



BUILDERS BONANZA

Lesson: Spaghetti and Marshmallow Towers

CURRICULUM REFERENCE: Form and Function

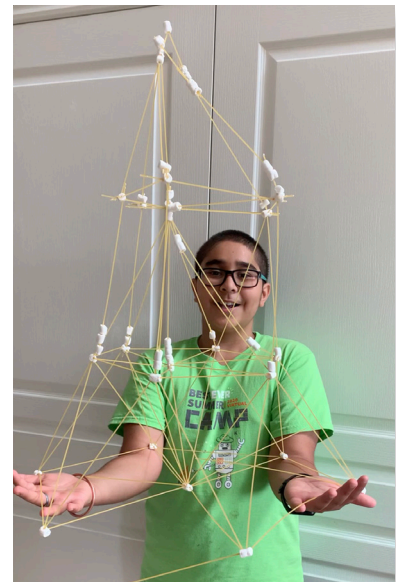
LESSON OBJECTIVE

Create a tall tower (over 1 meter/39 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 things might a company consider when constructing a new structure that consumers might not think of?
2. How does gravity affect your structure?
3. What are factors that could cause a structure to fail?

LEARNING OUTCOMES

- Evaluate the importance for individuals, society, the economy, and the environment of factors that should be considered in designing and building structures and devices to meet specific needs.
- Design, construct, and use physical models to investigate the effects of various forces on structures.
- Investigate the factors that determine the ability of a structure to support a load (e.g., the weight of the structure itself; the magnitude of the external loads it will need to support; the strength of the materials used to build it).



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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 1 m/39 in), sturdy, freestanding tower.

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

