Name: _____ Date: _____ Class: _____

Straw Tower Mini-Activities 1 & 2

Mini-Activity 1: *One-Straw Tall Tower*

Your design challenge: Following the steps of the engineering design process, figure out the best way to keep one straw held up tall using the fewest number of straws and no more than 5 cm of tape.

1. **Ask:** _____

   _____

2. **Research the problem:** Compare and contrast feature you see in tall and short towers.

3. **Imagine:** Draw your design solution for how you would keep one straw up by using the fewest amount of additional straws and no more than 5 cm of tape. Label the materials used.

   For this design, how many additional straws do you need? _____

4. **Plan:** Are you selecting your design solution or your partner's design solution (or a combination)?

   Example answer: We are selecting my plan to build._____

5. **Create:** Build your tower.

6. **Test and evaluate:** How did your group's design compare to your classmates' designs?

   _____

   _____

   _____

7. **Improve:** After seeing what your classmates have created, draw a new and improved design. Label the materials used in your design.

8. **Now construct your revised design.** ☺

Mini-Activity 2: *No "Fishing Pole"*

Your design challenge: Make the longest straw pole possible without it becoming like a "fishing pole," where the straw bends at about 45 degrees.

1. Number of straws to make a straw pole before it creates a "fishing pole": _____
2. Why does the straw pole become a "fishing pole" when you add more straws?

3. How can you make a taller straw pole without it bending like a "fishing pole"?