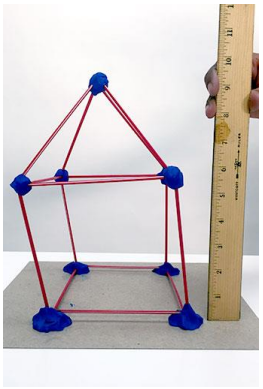
BUILD AN EARTHQUAKE-RESISTANT STRUCTURE

Introduction

Designing earthquake-resistant buildings is extremely important in areas where earthquakes are common, like California and Japan. One way to make a building stronger is to use trusses and cross bracing, which make a structure stronger by using triangle shapes. Today you will get to engineer your own structure to resist a quake.



The design challenge.

Build a structure that can withstand an earthquake.

■ Plan your structure. Should it be flexible or rigid?

■ Build your structure.

• Connect straws with sticky tape or play dough to build your design.

- Attach the base directly to a piece of cardboard.

■ Test the structures.

• Place the structure on a testing platform (any uneven surface will do).

• Start with a gentle earthquake. Use your finger to gently shake the platform. Observe how the structure moves.

• Gradually increase the strength. How hard do you need to shake the building to cause it to fail?

• Note weak points in your structure and think about how you can improve them.