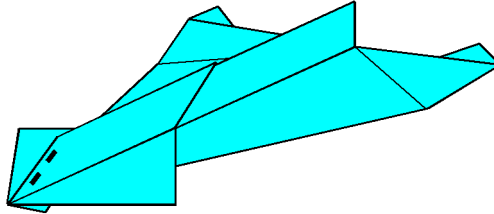# The Kendal Flyer

Designed by David Mitchell

The Kendal Flyer is a rubber band launched plane that I designed in 1990. It is possible to make a pure origami version but I prefer this one in which the nose is held together with a staple.

Most paper planes have a keel below the wings. The Kendal Flyer is different. Here the keel is above the wings so that it looks more like a modern plane. Unfortunately I forgot to tell Nick Robinson this when I submitted the design for inclusion in his book Paper Airplanes with the result that it was first published upside down.

It is also possible to make a more traditional version of the design - which I call Easy Glider - which can be launched by hand in the normal way.
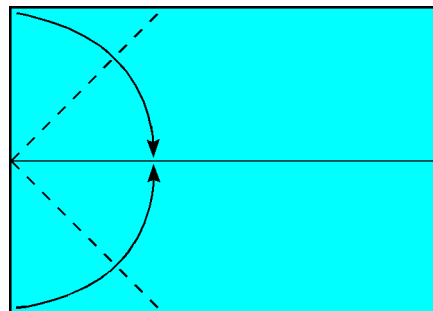
You will need a single sheet of A4 photocopy paper. I have not experimented to see if this design will work from US letter size paper although I expect that it will.
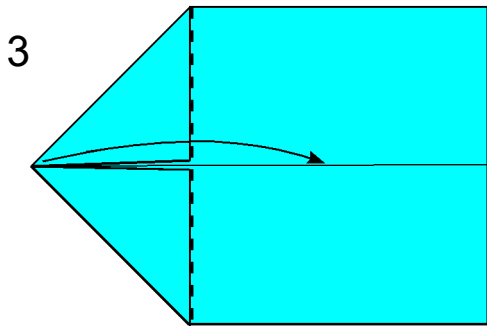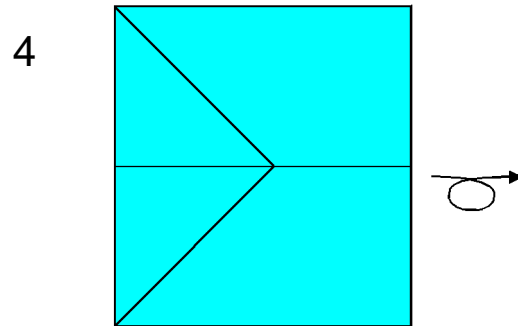
1
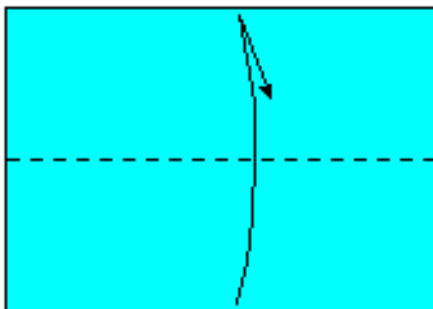
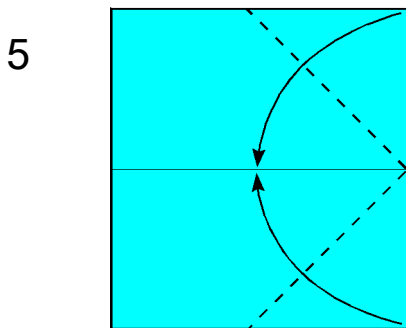1. Fold in half downwards, then unfold.

2

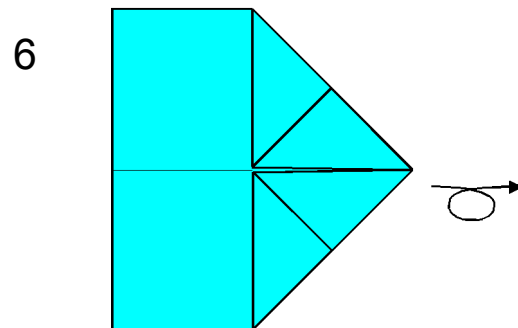2. Fold both left hand corners inwards using the horizontal centre crease as a guide.

3

3. Fold the left corner inwards along the line of the right edges of the front flaps.
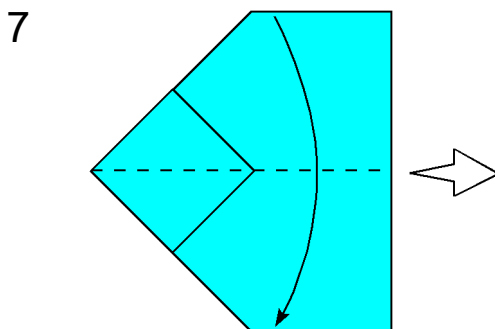
4

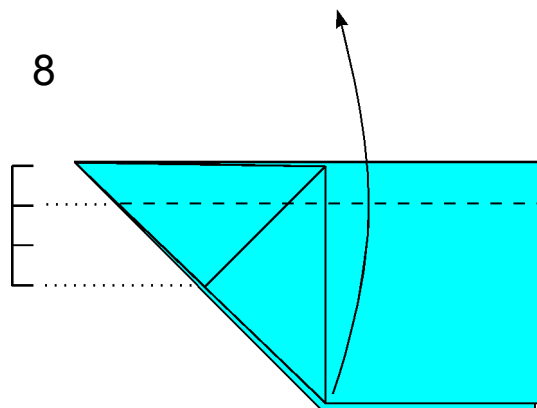4. This is the result. Turn over sideways.

