

Fold and Fly

Here are the instructions for how to make six different paper aeroplanes, as well as a helicopter and hang-glider too!

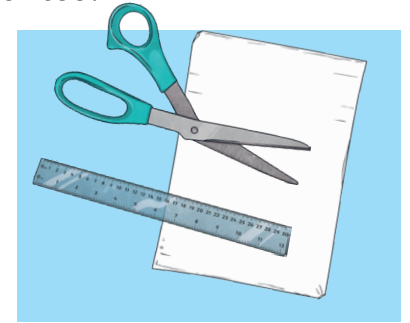
You will need:

A4 paper

Scissors

A ruler

Paper clips (only needed for the helicopter and hang-glider).



Top Tips

Do the folds on a hard, flat surface, such as a table.

Line up your fold before you crease.

Press the creases firmly.

Keep your folding as symmetrical as possible for better flight results.

Never throw an aeroplane directly at someone.

Adjusting the Wings

You can alter the way the plane flies by adjusting the wings.

See what happens if you curl the back of the wings up or down slightly.

Try changing the angle across the wings to see what is best for each plane. Having the wings angled slightly upwards, downwards or completely level will alter the flight of the plane.

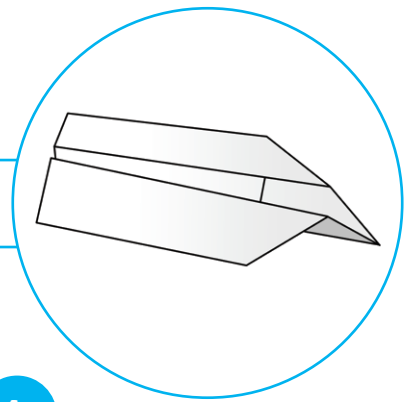
Throwing Speed

The speed at which you throw the plane is important. Thin and sleek planes, with small wings, like to be thrown quickly. Gliders on the other hand, with bigger, wider wings, prefer to be thrown slowly.

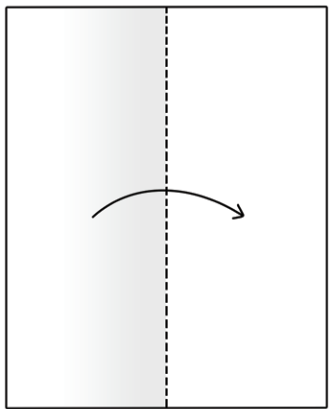
The angle at which you throw also makes a difference. See what happens when you throw upwards, flat or downwards.

1) The Simple 'n' Speedy

Easy to make and flies fast!

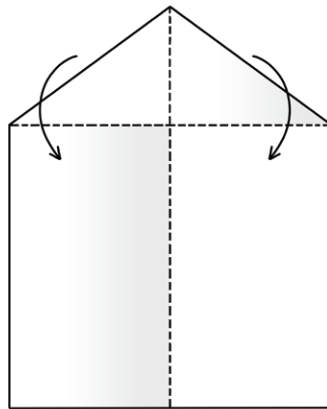


1



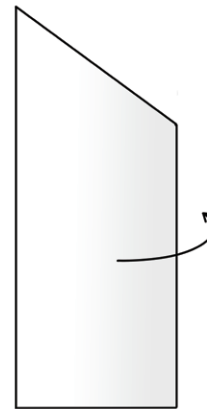
Make a line in the centre by folding the paper in half longways then opening it out flat.

2



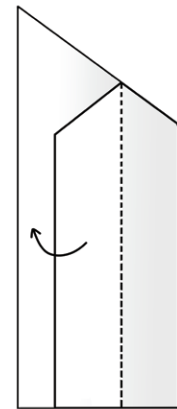
Fold in two of the corners at the top so that they meet at the centre fold.

3



Fold the paper in half.

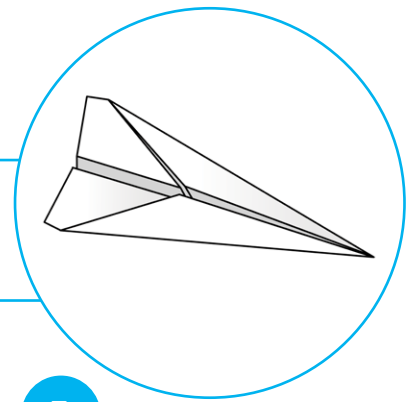
4



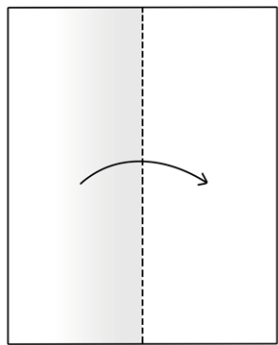
Fold the edges down to meet the bottom of the body. Your plane is ready to fly!

2) The Fantastic Flyer

This is probably the most iconic paper aeroplane design and one of the easiest to make. It flies well too, reaching a decent distance and speed.

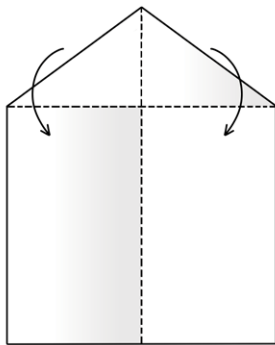


1



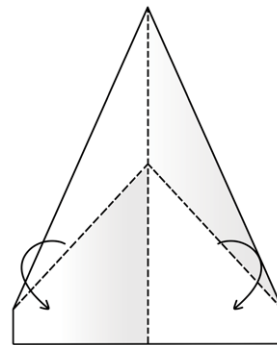
Make a line in the centre by folding the paper in half longways then opening it out flat.

2



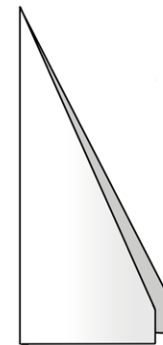
Fold in two of the corners at the top so that they meet at the centre fold.

3



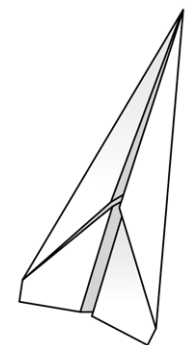
Fold the top edges to the centre.

4



Fold the plane in half.

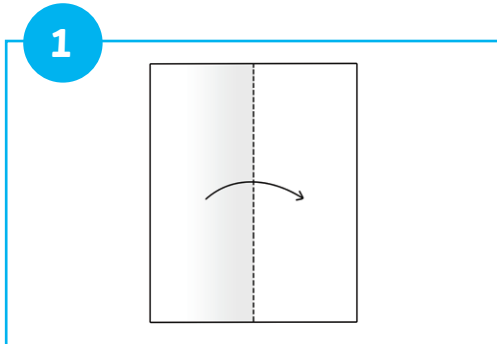
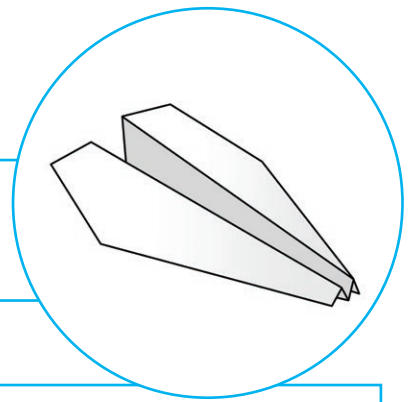
5



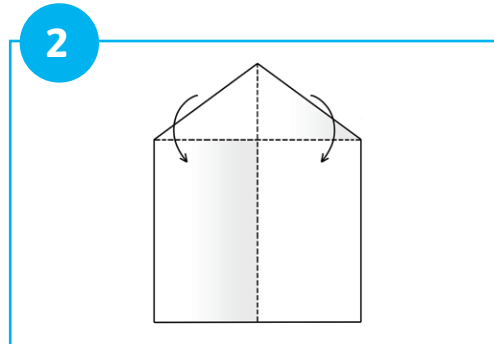
Fold the wings down to meet the bottom edge of the plane's body. It's ready to soar!

3) The Skater

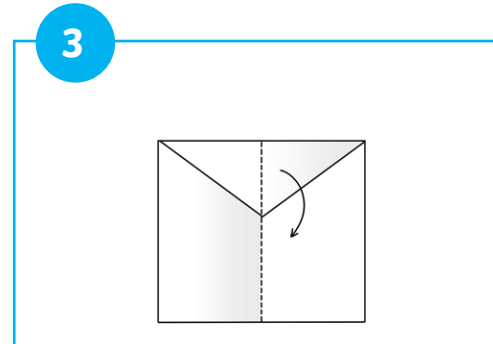
This plane has a tendency to flip upside down during flight. Try bending the two wings up slightly at the rear and see if you can get it to do flips and tricks.



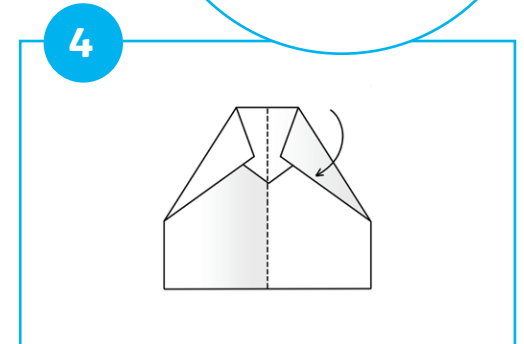
1 Make a line in the centre by folding the paper in half longways then opening it out flat.



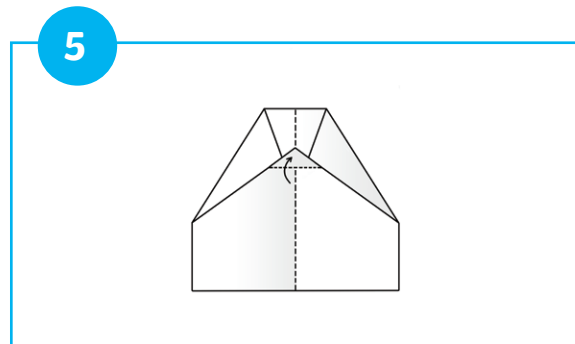
2 Fold in two of the corners so that they meet at the centre fold.



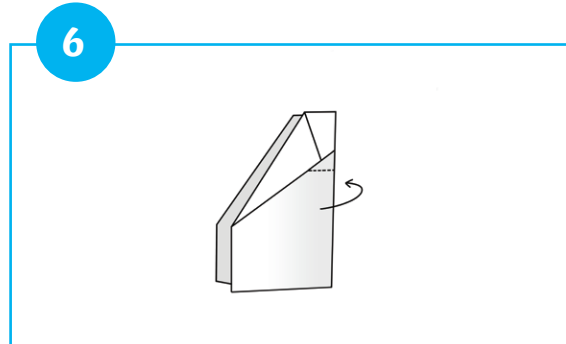
3 Fold the top peak down to create a triangle shape on top of the rectangle (so it looks like the back of an envelope).



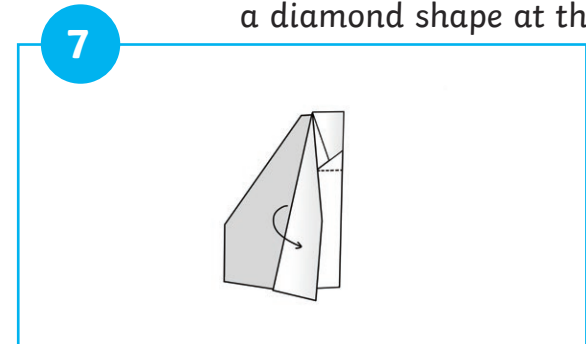
4 Fold the top two corners to the centre about 2.5cm above the downward facing point, to form a triangle shape at the top and a diamond shape at the bottom.



5 Fold the downward facing point up to secure the flaps.

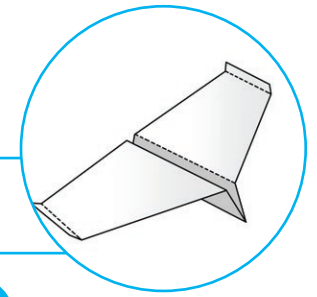


6 Fold the plane in half and flatten it out.

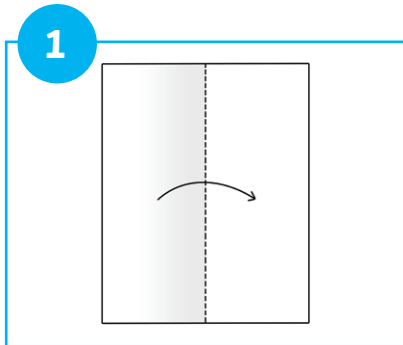


7 Fold the edges down to create the wide wings.

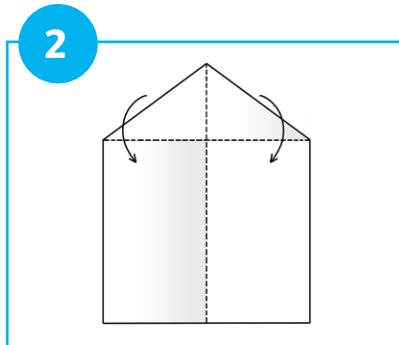
4) The Wide-Winged Glider



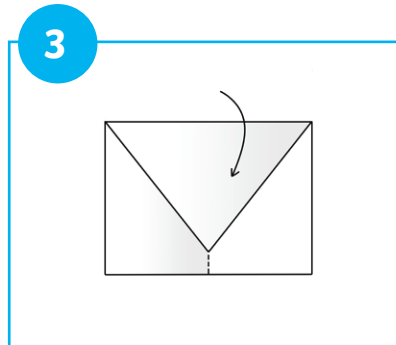
A great plane for distance and glides nice and straight through the air.



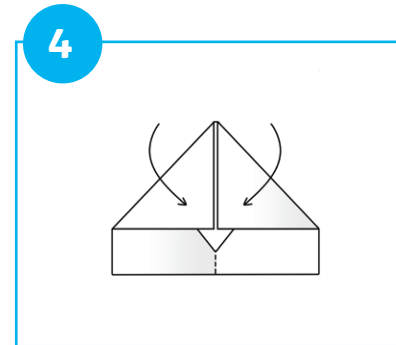
1 Make a line in the centre by folding the paper in half longways then opening it out flat.



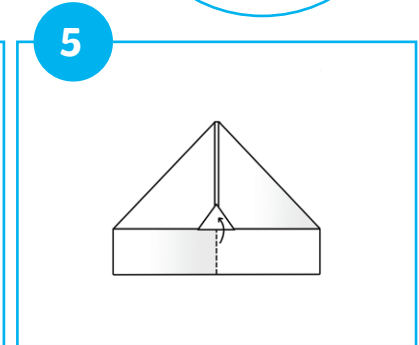
2 Fold in two of the corners so that they meet at the centre fold.



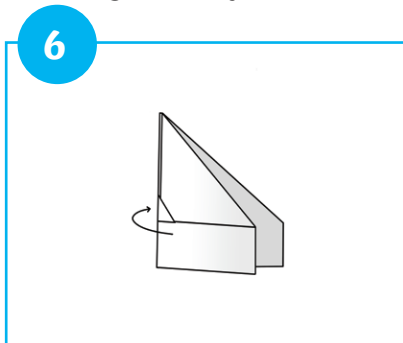
3 Fold the top peak down to about 2cm before the bottom edge.



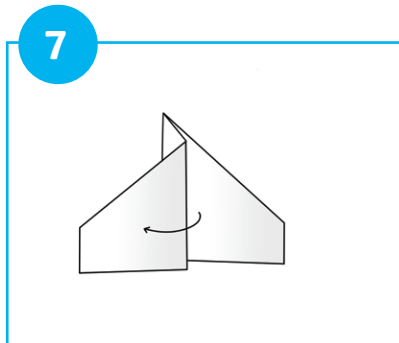
4 Fold both corners in so that they meet at the centre fold.



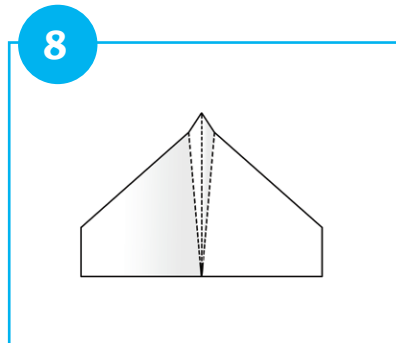
5 Fold the downward facing, triangular shaped point up to secure the two flaps.



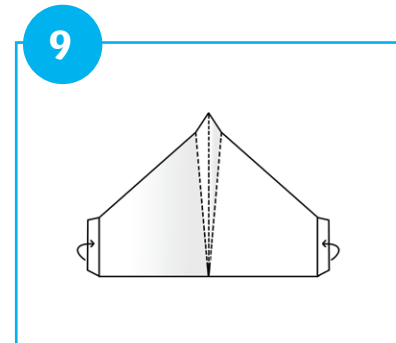
6 Fold the plane in half.



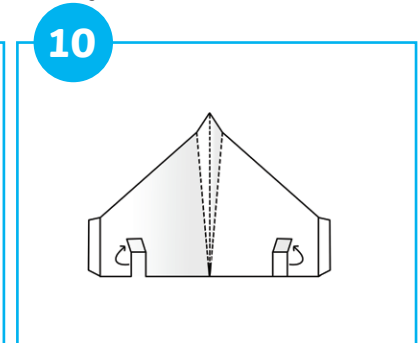
7 Fold one wing down about 2.5cm from the belly of the plane.



8 Repeat with the other wing.

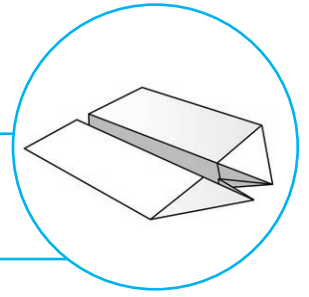


9 Next, fold up the ends of each wing about 1cm.

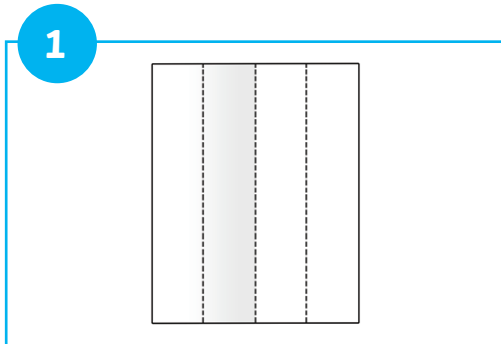


10 Finally, take a pair of scissors and cut two small slits at the tail end of each wing.

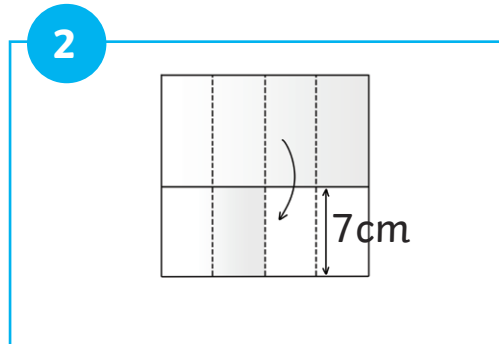
5) The Aeroboat



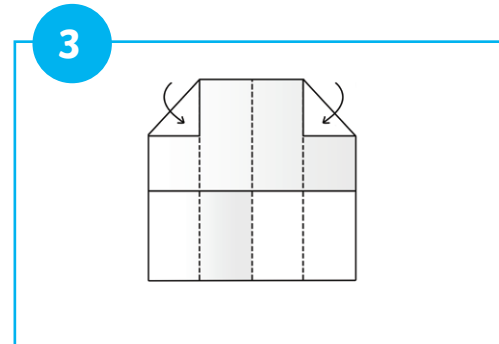
Is it a boat or a plane? This is a plane that looks like a boat. It glides through the air like a boat glides through water.



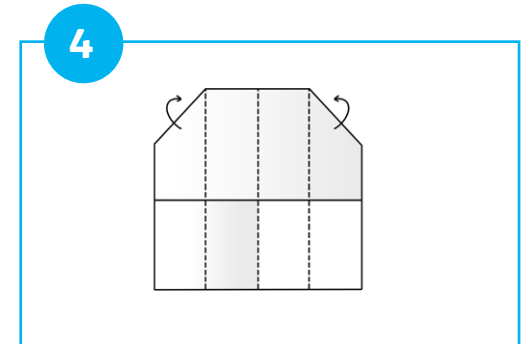
1 Fold the paper in half and half again lengthways and then open it out flat.



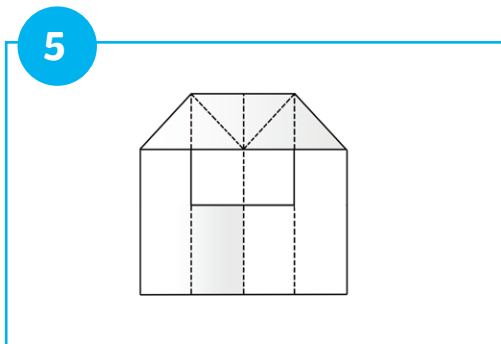
2 Fold down the top to leave about 7cm before the edge.



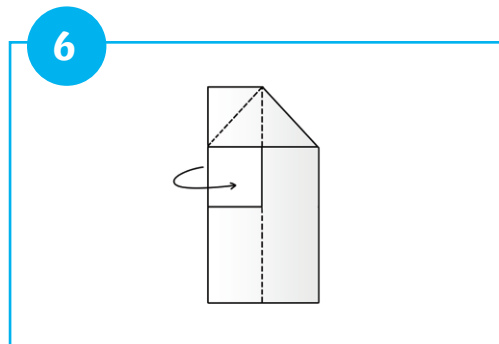
3 Fold the top two corners to the crease closest to it.



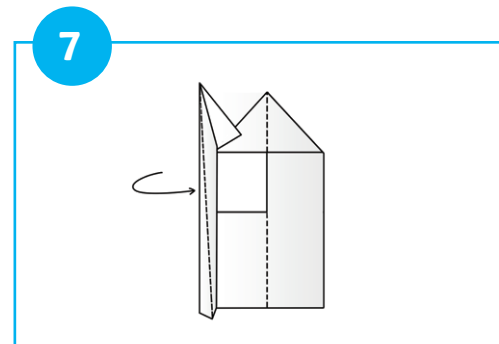
4 Unfold and then accordion fold the top corners in.



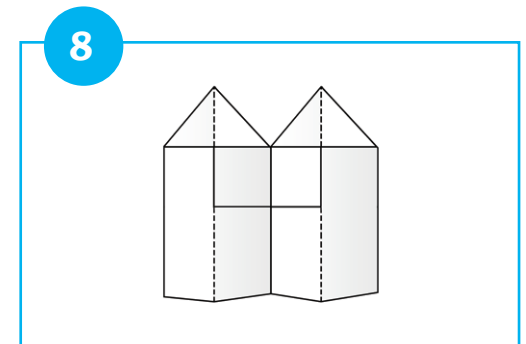
5 Fold the top flaps to the centre line.



6 Fold the paper in half.



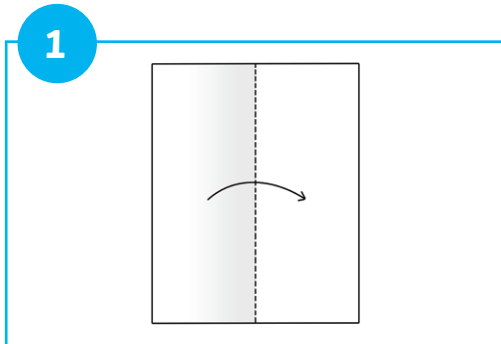
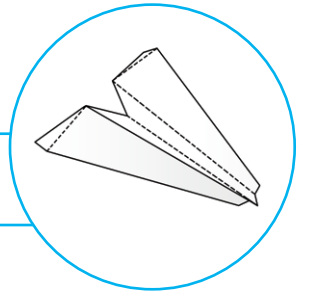
7 Accordion fold the top peak in as shown.



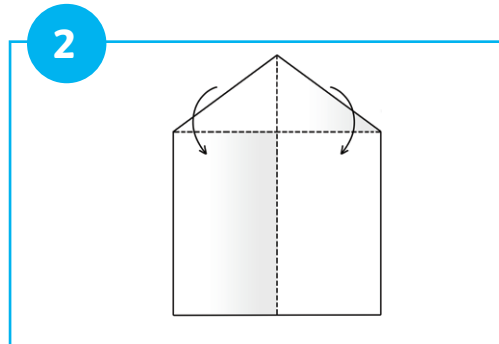
8 Finally, fold both sides out to create the wings.

6) The Rollercoaster

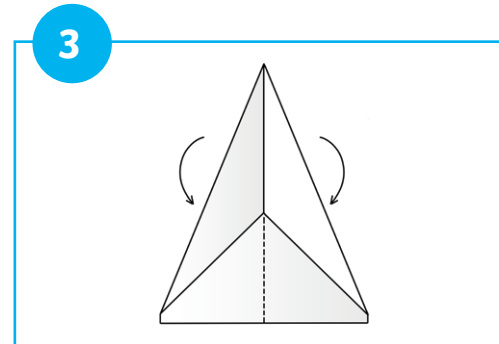
This plane has its own unique flying style due to the shape of its tail.



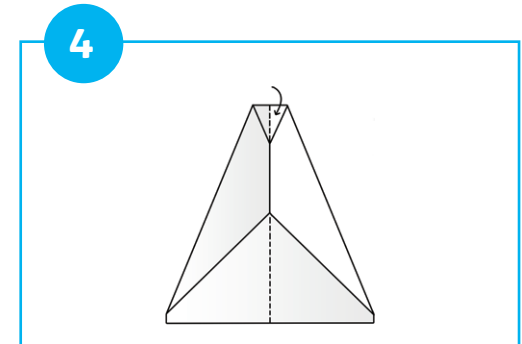
1
Make a line in the centre by folding the paper in half longways then opening it out flat.



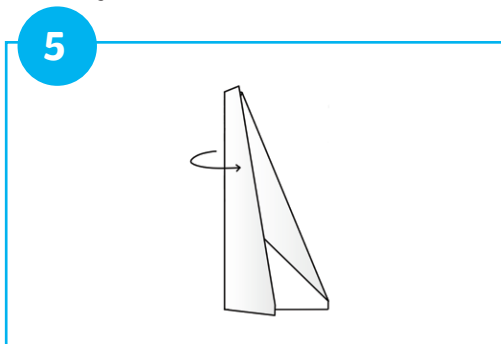
2
Fold in two of the corners so that they meet at the centre fold.



