Build a Skyscraper!

What you'll need

- ☐ Straws and/or popsicle sticks
- ☐ String
- ☐ Tape
- ☐ Pencils
- ☐ Scrap paper with at least one side blank
- ☐ Ruler or tape measure

***Note**: If you don't have straws or popsicle sticks, use cardboard cut into strips instead!*

Introduction

In this challenge, you and your child will build a tower that meets requirements and can withstand an "earthquake," just like real engineers do.

At the end of this guide, there is a page of famous skyscrapers around the world. Discuss these questions with your child while looking over the towers:

- What is similar about the towers?
- What is different?
- What shape are they?
- Which tower looks like it would be the most stable? Least stable?

Do it!

The rules of the challenge are:

- The tower must be at least 2 feet tall
- It must withstand an "earthquake" (You will shake the tower to simulate this.)
- It must use only the materials listed
- You may only use a combination of 20 straws, popsicle sticks, and cardboard strips.

If you like, you may have your child draw their tower idea before the build it (similar to the Blueprinting activity).

Depending on your child's confidence level, you can either build your own tower to compete with theirs, or help them build one.

Adaptations	Vocabulary	Fun facts
For Younger children Lower the height requirement, and increase the number of materials that can be used.	**Engineers**: People who design and build things like bridges.	**How do skyscrapers resist the wind?** This video helps explain some of the tricks skyscrapers use in real life to both resist wind shaking

For An Extra Challenge
Increase the height requirement without increasing materials, OR make it so the tower must hold a weight near the top *while* withstanding an earthquake.

Requirement: A rule that engineers follow when they are building something.

Earthquake: A kind of natural disaster where the ground shakes and can become unstable.

them, and the movement from earthquakes. https://youtu.be/ebx5Y5qOmTM

Tower Examples

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Credit: Jim Epler via Flickr

Credit: Joi Ito via Flickr

Fun fact! The tower on the right is the tallest tower in the world, at 2,772 feet tall.

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