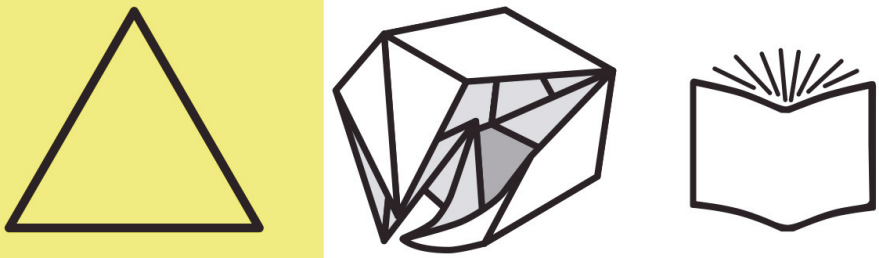
三角折り紙の本



Triangle Origami Book

William Zicker

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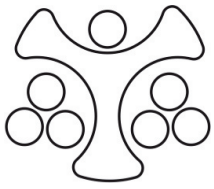
Exodus
"he that gathered much had nothing over, and he that gathered little had no lack"

Proverbs
"Labour not to be rich:
cease from thine own wisdom"

Luke
"But rather seek ye the kingdom of God; and all these things shall be added unto you."



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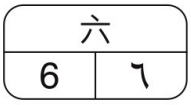


Twisting a shape in three dimensions from a two dimensional sheet of paper seemed easy enough. The more you fold and unfold the paper the more pliant it becomes, more like fabric. This makes it easier to shape. However, it becomes less repeatable, less measured.

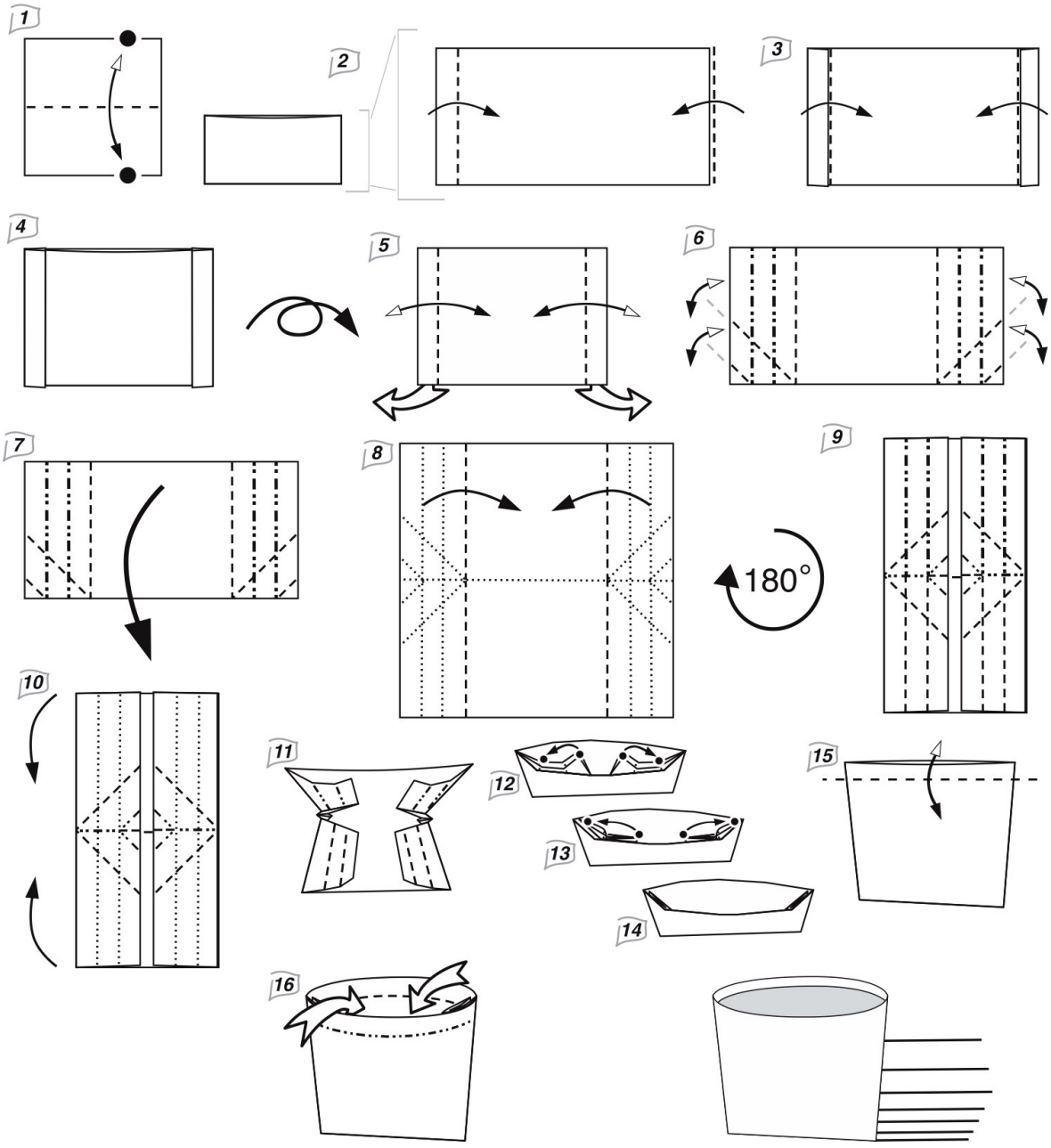
Took a few hours, but the twisting of paper fabric resulted in an interesting little pyramid. It seemed like there was some pattern to the way the paper wrapped in on itself. After an additional few hours a successful reverse engineering revealed a complete set of folds in a symmetrical and repeatable pattern.

