



Air Activities Badge



Requirement 3a – Hot Air Balloon

Tissue Ballooning

The principle of hot-air balloons could not be simpler. Enclose a "bubble" of warm air and it will float around until the warm air cools. Two or three Cub Scouts should be able to make a tissue paper balloon in a couple of hours.

All you need are 48 sheets of 12 inch square tissue paper, glue (Pritt Sticks), scissors, a piece of string and some stiff wire (similar to wire coat hangars).

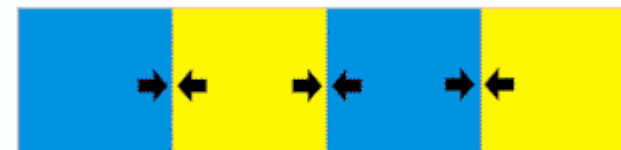
To launch the results of your efforts, you will need an open space, preferably in the country, and a simple source of heat. Weather conditions will determine how far the balloon travels. One "home-built" balloon survived four flights, flying as much as 50 miles in one trip.

The best way to inflate the balloon is with an electric fan heater, or Hairdryer although a blowtorch can be used – the hotter the air the further and higher it will fly. **As with anything that has the dangerous potential of causing a fire, it should only be done with Leader supervision and insuring adequate safety precautions are followed. For Indoors Flight – use only a Hairdryer or Fan Heater.**

When the balloon takes off, the game is to keep up with it. It can be a great sport on foot on a calm day, but in certain conditions, your "bubble" could fly for miles and it is wise to have transport even if it is only a bicycle.

Step 1.

Make 12 long strips by gluing the squares of paper together with a 1/2 inch overlap. By alternating the colours of the squares a chequered design can be achieved.



Step 2.

Fold the strips in half lengthwise and pile them up, clipping the folded edges together with spring or Bulldog clips.



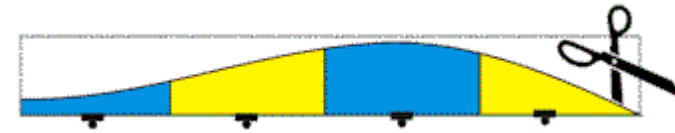


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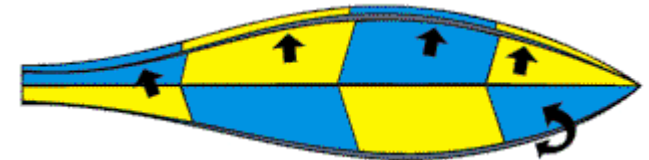
Step 3.

Draw a "fish" shape on the top sheet and cut it out through all of the sheets. Keeping the spring clips in position, place the fish shapes on a flat surface with the straight edges away from you.



Step 4.

Fold back the top "fish" and apply glue to the curved edges of the following two "fishes". Continue gluing the rest in twos. When you are left with one "half fish", roll the glued sections toward the straight edge and glue the edges of the first and last "fish" shapes together. Then apply glue along the top side of the seam and press it back on the balloon's surface.



Step 5.

Tie the "crown" of the balloon tightly with string. Make a circle of thick wire (from a wire coat hanger) and glue it to the throat of the balloon making a "hem". This tissue paper Hot Air Balloon is now ready to fly.

