

GENIUS TOWER CHALLENGE INSTRUCTIONS

S.T.E.M. ACTIVITY

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Materials (any of the following):

- 1 bag of large or mini marshmallows
- 1 box of toothpicks, skewers, or uncooked spaghetti noodles
- Ruler or tape measure
- Timer (optional)

Steps:

1. Explain the challenge to your child: build the tallest tower that can stand on its own for at least 10 seconds.
2. Set a time limit of 15 minutes.
3. Work together to plan before building. Ask questions like:
 - “Which shapes do you think will make a strong base?”
 - “How can we connect the marshmallows and sticks for stability?”
4. Start building. Encourage testing and making changes if it wobbles.
5. When time is up, measure the height of the tower.
6. Celebrate the effort, even if the tower tips over. Talk about what worked and what to try differently next time.

Extension Ideas:

- Try again with fewer materials.
- See if you can build a tower strong enough to hold a small toy on top.
- Compete with a family member to see who can build the tallest or strongest structure.

STEM Learning Connections:

- **Science:** Explore balance, tension, and gravity.
- **Technology:** Use trial and error to improve designs.
- **Engineering:** Create and test different structures like pyramids or cubes.
- **Math:** Measure heights, count marshmallows, compare tower sizes.

Goal: Build the tallest free standing tower possible using simple household materials while testing creativity, problem-solving, and teamwork.