While it would be reasonable to assume this took place during the initial lockdowns during the COVID-19 crisis, in fact it began three years earlier.

In 2017, I was over four years into development of a new material, a stable suspension of starch and water.

Origami presented a possible way to fold biodegradable paper packaging. An interesting little pyramid turned into an

27 | Inside Out Envelope



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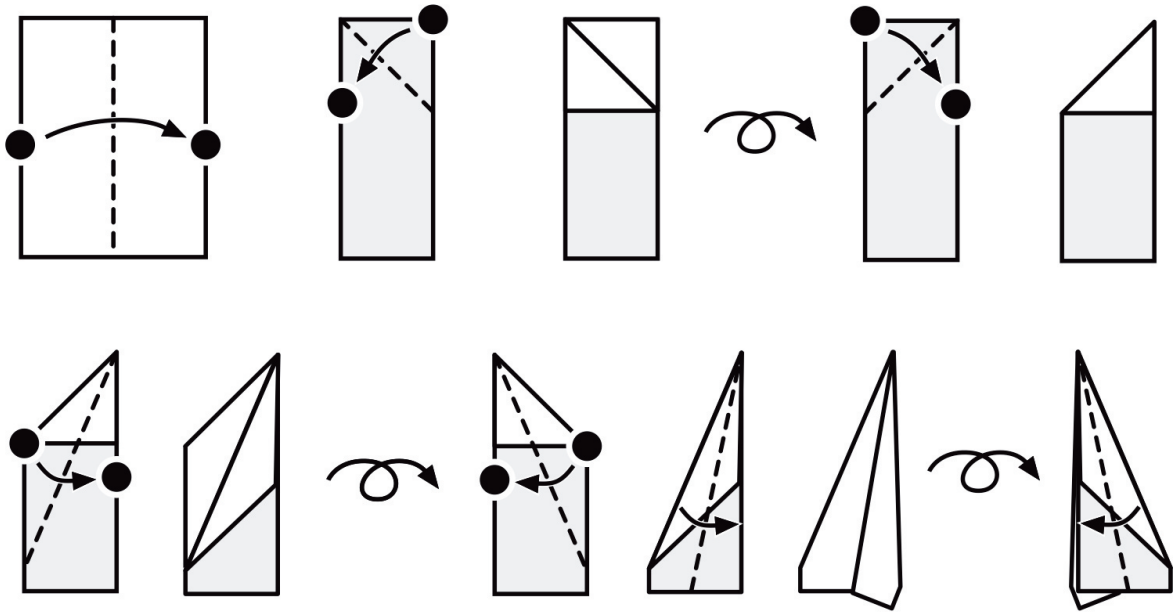
Folds, and in particular interlocking folds, are required to create a three dimensional object from a substantially two dimensional piece of paper.

