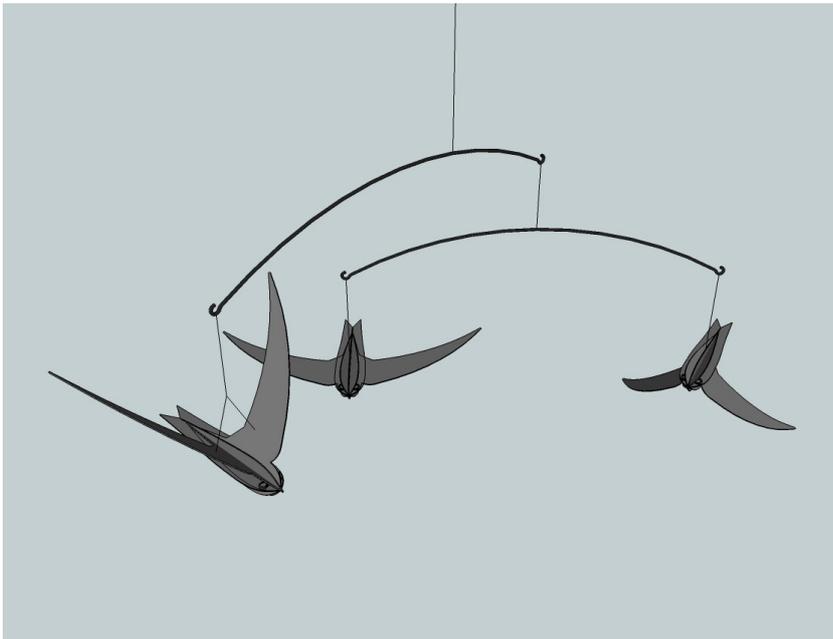
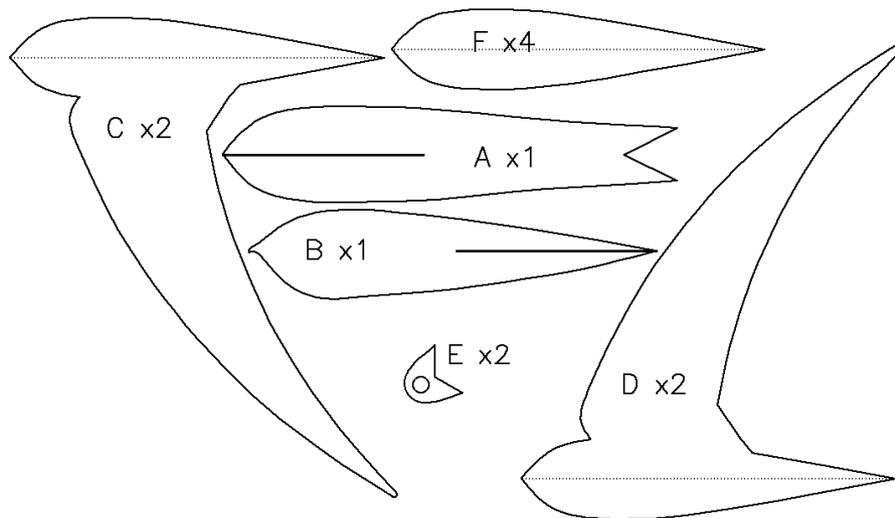


## Swift Mobile Assembly Instructions



12 pieces are required to assemble each swift



(Note: for the single thickness wing, you require 1x A, 1x B, 1x C, 1x D, 2 xE and 6 xF)

You will require child-friendly glue which sets reasonably quickly, but also allows time for the pieces to slide over each other and align perfectly (e. g. White School Glue or White PVA Glue used with a brush, or Pritt applied liberally). Paper clips or clothes pegs are useful for holding things in place while the glue is setting.

While a laser cutter provides the most precise results, perfectly good Swifts can be made by printing out the pieces (see associated PDF's) onto card, provided your computer printer can handle card. If not, then print onto white paper, then glue to an old cereal package (on the printed side). It is best to cut out the paper shapes roughly, then glue them one at a time to the card – this makes removing the bubbles easier. Then, when the

glue is dry, score the fold lines, then cut the pieces accurately with sharp scissors – probably a job for an adult. The slots in pieces A & B need to be carefully cut to a width the same as the card thickness.

The final assembled Swift can be painted black using child-friendly black paint, such as poster paint.

Of course, the shapes can be used as stencils to mark out the pieces with a sharp pencil on black card purchased from an art shop.

