

Name: _____

Date: _____



Week 9 - Earthquakes

Materials:	Amount:
Toothpicks	60
Mini Marshmallows	40
White paper	1
6"x6" Square	1
Shake Table	1



Procedure:

1. *ASK: Review the steps of the engineering method with the SCouts and your group. The problem will be introduced to you.*
2. *IMAGINE & PLAN: Talk with your teammates on how to build a strong building, and brainstorm ideas. On the back of this sheet, draw the building your group wants to make that will withstand an "earthquake".*

Note: You cannot ask for more supplies, so make sure to plan a structure that you are able to build!

3. *CREATE: Build your building using the toothpicks and mini marshmallows given. Test out your structure by having the SCouts place it on the shake table and shake.*
4. *IMPROVE: Think about the ways your building can be improved. Answer the bonus question on the back of this sheet.*

Earthquakes

As we learned back in Magnetism, the Earth is not a ball of solid rock. The outer layer of Earth, the crust, is made of many solid pieces that float on top of the molten rock inside the Earth. As pieces of the crust rub and bump into each other, they create **earthquakes**. An **earthquake** is when the ground trembles because of energy released underground. Since people live on top of the Earth's crust, it is important that we build **strong** buildings and structures. If our structures are **not strong**, then they may **crumble down and collapse when an earthquake hits**.

Question 1: Review the strengths of the three shapes from our last experiment: **rectangle**, **arc**, and **triangle**. What can you add to a **rectangle** to make it stronger?

Question 2: Imagine and Plan!

Draw what your building will look like. Do this with your teammates before building to better plan everyone's ideas.

Bonus Question: Think Like an Engineer!

Did your building survive the earthquake? How can you **improve** your building?

