NGSS:

3-ESS3-1 Earth and Human Activity

Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.*

Outline:
Earthquakes
- Civil Engineering (Review for King and Columbia)

Build
Review

Earthquakes

1. Ask if any of the kids have ever felt an earthquake before
    a. Have them explain what it felt like to the rest of the class
2. Ask if any of them know why earthquakes happen, take a lot of different answers
    a. Answer: The earth's surface, also known as the earth's **crust**, isn't made out of one small piece, but a few large pieces
        i. These pieces are constantly moving, and sometimes one piece gets caught on another. When the pieces finally slip apart, we get an earthquake
    b. Ask if they have any questions!
3. Before you move on, ask some quick review questions:
    a. What causes an earthquake?
    b. What is the scientific name for the surface of the earth?

Engineering

1. Ask the kids to explain the different ways earthquakes affect us/our lives (take lots of answers)
    a. Answer: one big way earthquakes affect our lives is the way it affects buildings
        i. Because of how powerful earthquakes are, a lot of times it forces buildings to crumble
    b. So, engineers have to design buildings with earthquakes in mind, so that when one happens, the building doesn't get destroyed.
2. Today, we're going to act like those engineers, and try and design buildings that will withstand our own mini-earthquake!

Build

1. Give every person 20 skewers and 20 packing peanuts, and explain that they don't need to use all of the supplies, and they can always ask for more
2. Tell them that they're goal is to use these materials to create the tallest possible structure that will withstand an "earthquake"

    a. Show them what our earthquake looks like

Review

1. Ask a couple people who's buildings were successful to share how they made theirs
    a. Ask for some kids whose buildings fell to do the same thing
    b. Compare what worked and what didn't
2. Review questions:
    a. What causes an earthquake?
    b. What is the scientific name for the surface of the earth?