Name: _____

Date: _____

Period: _____

Toothpick Towers

Create in your lab notebook a new project on a new page. Label this Toothpick Towers.

Scientists and engineers work together to find techniques for building stronger, safer structures in earthquake prone areas such as California. What they learn can then be used to build safer structures elsewhere.

Your goal is to build the tallest structure you can that can withstand a 30 second ride on the shake table at full capacity without failing or deforming.

In your lab notebook, create the following table. It should take up about ½ a page.

Design #1	Rational:
	Performance:

In the "Design" area, draw your design and include measurement of height.

In "Rational" explain why you think that this design will perform well. What techniques did you use that we have discussed, seen in videos, researched, or learned in the STEM bridge building class?

In "Performance" describe how your bridge faired after the 30 second ride on the shake table. Did it fail, if so how? Did it deform, describe. Did it do well, why?

Scientists and Engineers are always looking to make designs even better. Using your same materials, create Design #2 (make another table as seen above). Under Rational, discuss what improvements you have made and how you think they will out perform Design #1. In Performance, discuss how Design #2 compared to Design #1. Use data to support your claims.

If time permits, try a third design.

Create a section for this project called "Conclusions" Discuss what you learned about building earthquake resistant buildings or other structures.