Jeanette Valdez Reflection of the Design Process
July 2018

1. Identify the problem- The student was able to identify that the force of the wind makes a tower wobble.

2. Brainstorming- The student thought and stated in discussion “I think the earth spins and it forces the wind and it made the tower wobble.” “It needs to be stable because if it’s unstable it can collapse or fall down.”

3. Design- The student’s design was very simple, he utilized only two of the materials offered.

4. Build- As the student-built his tower, he used a triangular figure at the base, a single skewer taped in the middle, and three skewers taped on the top to hold the ball.

5. Test and Evaluate- The student’s tower was tested and it was very successful and he saw it wobble in the wind.

6. Redesign he stated that if he would design it again, he would do it the same but add more sticks to the middle and the top.

7. Share the solution- His solution was a four-legged triangular base with a skewer in the middle to heighten and then four at the top as a base to hold the ball. All taped with masking tape. When it was successful, he was challenged to do it with a baseball. He definitely needed some emotional support because he became frustrated, but with encouragement, he redesigned using his written idea of adding more sticks to the middle and top, but instead of adding to the top he did the middle and bottom to create more stability.

5. Reflect upon your experience. The following questions may be used as a guideline; however, additional questions might be appropriate for your project.

a. What went well with the engineering design challenge? The entire lesson was very hands-on and engaging.

b. What did not go well with the engineering design challenge? The video on structures that was 25 minutes needs to be clipped for parts that are necessary. (Too long for student)

c. What concepts were covered (list standards and topics where appropriate) See Lesson Plan

d. How did the ED process help teach the science and mathematics concepts? I love how the process teaches the kids in steps to develop deep understanding. The student was able to compare and contrast what he needed to do based on his observations.

e. Did I choose an appropriate engineering design process? Should I simplify or make more complex?

I think the design challenge that I choose was perfect for the grade level. I would make it more complex with older students.

f. How can I improve this activity to use with future students?

Again, if keeping it for the second-grade level that it was created for, I would shorten the 25 min. video to just a few important parts. If I was going to use it this coming year, I will have to make it more complex to challenge the fifth graders that I teach. Asking more complex questions and making the criteria a little bit more challenging.