

Engineer for the day

Background:

Engineers try to build the best product for the least amount of money. They often work together to make the most successful design and they must test this design to ensure that it meets the requirements set forth by the customer. Today, you will try to build the best tower.

Goal:

Build the tallest tower that you can that can hold the most number of pennies

Restrictions:

- You may not use the ruler in your tower.
- You may tear the paper or the tape yourself but you may not use any outside materials.
- The pennies can only be placed on the tallest part of the tower.
- The tower must be at least 6" tall.

Supplies:

- 12 inches of tape
- 2 sheets of paper
- 1 ruler
- Initial cost = -5 points

Costs:

- 1 sheet of paper = -5 points
- 1 inch of tape = -1 point
- 1 cut of paper or tape = -1 point

Individual Preliminary 3D Sketch:

Group Preliminary 3D Sketch:

Deadline:

- Your design must be ready for testing five minutes prior to testing.
- Failure to meet the deadline = -10 points

Testing:

- Pennies will be placed on your tower until it collapses.
- 1 penny = 1 point
- Height of tower: 1 inch = 1 point
- Testing will occur in a bracket style competition.

Testing Results	
Height	
Pennies	
Deductions	

Reflection:

1) What were three challenges that your group faced in constructing the tower? What did you do to resolve these challenges?

2) What changes would you make to your design in the future? Why would you make these changes?