

THE MARSHMALLOW DESIGN CHALLENGE

Overview:

The Marshmallow challenge has become a popular exercise in which small groups are asked to build the “tallest free-standing structure” out of the materials listed. The teams have 20 minutes to complete this task including assembling the large marshmallow on top. It’s a fun and interactive exercise that allows teams to experience simple lessons in collaboration, innovation, design, and creativity.

The Marshmallow Design Challenge:

- How it will work:
 - Teams of 1-4 are required to submit a scaled blueprint and outline of their initial design for the tower. It must be detailed with appropriate scales, titles, labels, and measurements. The blueprint is due before Engineer’s Day. This will be worth **15 points**
 - Students will need to measure their tower from the bottom to the top of the marshmallow. **(every inch is a point)**.
 - Students that use minimal materials get extra points **(every dollar saved will be an extra point)**
 - Students will submit all of this information prior to Engineer’s Day.

****You can submit all of this information on the google form here (copy&paste):
https://docs.google.com/forms/d/e/1FAIpQLSeenW9UQgbqclwnva_inWhuAqK1YQuST7Y1YRt4aUWFa-0jFQ/viewform?usp=sf_link*

Materials Needed

- 20 Sticks of Spaghetti Noodles (\$20 total, ea. noodle is \$1)
- 1 Yard of Tape (\$15)
- 1 Yard of String (\$5)
- 1 Large Marshmallow
- Scissors (to cut materials such as the string)

****Example: Not using 4 noodles would mean you saved \$4, thus giving you 4 extra points.*

Rules

- The challenge is for each team to work together to build the tallest free-standing structure in just 20 minutes using no more than 20 sticks of spaghetti, one yard of tape, one yard of string, and one marshmallow. The marshmallow must be on top and cannot be deformed to hold it in place. The structure has to stand firmly on its own; it cannot be propped up, held, or suspended from the ceiling.
- The challenge is to build the tallest **free-standing** structure using ***only*** the given materials.
- The tower must be measured from the **tabletop surface to the top of the marshmallow**.
- The tower must stay standing on its own while being measured by judges. Teams **cannot** touch or support it physically.
- The entire marshmallow must be on top of the structure. It **cannot be altered** in any fashion.
- Marshmallow must be placed on top of the tower before time runs out.

Get in groups, make a blueprint/plan, gather your materials, set a timer, and start building.
Have fun!