The Paul Jackson Cube

The Paul Jackson Cube, is a plain sided cube made from six very simple modules. It is quite possibly the best design in the whole of the modular origami repertoire. The modules are not provided with pockets, although they do have tabs, which go inside the design, (rather than outside the design as in the case of the otherwise quite similar Business Card Cube).

Because the gaps between the tabs along the open edges of the modules are slightly less wide than the tabs themselves, a natural result of the folding process and the thickness of the paper, assembling the modules creates a slight mutual inwards pressure which acts to keep them locked together. As a result the finished cube is a surprisingly strong construction and can easily withstand being thrown around. This cube is also an example of an even distribution design, since, once assembled, it is four layers deep at every point.

Paul Jackson discovered this design in the early 1970’s, quite possibly in 1973. I found it for myself many years later in 1987. Wayne Brown showed me the alternative folding method for the modules. I have also included diagrams for a minimalist variation in which the modules are made using just three active folds. There is a slight lost of strength / elegance with this version.

You will need six square sheets of paper. The Paul Jackson Cube is a very versatile design and almost any kind of paper will do. If you are using irogami (paper that is white on one surface and coloured on the other) begin with your paper arranged white side up.

David Mitchell / The Paul Jackson Cube
1. Make a tiny crease to mark the middle of the top edge.

2. Mark the middle of the right hand edge in a similar way.

3. Fold both outside edges to the centre using the crease you made in step 1 as a guide.

4. Fold the top and bottom edges to the centre using the crease you made in step 2 as a guide.

5. Open up both tabs at right angles.

6. The module is finished.
7. Make six.

Alternatively ...

8. Make a tiny crease to mark the middle of the right hand edge.

9. Fold the right edge in a random amount, making sure the top and bottom edges line up.

10. Fold the right edge onto the original left edge.

Assembling the modules

12. Slide the bottom tab of one module into the open edge of another.

13. Add the third module to complete one corner ...

14. ... then add the fourth module like this.

15. The fifth module slides in like this.
16. Finally add the sixth module to complete the cube.

17. Check that none of the tabs are visible. The Paul Jackson Cube is finished. If you have folded your modules accurately the cube will lock solidly together.

Folding the modules for the minimalist version

18. Make a tiny crease to mark the centre of the right edge.

19. Fold in half sideways.
20. Fold both the top and bottom edges into the centre. The next picture is on a larger scale.

21. Unfold both front flaps to right angles.

22. The minimalist version of the module is finished. Make all six. Assemble in the same way as the original version.