

Make a recycled kite

It's easy to build your own simple flying machine.

What you need

- A durable carrier bag
- 2 tough paper straws, or two wooden skewers
- Masking tape or parcel tape
- Around 10–15 metres of string
- Old ribbons, cut to around 10cm long

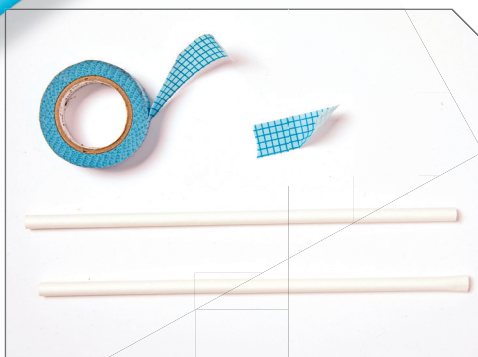
TOP TIP

Try to reduce the weight of your kite by using as little tape as you can. Use kite or fishing line instead of string.

How does it work?

There are four forces that control how a kite flies, and they are the same forces that act on planes and other flying machines. These are: lift, weight, drag and thrust. Lift is the upward force that keeps the kite in the sky. It works because if the kite is angled to the ground, the air over the top of the kite moves faster than the air underneath. Faster-moving air has lower pressure, meaning the kite "feels" more pressure from the air below it and so goes up. The opposite of lift is weight – gravity pulling the kite back to Earth. So long as the lift is greater than – or equal to – its weight, the kite will stay up. Drag is the resisting force from the air pulling on the kite as it moves forwards. To fly, the drag must be less than the forward force of thrust. You can increase thrust by pulling the kite faster through the air.

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1 Gather your materials together. Cut off about a third of one straw or skewer. Lay it on the longer one to form a cross, and tape them together.



2 Lay your plastic bag flat and cut down each side. Open up the bag and lay the straw or skewer cross on it. Tape the cross to the bag.



3 Fold the edges of the bag over and tape them in place to make it a little more rigid. Attach the ribbons to the base with tape.



4 Tie one end of the string securely to the centre of the cross. Give your kite one last check over and now it's time to see if it flies.