Name(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Structural Engineering and Earthquakes**

**Overview**: In this project you will be working in a small group to construct a tower from the material provided that would be able to withstand the force of a simulated earthquake.

To be approved for the competition, **the towers must be at least 30 centimeters tall and weigh less than 45 grams**. They will be glued to the wooden boards provided as to not to slide off when the platform starts to vibrate.

**Materials**: wooden sticks, glue, wooden board, string, paper

**Background Research**:

 Research 3 structural elements that improve your building’s strength.

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Design**:

 Create a sketch of your design for this project. Label on your sketch how you incorporated each of the structural element list above in your design.

 With a highlighter, highlight the weakest parts of your design. Make a prediction of where it’s going to break. Circle this on the sketch.

 Show this page to your teacher to receive permission to start building.