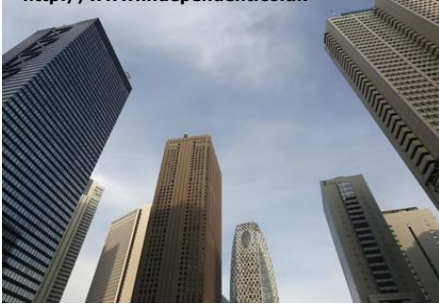


# Skyscraper Engineering Challenge

<http://www.independent.co.uk>



## Scenario:

You belong to a group of expert engineers and architects brought in to design a skyscraper which will withstand the impact of gravity and wind pressure.

Your team must formulate a skyscraper design which will take into consideration the 3 main problems which are facing our skyscraper's safety and development.

The problems are **gravity, wind, and limitation of time.**

## Proposal:

How can you design a structure that will withstand the forces of wind and gravity and remain standing? Your proposal must be approved by the Urban Developer (your teacher.)

## The Challenge:

As an engineering team, design and build a skyscraper that is at least 8 inches tall and will be self-standing when books are placed on top.

## Constraints and limitations:

- Time is your biggest constraint! You have one class period to build and test your model according to your proposal. Only the Urban Developer may change the time constraint.
- Building a skyscraper is expensive. You must keep track of your expenditures as you build to calculate your final cost.
- You will be allowed to test your model \_\_\_\_\_ times as you work.

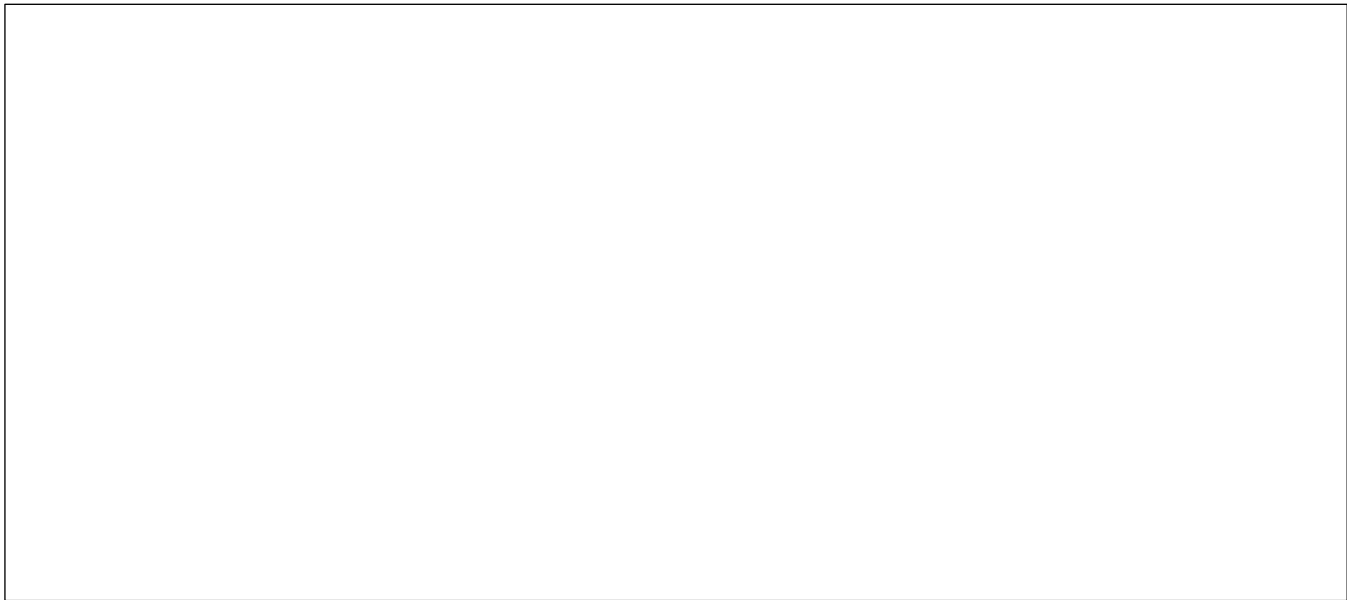
## Notes:

Each group member must contribute to the design, construction, and presentation of the model.

**Materials:**

- Each team will be provided one platform to build a working model.
- sheets of paper
- bendable straws
- string
- tape
- popsicle sticks
- books for testing

**Make a labeled sketch of your model in the box below. This will help in the planning and writing of the proposal.**



**Proposal:**

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Complete this form to show how much your building will cost.

<b>Material</b>	<b>Quantity Used</b>	<b>Price</b>	<b>Total Cost</b>
Tape		\$2 per inch	
Sheet of Paper		\$20 each	
String		\$5 per inch	
Popsicle Sticks		\$20 each	
Straws		\$20 each	
Base provided by teacher	1	\$200 each	\$200
Total			

**Skyscraper Scorecard Results:**

Height = \_\_\_\_\_ Points

Strength = \_\_\_\_\_ Points

Total Points = \_\_\_\_\_ Points

**Our Final Score (divide total points by 2) = \_\_\_\_\_**