My second round occurred during my month of teaching math, specifically at a time when geometry was our focus. As we were working towards area and volume, I wanted to give students an opportunity to construct and THEN define formulas for those things. In working with tangram puzzles, students are dealing with several shapes whose areas are relative to each other. This lesson was a part of my hook, but also led into students working to manipulate the shapes and consider relationships between them.

By setting the stage that this was a challenge, I drew students in. Throughout the lesson, I did not see a single student give up on a task that was very difficult. It was really meaningful for me to see them all persevere and continue working hard in the face of a challenge. I noticed that some students spent a good thirty minutes working by themselves, puzzling over what to do and sometimes not making any progress, but they maintained their resiliency. If I had framed the day differently and failed to include the challenge piece of this, I don't think it would have been as successful. So for me, this relatively small choice that I made had a huge impact on the lesson.

I also felt that giving students hints was a huge support. I intentionally tried to give them casually, meaning some students who were focused on their work/disinterested in what I was doing missed the hints. I know that some students appreciated them greatly and watching the round video I noticed an enormous change in one student’s affect after she was able to put her square together with the help of the hints.

If I were to implement this lesson again, I would choose to break the students up into groups based on their needs. Some students were able to conquer this challenge independently and relatively quickly, but others were in need of support. I also made a mistake with the visually impaired student in the class when I did not give him the plastic tangram set. While he had his own set of shapes, they were made of paper and did not retain their shape like the plastic set which was a huge challenge for him during the lesson. I differentiated by having mathematical work for students to do after they completed the challenge, but some students in the class definitely needed more help getting there than I was able to provide.