5

5. Fold both right hand corners inwards using the horizontal centre crease as a guide.
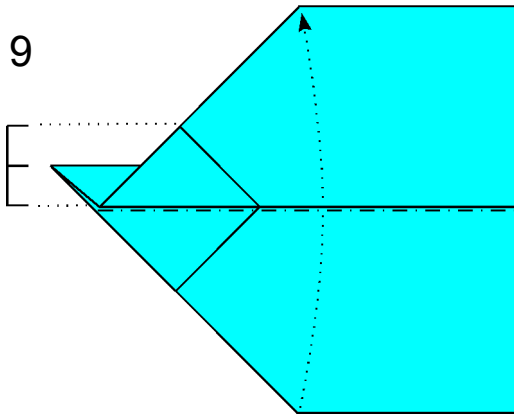
6

6. Turn over sideways again.

7

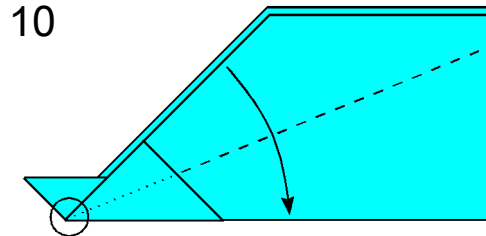7. Fold in half from top to bottom. Crease firmly.

8

8. Fold the front wing upwards in the way shown here. Try to make sure the new crease lies parallel to the bottom edge.

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9

9. Fold the other wing upwards behind so that the edges of the wings line up. Crease firmly.

10

10. Fold the sloping edge of the front wing downwards to lie along the bottom edge. Look at picture 11 to see what the result should look like. You should only be folding the layers of the wing itself and not the pocket it runs into on the left. Make sure that the crease runs all the way to the point marked with a circle. You will find it easier to do this if you open up the pocket slightly while you make the fold.
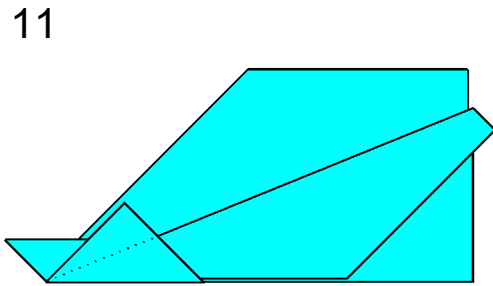
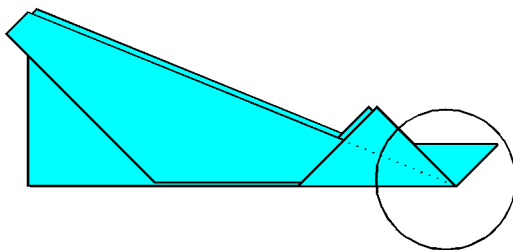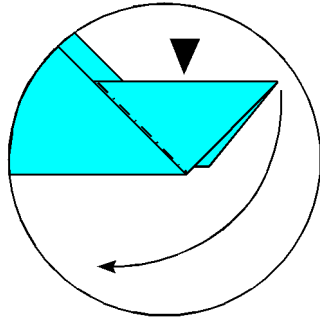**11**

11. This is the result. Turn over sideways.

12
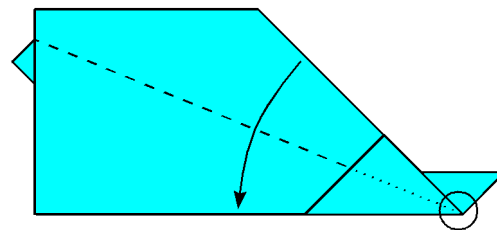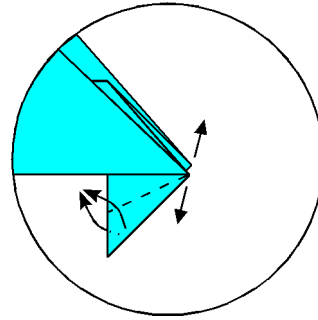
12. Repeat step 10 on the other wing.

