Grade 3 Understanding Structures and Mechanisms –Strong and Stable Structures

STANDING TALL

Skyscraper Stability



Modern skyscrapers tower over the regular buildings we see. As these skyscrapers get taller, the forces they experience from wind become stronger as well, so much so that they begin to sway. Engineers have developed interesting ways to overcome these forces.

Tuned Mass Dampers

One way to minimize swaying in skyscrapers is to use tuned mass dampers. The Taipei 101, for example, has a large metal weight that dangles at the top of the building. When the wind blows the skyscraper in one direction, the mass damper acts as a pendulum to counter the building's movement and reduces the swaying.

The Taipei 101 in Taipei, **Taiwan**