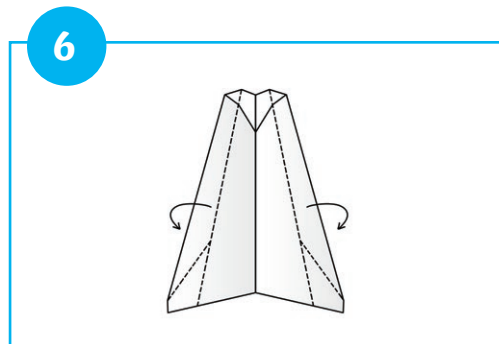
3
Fold the top edges to the centre line.



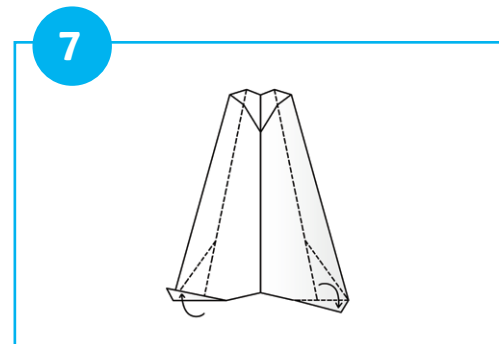
4
Fold the top peak down as shown.



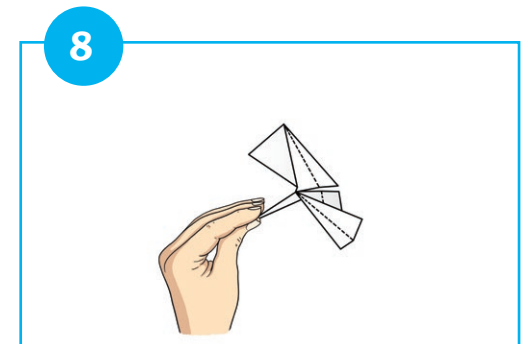
5
Fold the plane in half.



6
Fold down both wings.

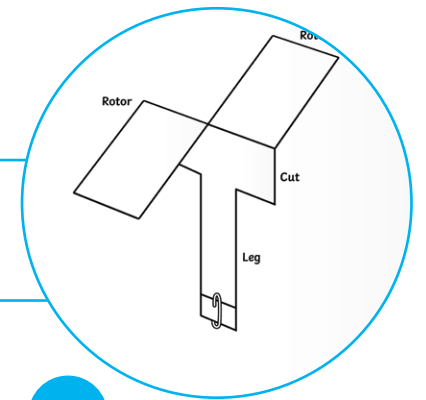


7
Finally, fold the back ends in opposite directions as shown.

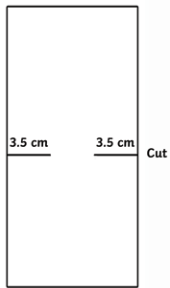


7) How to Make a Helicopter

You will need half of an A4 sized sheet of paper (lengthways).

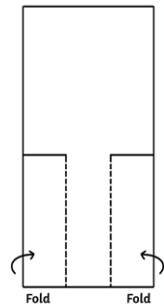


1



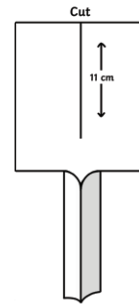
Find halfway down and cut a 3.5cm horizontal slit in each side, as shown by the solid line on the diagram.

2



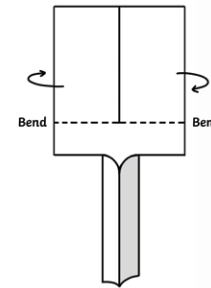
Fold each side in, so that the flaps overlap.

3



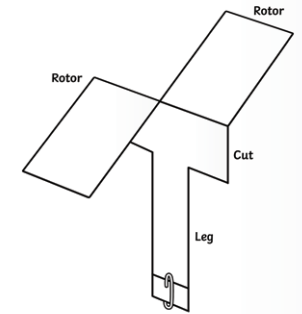
Cut an 11cm slit from the middle of the top of the paper.

4



Fold one rotor blade down one way and one the other way.

