



BUILDERS BONANZA

Lesson: Spaghetti and Marshmallow Towers

CURRICULUM REFERENCE: Strong and Stable Structures

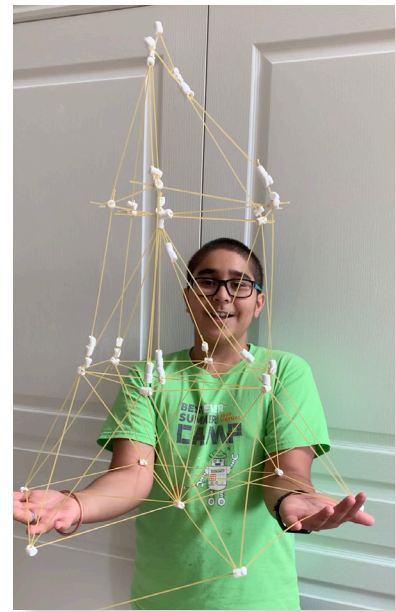
LESSON OBJECTIVE

Create a tall tower (over 75 cm/30 in) using dry spaghetti noodles and marshmallows to make the tallest tower possible and watch how forces such as gravity, structure, and stability work together or against each other.

THE SCIENCE BEHIND

When building your tower, your spaghetti noodles and marshmallows are always competing against gravity. The higher your tower goes, the greater its weight and the stronger effect that gravity will have. Engineers use good design to create large, long-lasting structures.

VIDEO: <https://youtu.be/4g-SCz-msn8>



FOLLOW-UP QUESTIONS

1. What are structures we see every day that we depend on being strong and stable?
2. What features of structures have enabled them to still be standing today?
3. What kinds of materials are used in human constructions? Why?
4. How can we improve a structure's strength and stability?

LEARNING OUTCOMES

- Assess effects of strong and stable structures on society and the environment.
- Investigate, through experimentation, how various materials and construction techniques can be used to add strength to structures.
- Investigate, through experimentation, the effects of pushing, pulling, and other forces on the shape and stability of simple structures.
- Identify the strength of a structure as its ability to support a load.
- Describe ways in which the strength of different materials can be altered.



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MATERIALS (PER PERSON)

- Dry spaghetti noodles
- Large marshmallows

INSTRUCTIONS

1. By poking the dry spaghetti noodles through the marshmallows, create a tall (over 75 cm/30 in), sturdy, freestanding tower.

VIDEO: <https://youtu.be/-7GbDzWjzJs>