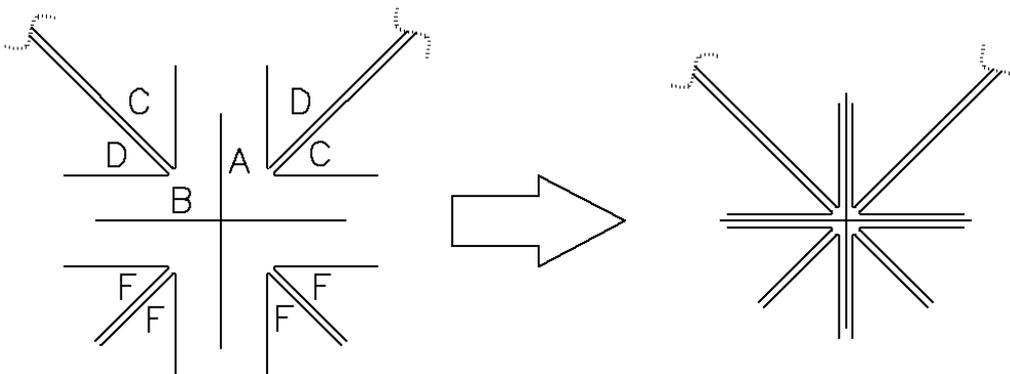
The basic assembly is as follows:

1. Pieces C, D & F need to be folded away from the score line.
2. Slot pieces A & B together, making sure that the small tick marks at the end of the slots align.

To make a Swift with wings made of two layers of card (see two pdf's for double thickness wings):

#### For the wings up and wings down configurations

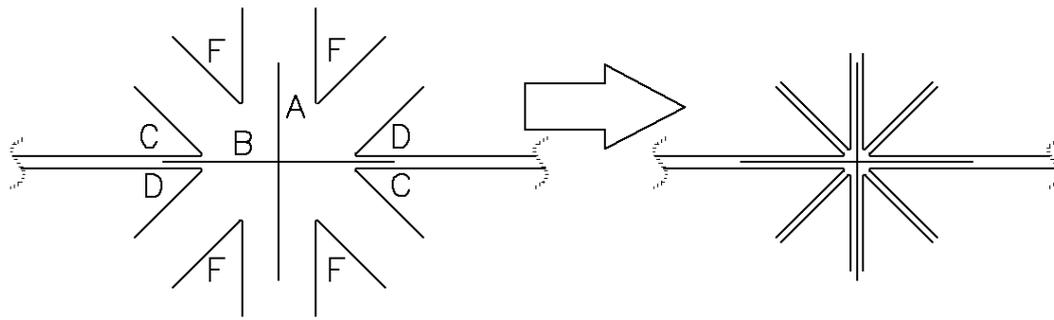
3. Each wing is made by glueing a C and a D together, making sure that they are perfectly back to back and with glue only on the wing side of the fold.
4. Glue a pair of F's together (twice) again making sure that the glue is on only one side of the fold
5. Now assemble the swift by gluing the assembled wings and assembled pairs of F pieces as in this diagram showing the assembly for wings up. For wings down, put the wings below and the F pieces above. Make sure everything aligns nicely, particularly at the head end.



*Wings up configuration - view from rear of swift*

#### For the wings flat configuration

6. Spread glue over the wing side of the fold on piece C & D. Then, for the left wing glue C to the top left side of B and D to the bottom left side of B making sure that the wing tips, and the head end are perfectly aligned. Press upper and lower wing surfaces together. Do the same for the right wing but with D on top and C below. Secure everything with paperclips or clothes pegs.
7. When the glue has dried, insert 4 F pieces between the wing flaps and A, making sure they are well pressed in and aligned properly at the head end.



*Wings flat configuration - view from rear of swift*

To make a Swift with wings made of a single layer of card:

8. With thicker card, you can save some work by having wings of single thickness by replacing the C and D pieces on the underside of the wings with 2 F pieces. This requires 6 F pieces and single C & D pieces for each Swift – see single wing layout pdf.

