

Assignment 2.3i: Tower Building Challenge

In groups of 2 or 3, design and construct a tower using straws, pipe cleaners and paper clips.

Problem Statement:

I don't have a structure that can support a weight on or near the top.

Design Statement:

Construct a tower using the supplied materials to support the supplied weight for the specified time.

Design Requirements:

- Materials: 50 straws, 50 pipe cleaners, 25 paper clips
- Load: support a golf ball within 20% of the maximum height of the structure.
- Time: The tower and ball must remain stationary for 30 seconds without external support.

Documentation:

- In your notebook record the design the above problem statement, design statement and Design requirements.
- Draw an initial conceptual sketch showing how you would like to build your tower.
- Draw an as-built sketch explaining any differences between that and the original concept.
- Report the tower height, golf ball height and whether or not the tower held for 30 seconds.
- What worked, what didn't and what changes would you make?

Makeup:

Do this project at home. Include a photograph of the completed structure or bring it into class.

Developed through a partnership between the University of Utah College of Engineering and Granite School District