Engineering Lab
NEWSPAPER TOWER

Spirit of the problem:

To build the strongest, yet lightest and tallest, paper tower. The tower must hold as many books as possible. Final scores will be based on weight supported, weight of tower, AND height of tower (see formula below).

Before you start:

- Complete research into the strength of various shapes that you can incorporate into your overall design. Keep track of this information and the sources that it came from because you'll need it for your engineering report.

Specifications:

- The tower must be constructed from no more than 2 sheets of standard newspaper and 30 centimeters of masking tape. No other materials may be used.
- You can manipulate the newspaper in any way you want, but your finished tower must consist of only tape and newspaper
- The finished tower must hold the lightest book at least 200 mm above the "ground" to receive credit.
- Before testing, the tower will be weighed and the height of its book holding surface will be measured in mm.
- After measuring, books will be added until the tower collapses. When the tower fails, the book that made it collapse will be removed from the total. The weight of the books your final tower held will be calculated and the final score determined, as follows:

Scoring: (google sheet)

Score = (mass of books(g) ÷ mass of tower(g)) x height of tower (mm)

(Highest score gets bragging rights!)

Additional procedures:

- Designers will place textbooks on their own tower until the tower fails.

Good Luck…, but mostly, good engineering!!!

Mass of Tower (g)	Height of Tower (mm)	Mass of Books(g)	Score

Engineering Design Process:

Sketch and describe the design that you used to create your paper tower today in the space provided:

After completing the paper tower exercise what would you do to change your design? How can you maximize the weight holding capacity of your tower? Sketch a revised version of your tower in the space below and answer the previous two questions: