

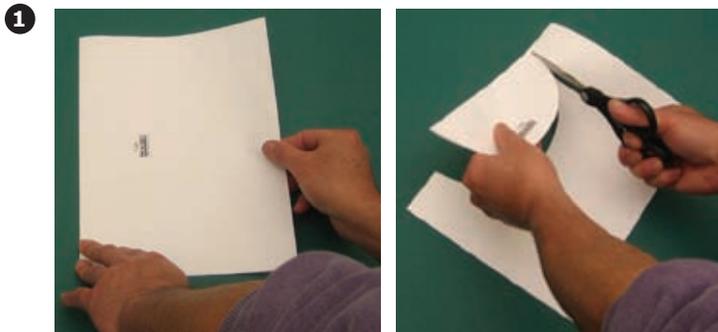
Template (download to 4 pieces of 11x17-inch 20-lb. or 24-lb. bond paper)
 Four 17-inch matchstick bamboo spars
 Four 15-inch matchstick bamboo spars
 Eight 1-inch lengths of natural rubber latex tubing (.094 x .031)

Scissors
 Scotch tape (clear, not "Magic" recommended)
 Markers, crayons, or watercolors, for decorating sail
 Low, stable cup with a small amount of water (optional)

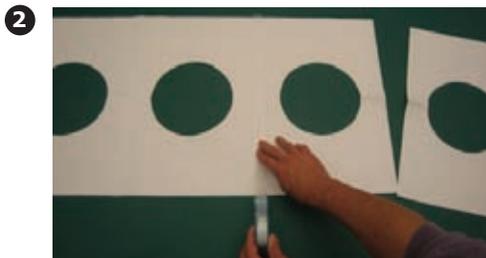
Materials, per kite

Note: kite makers will need plenty of space to tape together and decorate the kite sail. Provide an unobstructed work surface, with room for the taped-together sail to drape over the edge (cafeteria tables or floor). Also note that this kite requires a lot of Scotch tape. A group of students assembling kites will have an easier time if each student has an individual tape dispenser.

Assembly



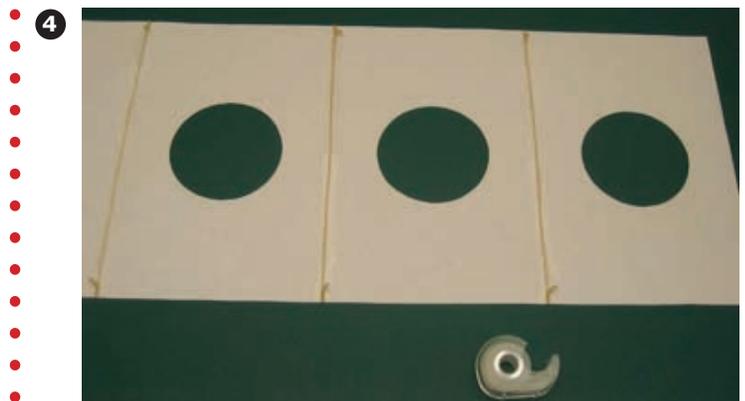
1 **Download and print the Box kite template.**
 Fold one 11x17-inch sheet for the kite sail in half. Cut out the circle along the dotted line; recycle or discard the circle. Repeat for the other three sheets. Decorate the sheets, if you wish, with crayons, markers, and/or watercolors.



2 Position the four sheets for the kite sail edge to edge (NOT overlapping), with long (17-inch) edges together, decorated side DOWN on the work surface. Take care to position tops to tops, bottoms to bottoms, per the decoration.
 Tape the sheets together down the ENTIRE length of each seam. Use one long piece of tape, or shorter pieces end to end, but do cover the entire seam. Fold over some tape at top and bottom of each seam for reinforcement. **Note:** to prevent the sheets from shifting, tape each sheet temporarily to the work surface.



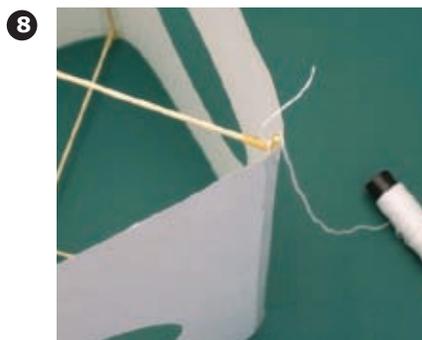
3 CAREFULLY make a slit about halfway through each piece of latex tubing at its center. Slide a piece of latex tubing over EACH end of the four 17-inch spars, FROM THE SLIT END at the center. Push the spar to the end of the tubing. **Note:** dip the end of the spar in water, if necessary, to ease sliding on the tubing.



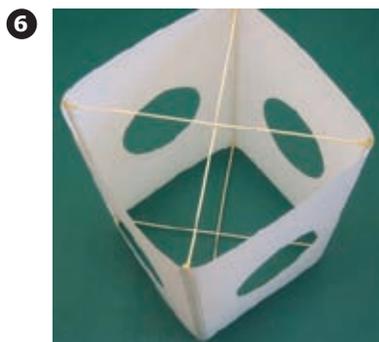
4 Position a 17-inch spar along each of the three taped seams so that the top and bottom of each spar are even with the edges of the paper and the open end of the latex tubing sticks up at about a 90° angle. Use several short strips of tape along each spar.



5 Bring together the two untaped edges of the sheets at either end of the sail and tape them together along the entire seam, to make a tube. Position the final 17-inch spar along this seam and tape in place, as in step #4.

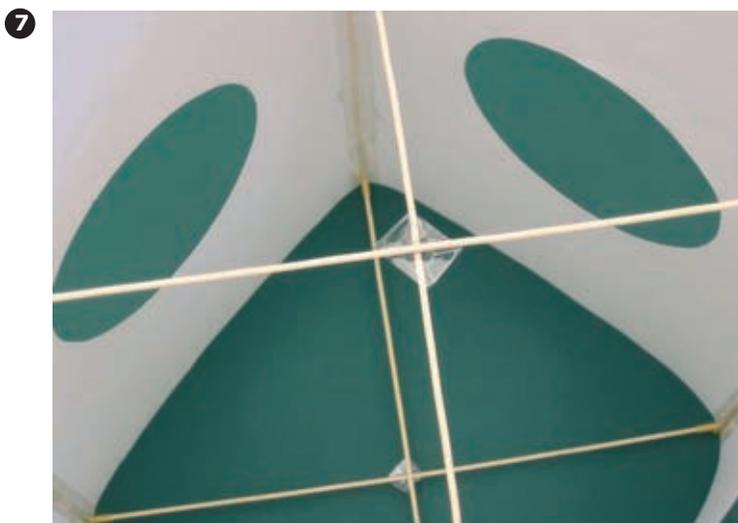


8 Tie kite line from winder with two overhand knots around a spar at one corner of the top of the kite.



6 Slide one end of a 15-inch spar into a free end of latex tubing at one corner of the kite (wet the end of the spar with a little water, if necessary). Slide the other end of the spar into the tubing at the DIAGONAL corner. Make sure to push the spar to the end of the tubing so

that it fits snugly. Repeat the process with the three additional spars so that the 15-inch spars cross at the top and bottom of the kite.



7 Reinforce the intersection of the spars with tape. Make a "tape sandwich," with two pieces of tape, one above the spars, one below, the pieces of tape adhering to each other around the spars and holding them as stably as possible. **Note:** winding tape around the spars is less effective. More tape will be required (thus making the kite heavier), and the spars will not be as well stabilized.

