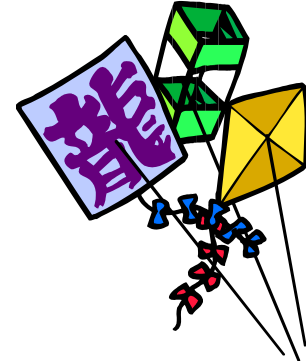


## KITES

### Why Does A Kite Fly?

Four key words describe the factors contributing to the flight of a kite. They are thrust, lift, weight, and drag. These are the very same factors that affect the flight of an airplane.



Your kite flying activities may lead your troop into a study of aerodynamics or you may want to stop with the following explanation.

The material of which the kite is made is spread out as wide as can possibly be, so that it has a large surface for the air to hold up. The ocean of air above the earth is always moving, and is full of currents and tides, just like the ocean of water, and the kite floats on these currents just as a raft floats on the moving waters of the sea. When the kite is slanted to the wind in the proper way, the pressure of the wind forces it to rise. If the wind pressure is not strong enough to make the kite rise, we run and pull the surface against the wind, which increases the pressure and raises the kite.

\*Safety First - Refer to *Safety-Wise* for additional guidelines.

### Safety Rules For Kite Flying

1. Never fly a kite near electric wires, buildings, ditches, or ponds.
2. Don't fly a kite in a thunderstorm.
3. Don't use metal in making a kite - it might attract lightning.
4. Don't use wire or wet string for a kite line.
5. Don't fly a kite on a street or near railroad tracks.
6. Don't try to get a kite that is caught in wires, treetops, rooks, or high poles.

### Tips For Successful Kite Flying

1. A large, well-balanced kite is easiest to fly.
2. The tail (six times the kite's width is best) helps keep it upright.
3. Choose a day with a soft breeze; it shouldn't be too windy.
4. Find a large, open space with no trees or utility poles.
5. At least 100 feet of strong kite line is required.
6. Turn your back to the wind and let your line unwind quickly and smoothly. You don't need a running start.

## ***JAPANESE FLYING FISH KITE***

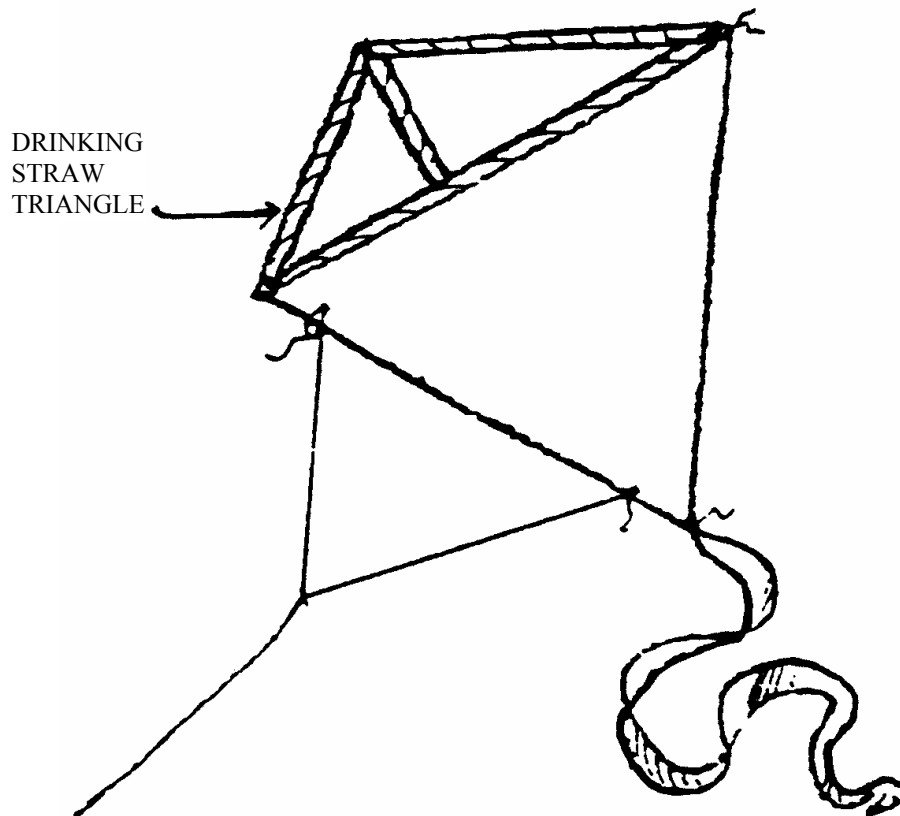
1. Draw a fish on plain wrapping paper or tissue paper. It should be three times longer than it is wide - about 12 x 36 inches.
2. Decorate with crayons or poster paints, if you like.
3. This kite is made of two halves so you will need two fish shapes as nearly alike as possible. Place the sheet with the fish over a second sheet of paper. Pin together. Cut out both pieces at the same time. Color the second fish.
4. Paste the two fish shapes together. Spread the glue only along the sides of the fish's body. Leave the center and the section around the mouth and tail free. Try not to use too much glue.
5. Make a tag board ring to fit the unglued mouth of the fish. Fasten the ring in place with tape. This ring holds the fish's mouth open so the wind can blow through the center, and out through the tail. Fasten strings to both sides of the ring, knot, and tie to flying string.



# ***SODA STRAW TETRAHEDRON***

**You will need:** 6 drinking straws  
thin plastic wrap, typing or tissue paper  
crepe paper  
a ball of lightweight string  
glue or tape

1. Make a triangle out of 3 straws by threading a long string through them and tying a knot at the end. (If you gently suck one end of the straw, the string will come through.)
2. Thread two more straws and add to one side of your first triangle, forming a second triangle.
3. Now attach the last straw from the top of your second triangle to the bottom of your first triangle with string or tape, and you will have a geometric shape called a tetrahedron.
4. Measure and cut out plastic wrap or tissue paper to cover two sides of the kite. Then tape or glue it around the straws.
5. Attach a long (about 3 feet) tissue or crepe paper tail to the bottom of the kite. Tie on a string bridle and your ball of string.



# **PAPER PLATE FLYER**

**You will need:** One paper plate  
Two soda straws  
Several styrofoam cups  
String

1. Punch four holes in the paper plate and attach the soda straws, as shown in the illustration, to strength the plate.
2. Punch a fifth hole in the plate and attach the styrofoam cup tail. Knot behind each cup to keep them in place.