For the Eyes, E

9. Bring the two straight edges together, then glue and insert the pieces, on each side of the head.

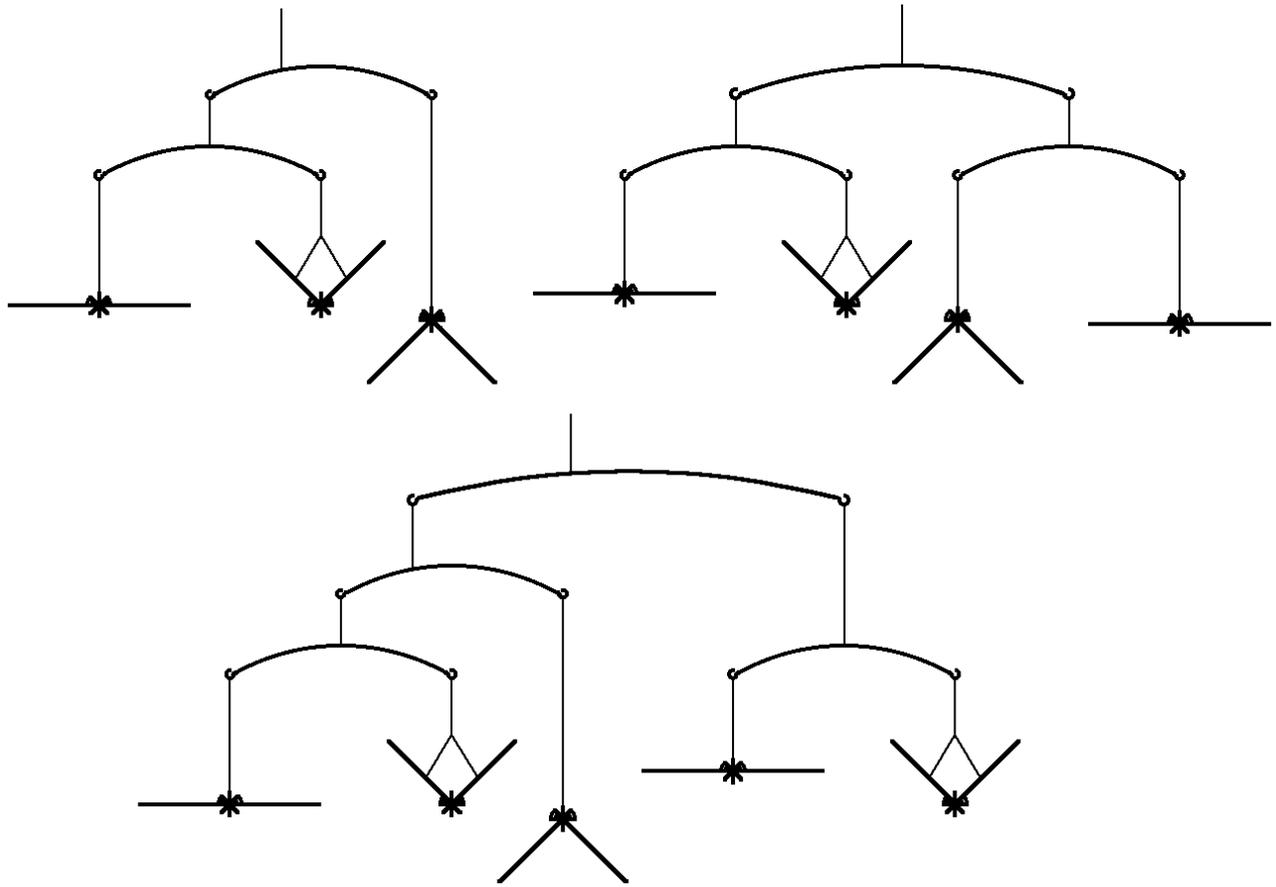
Assembling the Mobile

10. For this you require some wire that is sufficiently stiff to support the weight, but also enables making a small hook at each end with a pair of long-nosed pliers. Wire coat-hangers as used by Dry Cleaners are ideal when hammered straight. The pieces of wire need to be at least long enough to avoid colliding swifts. Collisions can also be avoided by adjusting the relative height of the swifts. For a mobile with 3 swifts, 2 pieces of wire roughly 1.5 times the wing span of a swift are required.



*Shape of hanger – designed for stability*

11. The swifts with wings flat and wings down can be suspended from a single point near the back of the swift and directly above the centre of gravity. The swift with wings up should be suspended by 2 points near the bends of each wing in line with the centre of gravity (see picture at the start). The easiest way to make small holes is with a bradawl, or other pointed sharp implement, on a hard surface. Thin black thread is best.
12. Here are some examples of mobiles with 3, 4 and 5 swifts



Profile PDF's:

For a Swift with double-wing thickness – recommended with thinner card see the two PDF's:

[Layout-double-wing-sh1.pdf](#)

[Layout-double-wing-sh2.pdf](#)

For a Swift with single-wing thickness – recommended with thicker card see

[Layout-single-wing.pdf](#)