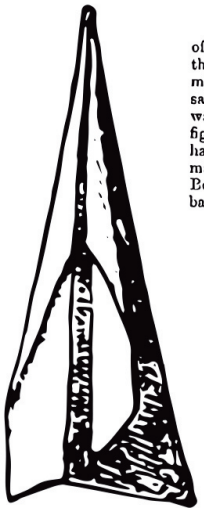
The object of this design was to turn an otherwise simple design for a bag or envelope inside out. All of the functional folds are put inside the envelope, keeping the faces of the envelope clean.

There are many variations possible on the theme presented in this diagram.

43 | Traditional Paper Dart



THE PAPER DART.



To form this dart you must take an oblong piece of paper, and fold it down the middle lengthwise; then double each of the lower corners up to the middle crease, and fold the doubled paper over to the same mark; you must now turn each folded side outwards, and your dart will resemble the annexed figure. The paper dart when thrown from the hand rarely hits the object aimed at, as it generally makes a graceful curve in passing through the air. Boys sometimes amuse themselves by fighting sham battles with these harmless weapons.

1859.

A traditional design, this is the paper airplane my grandmother taught me, my introduction to paper folding.

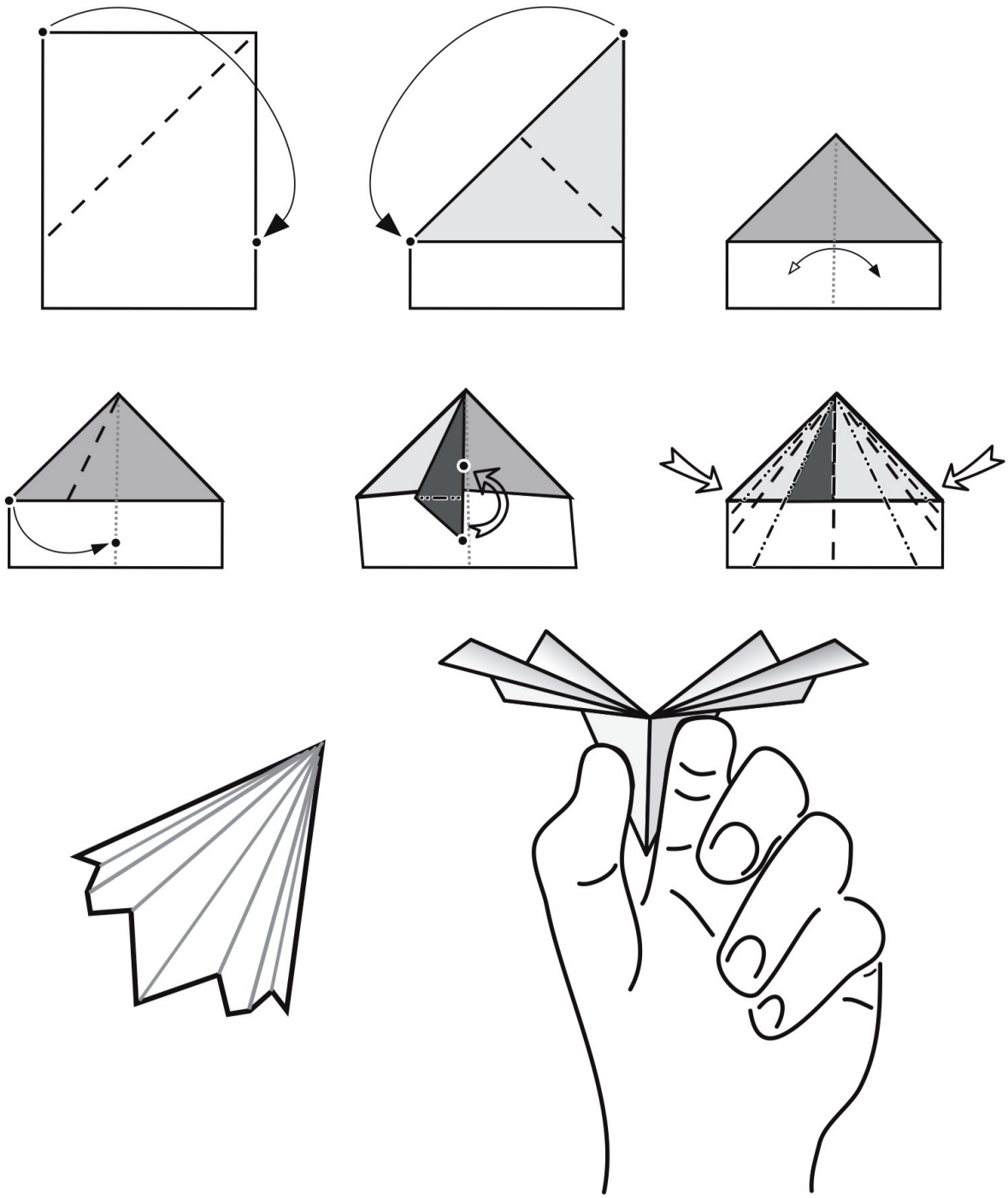
The first known illustration and description of how to make this appears to be in the book "Games and Sports for Young Boys," published 1859 in London by Routledge, Warne, and Routledge.