5



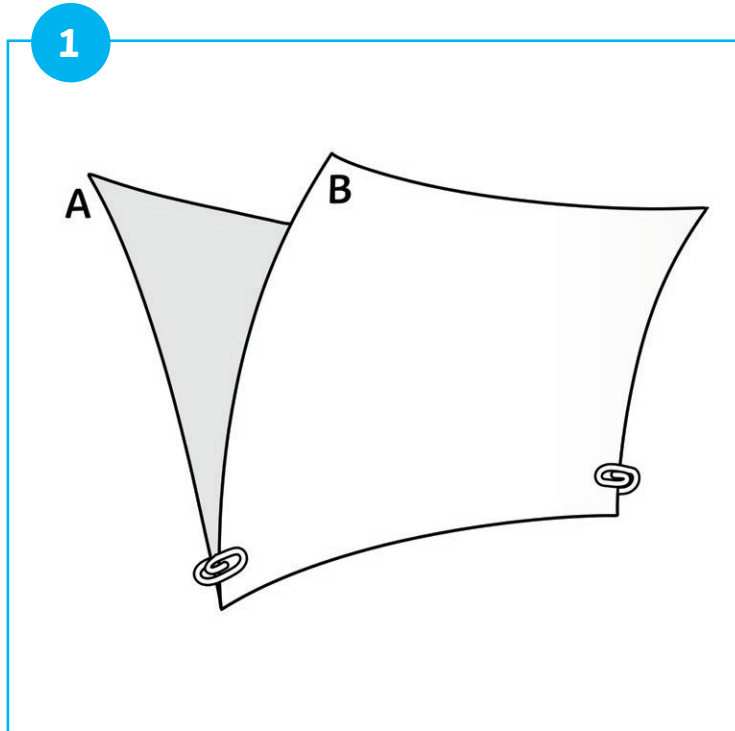
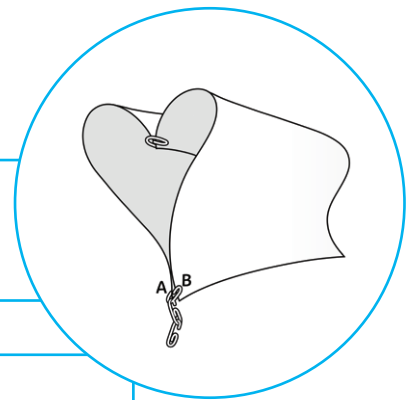
Optional: put a paper clip onto the bottom section (this adds weight to the helicopter's body so that it will fly better).

Challenge

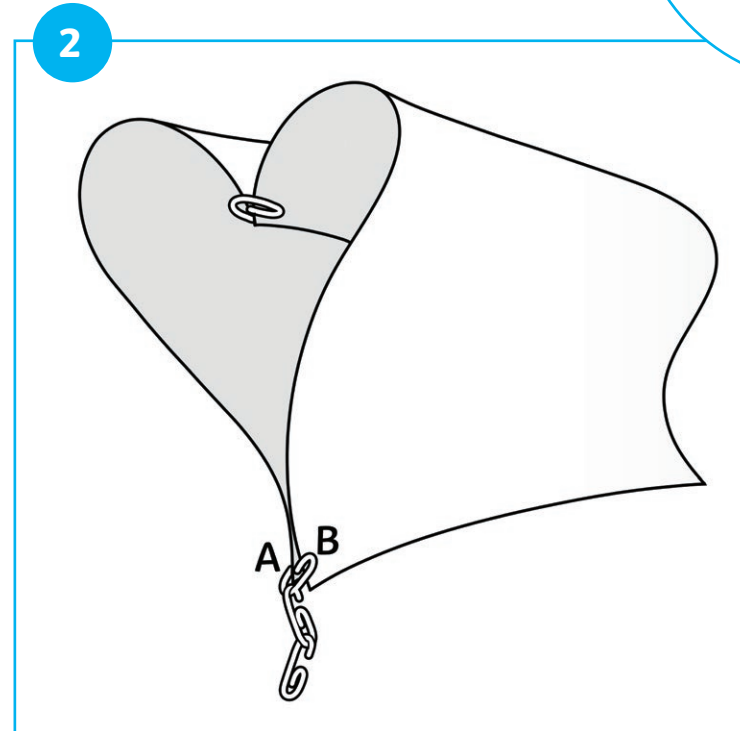
Experiment with different sized helicopters by changing their wing sizes and body length. Can you come up with the best design by dropping them two at a time from a height such as the top of a flight of stairs? The longer it stays in the air, the better the design.

8) The Hang-Glider

Hang-gliders are unpowered aircraft, which means that don't have a motor. They require air movement to stay in the air. You will need a sheet of A4 paper and some paperclips.



1
Fold the sheet in half widthways.
Paperclip the sides together at each end near the fold.



2
Curl the halves of the paper outwards and downwards and clip together the corners (A and B), which will be the front of the hang-glider. Attach a short chain of paperclips to the clip at the front (try varying the number).

Test the model by trying to make it glide in a steady way, but not losing height too soon.