of inquiry approaches to learning and teaching has remained largely the same. In September, I wrote that, "Inquiry approaches are ones in which students ask questions and teachers shape lessons to fit students' interests in order to make lessons meaningful." I knew that inquiry approaches were mostly student-led, and that the students' questions helped shape the lessons. In November, I wrote that, "An inquiry approach is one that allows natural curiosity to shape a lesson." This is just a shorter version of what I said in September, in that I still understood that natural curiosity from the students is supposed to lead lessons. Though I came out with very similar ideas about inquiry approaches to learning and teaching as when I went in, I feel as though I have a better idea of how to facilitate lessons and experiments for my future students.