This basic design was understood by readers to be a projectile, that would be thrown at targets.

It was some time before this dart became a paper airplane.

George Cayley (1773-1857) is noted to have first described the fundamentals of modern aircraft design in 1799, and built a glider that carried a person in 1849. With all of the pioneering work being done around this time in the area of aviation research and development, it is fitting that a toy like this would become popular.

13 | Paper Airplane from Rectangle



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Origami Collection 2022
Page 218

Sitting at the dining room table with my grandmother, in the hangar working on the next paper airplane, we would always have staples in the Swingline Tot 50 and there was always a roll of 3M Scotch magic tape.

When I was home or at school, I did not have this reliable resource. This was at least in part my motivation - design a paper airplane that requires no fasteners or tape, and can be folded using standard Letter or A4 size paper, or any paper with roughly 4:3 proportions.

In 2009, I published my first book, Fluffy the Vulture (ISBN 9780615266879). First in a series of three children's books, eight languages are presented in parallel. This paper airplane was shared as a promotional item for the books. The "V" shape of this design mimics the wings of Fluffy the Vulture.

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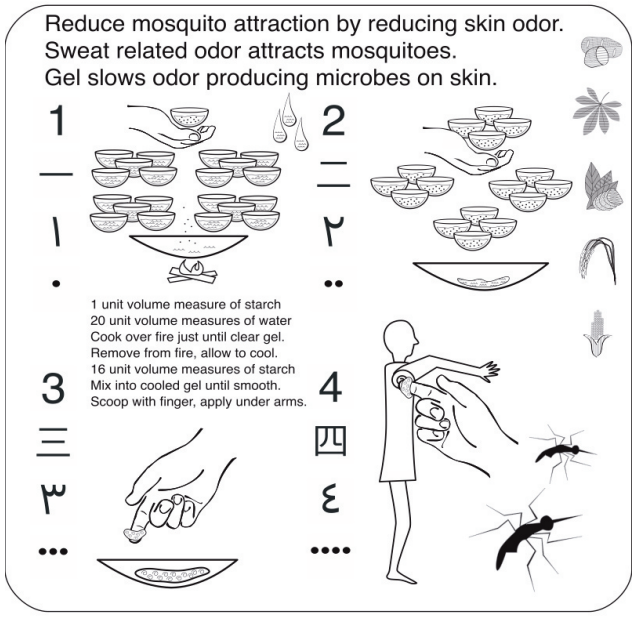

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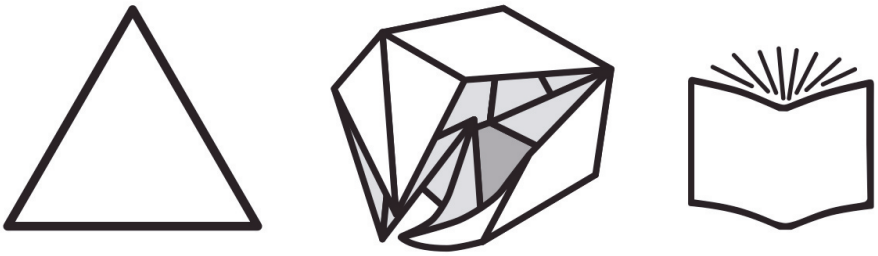
Paper Folding with Triangles



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