

Marshmallow Towers!

PURPOSE:

- To teach and apply concepts of geometric strength and structural support, by building towers with marshmallows and noodles.

TALKING POINTS:

- Engineers are responsible for almost every product on the market. From cellphones, cars, computers, bridges, and pens, to apparel, appliances, and everyday items, technically trained minds are behind the products we frequently use today.
- When a product is developed, it takes several people working together to create a successful prototype. The students will need to consider the best foundation for the tower to hold its weight and keep stress levels balanced to provide proper support and strength.
- This week, we will be working with marshmallows and toothpicks to create the tallest freestanding tower possible.
- Think about different types of shapes. Which do you think would be strongest when building a tower? A Pyramid, cube, cylinder?
- You could also consider adding crossbeams to your design. These would go across the vertical supports. By adding crossbeams, it is more difficult for the tower to rotate on its base, making a stronger structure. Without crossbeams, gravity can cause the tower to twist on its base and collapse.

MATERIALS:

- Marshmallows
- Toothpicks
- Yardstick

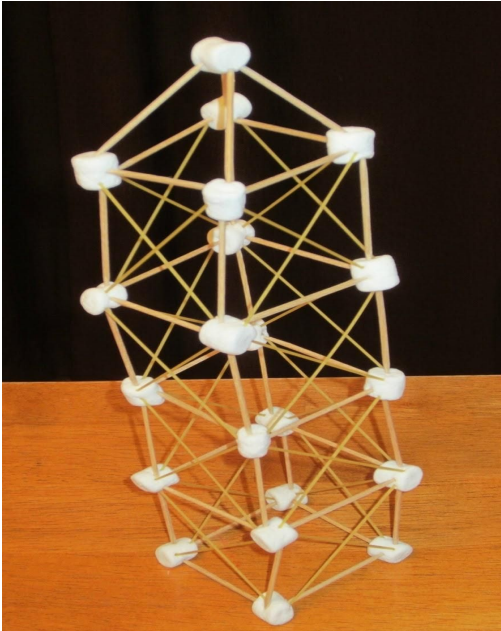
PROCEDURE:

- Draw a design to better plan out what you will be building
- Build the tallest tower you can!
- When done, use a yardstick to measure how high the tower came out to be.

CONCLUDING QUESTIONS:

1. When building your tower, what were some things that worked well and also some things that you struggled with?
2. Which design do you think would be the strongest when building a tower?
 - a. We found that the design that offers the best structural support is a wide base with a narrow top.
3. If you could make another design, what would you change to make your new design better?

EXAMPLE DESIGNS:



ENGINEERING A {TOOTHPICK} TOWER

