

Star Scraper

Grade Level

Elementary and up

Materials

- Drinking straws
- Sticky tape
- Gelatin
- Soup bowl
- Non-stick cooking spray

Today's engineers envision buildings in the 22nd century that are 300 stories high. As buildings grow taller, the ground beneath them becomes less dependable as an anchor. How can this stability problem be solved?

Prepare a packet of gelatin according to directions and pour it into a soup bowl that's been sprayed with non-stick cooking spray to set. When set, invert the bowl on a plate to produce a gelatin mound. This becomes the "ground" for a building.

Build the tallest structure you can using drinking straws and sticky tape. "Anchor" the bottom in the gelatin. You may increase the height using any materials you care to provide, but the bottom must be kept entirely within the gelatin.

When the structure has reached its final height, subject it to an "earthquake". Wiggle the plate back and forth quickly. Can the structure endure such a "natural disaster"?

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