# **Marshmallow Tower Challenge!**

#### **Introduction (5 minutes)**

Have you ever wondered how skyscrapers stay up or how bridges can carry so much weight? That's the work of structural engineers! They design structures to be strong and stable. Today, you're going to be a structural engineer in a fun challenge. Your mission: Build the tallest \*freestanding\* tower (meaning it stands on its own) using only the materials provided in just 15 minutes!

# Planning (5 minutes)

Before you start building, take a few minutes to think and maybe sketch a quick idea. Think about these questions:

- What shapes do you think are strong? (Hint: Think about bridges!)
- How can you make the base stable so your tower doesn't fall over?
- How will you connect the spaghetti sticks using the marshmallows?
- How can you build upwards effectively?

Remember, engineers always plan before they build!

## **Building Time! (15 minutes)**

Okay, grab your spaghetti and marshmallows! Use the marshmallows as connectors (joints) and the spaghetti sticks as beams. Try to build the tallest tower you can that stands completely on its own. You might find some designs work better than others. If something collapses, learn from it and try a different approach – that's what engineers do! Focus on creating strong shapes, like triangles, and a stable base.

## **Testing & Reflection (5 minutes)**

Time's up! Carefully measure the height of your tower from the base to the very top point.

- How tall is your tower?
- What was the most challenging part of building it?
- What part of your design worked really well?
- Did you use triangles? How did they help (or how might they have helped)?
- If you could do it again, what would you change?

Great job! You just practiced thinking and building like an engineer, tackling challenges with limited resources and time, and learning about structural stability.