More Paper Challenges

Adapted from https://thehomeschoolscientist.com

Materials:

- 8 ½ x 11 paper (second-use or recycled paper, please)
- tape
- scissors

The Challenges:

★ **Challenge #1**: Build a structure that will hold an egg 2 feet off the ground (check with your parents first!). Challenge yourself to use the fewest pieces of paper possible

★ **Challenge #3**: Build a bridge from table to table (6 inches or so apart) so a Matchbox car can cross.

★ **Challenge #4**: Build the highest, free-standing structure you can build with only one sheet of 8 ½ x 11 paper.

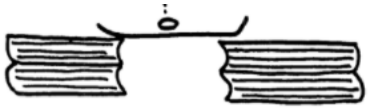
★ **Challenge #5**: Make paper airplanes of different designs and see which design flies farthest.

★ **Challenge #6**: Build the longest possible paper chain using one piece of construction paper (if you have it - any paper will work)

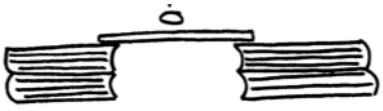
Extension - Paper Bridges:

Make two piles of books that are the same height and about 6 inches apart. The bridges will span this space. Strength of the bridge can be tested by using pennies or other small units.

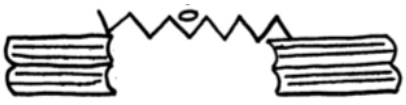
The Flat Bridge: Lay a single piece of paper across the piles of books



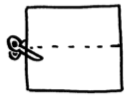
The Fold Bridge: Fold a piece of paper  so the two long sides meet.



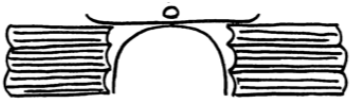
The Accordion Bridge: Fold the long side of a piece of paper back and forth to make many folds - each fold should be about an inch wide.



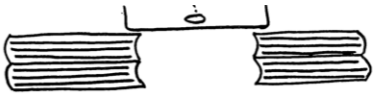
The Arched Bridge: Cut a piece of paper in half lengthwise.



Make one half into an arch and place it between the books. Place the other half across the piles of books and on top of the arch.



The Walled Bridge: Fold both long sides of a piece of paper so the bridge has walls.



Which bridge works best? Why do you think that is true? What makes it stronger?