

Tower Challenge

4th or 5th Grade

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Benchmark:

SLC 7: Students will select appropriate resources and tools to make accurate observations to gain desired results given the stated conditions (i.e., if a desired result is to build an outdoor greenhouse to start seeds, the design would have to promote the correct amount of sunlight.)

Objectives:

To have students work in groups to build a free standing tower that is 1 meter high and able to support weight.

Materials:

Per group:

- 30 straws
- Paper clips
- Masking tape

Initial Demonstration:

Talk to the class about how they think buildings are able to support weight and stand on their own. Ask for ideas of how they may go about building a tower in a similar way.

Target Observations:

- Buildings have supports on each corner and in the center (both horizontally and vertically).

Target Model:

-A way to build a free standing tower is to begin with a base and build up with straws at each corner and one in the middle. Add stories until a 1 meter height is achieved.

Procedure:

Break the class up into groups. Before giving them their supplies have each group discuss with their teammates how they want to build their tower. Once the group has come to a consensus give each group their straws, tape and paper clips. The class has 1 class period plus an additional 20 minutes from the next class period to assemble their tower. Each team's tower will then be judged based on meeting the requirements of the challenge and on how much weight the tower can support. The team that meets all of the requirements and can hold the most weight will win.