13

13. Follow the instructions in the enlargements to form the nose into a hook.
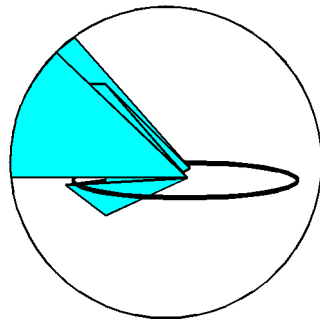
14

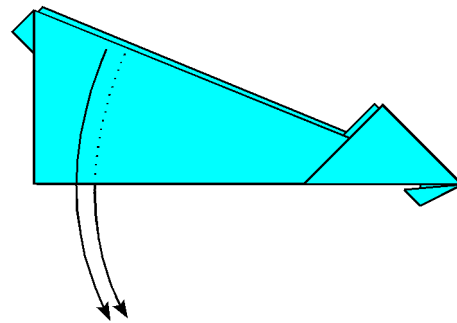14. Turn the tip of the nose inside out between the layers of the fuselage. Crease firmly.

15

15. Open the nose and turn the tip of the triangular point inside out outside the other layers to form the hook.
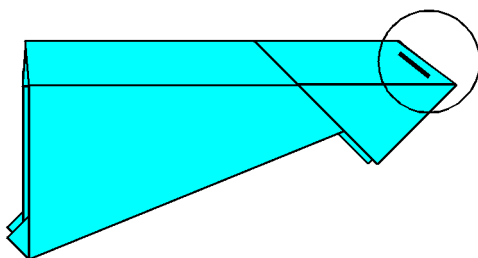
16

16. Make sure there is a small gap between the hook and the underside of the fuselage into which a thin rubber band can be slipped.
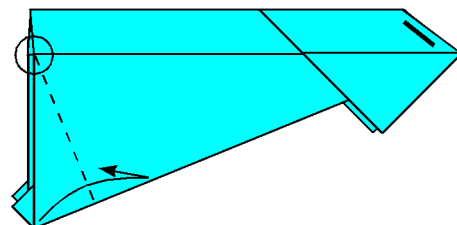
17

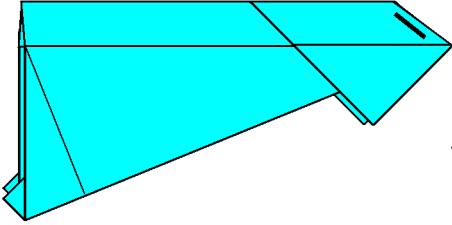17. Fold the wings downwards in front and behind.

18

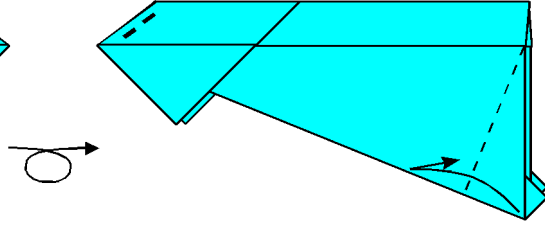18. Put a staple through the nose to hold all the layers together.

19

19. Make this small fold to form a control surface, then unfold.
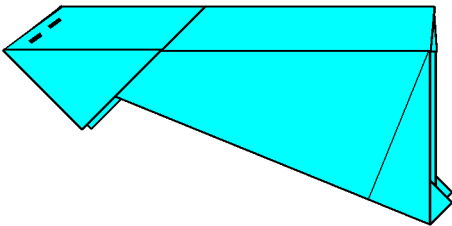
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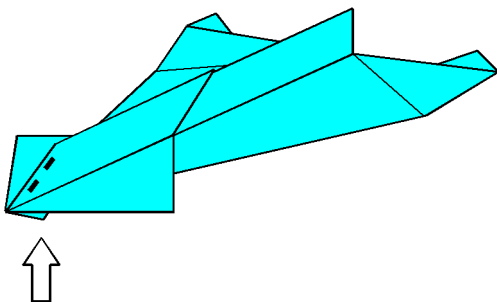
20

20. Turn over sideways.

21

21. Repeat fold 19 on the other wing.

22

22. Lift the wings upwards at right angles so that your plane looks like picture 23.

23

23. Hold the Kendal Flyer by the hook and test launch gently forwards. If the control surfaces are trimmed correctly the plane will glide at a shallow angle in the fuselage up position. Adjust the control surfaces until this has been achieved.

You can trim the Kendal Flyer for flight indoors but because of the rubber band powered launch it is best to launch it for real outdoors in a wide open space. Try to choose a calm, almost windless day.

24
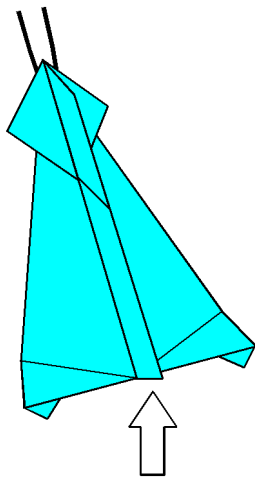
24. To launch The Kendal Flyer first slip a long thin rubber band onto the hook. Loop the band onto the tip of your thumb, hold the back of the fuselage in your other hand and pull back to tension the band. Release the Kendal Flyer upwards at a sharp angle. It will catapult into the air, perhaps loop the loop (depending on how the control surfaces have been trimmed) and glide away in the least expected direction.

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