Step 1) Glue the 2 base pieces together.



Step 2) Glue one of the "L" pieces inside two of the "J" pieces.



Make a continuous line of glue outlining an "L" on the "J" piece. Do not get any glue on the top "flap" part of the "J" pieces. Later, you will need to fold these flaps in opposite directions.



Then outline the "L" piece with glue and cover it with the second "J" piece.



If you are using corrugated cardboard, just glue two "J" pieces together, but do not glue the top flaps together.





Fold the top flaps in opposite directions. Repeat this for other "J" and "L" pieces. You will end up with three pieces that look like this:





Step 3) Use a sharp object to poke a hole through all three pieces as shown below:



The hole will need to be just wide enough so that a pencil or nail will fit snugly. Use a pencil or nail to make the hole the right size.



If the hole is too big, don't worry. You can fix that later.

Step 4) Glue the braces together. Glue 6 paperboard squares or 4 cardboard squares together for each brace.



As you glue, make sure two sides are even by aligning the sides on the table as you glue each one. It's okay if the other two sides are not even.



Step 5) Glue one of the "J" pieces about 1" from the end of the top piece so that the "J" points away from that end.



Step 6) Glue one brace on either side of the "J" piece, aligning the even sides of the brace with the corner so that the "J" stands at a 90° angle from the top piece. Then add a second brace on the other side.



Step 7) Add the two other "J" pieces to the base about one 1" from the end. Start by aligning the edge of one of the flaps with the side of the base.





Then add the second piece right next to it. Have the two flaps in the center on top of each other. If there is much excess flap hanging over the side, just trim it off.





Step 8) Then add a brace to either side of both pieces like you did earlier.





You may have to stagger the interior braces.





Your sculpture pieces are now ready for assembly.

Step 9) Cut 4 pieces of thread or clear fishing line about 12" long.



Step 10) Thread one piece of thread through the hole in the top "L" piece.



Tie a loop about 2½" long.



Step 11) Hold the top so that the "L" piece is hanging below it. Assume that the "L" piece is pointing to the front of the top. Tape one thread in the middle of the front. Then tape two more threads on either side about 1" from the back. There will be 3 threads hanging down. Have a little bit of thread sticking out from the opposite side of the tape.



Step 12) Push a pencil through the hole in one of the "L" pieces glued to the base. Slip the loop over the pencil and then push the pencil through the 2nd "L".





Step 13) Hold the top up over the base. Note where you taped the threads to the top. Find the points on the base that are directly below these three spots and place a piece of tape on these points. Do not rub the tape down hard; leave it loose because you will need to pull the pieces up in a moment when you tape down the threads.



Step 14) Check the length of the loop. There should be about 1" of space between the top and bottom "L" pieces. If the loop is too long you can shorten it by gluing part of it to the side of the top "L" piece.





Step 15) Now for the tricky part. Lift up the top piece, but let the loop support the weight of it. The loop should be taut. While you are holding to top part in place, tape each thread down onto the base. There should be a little tension on each thread.





You can adjust the tension by pulling the thread through the tape, either at the top or the base. Adjust the tension so that the top is level and not pulled to one side or leaning forward. Check to make sure the loop is in the middle of the pencil, between the 2 "L" pieces as you fine tune the tension.



Step 16) The loop around the pencil supports the weight of the top. The three threads should supply enough tension to keep the top from falling over. Once you get the tension right so that the top is level and stays in place without having to hold it, you can secure the threads by adding a little glue to the back side of the tape, where the thread leaves the tape.



Once this glue cools/dries, you can add another drop of glue to the front side of the tape. Use another drop of glue to keep the loop in the correct position in the center of the pencil. If needed, you can also glue the pencil/nail to the base "L" pieces so it stays in place. Congratulations. Your tensegrity sculpture is now complete.



You can even put a little weight on the top for a more dramatic effect. Too much weight will make the top fall over, but don't worry; you should be able to stand it back up again if this happens.

