

## The value of folding

By Vanya Lambrecht Ward – Visual Artist

*This spring at the Regional Day in Leitrim, Vanya Lambrecht Ward will lead a folding workshop, exploring the magical process of transforming a flat plane into a 3D form. Vanya is a visual artist with a background in design and architecture. Over the last twenty years, Vanya has worked within a wide range of settings, across all age groups, in a variety of disciplines. Her primary interest is in how we perceive, understand and interact with our surroundings. Alongside her studio practice, Vanya currently lectures at IT Sligo in Theatre Design and works with the Dock Arts Centre co-curating their education programme. She has also worked with Kids' Own for over 10 years on a variety of book and residency projects.*



Over the many years I have worked in arts and educational settings, I have become more and more aware of how flat our 'world' has become. A4 pages, books, computers and other screens all present, represent and mirror our surroundings to us in flat formats. We abstract our surroundings through these (and other) lenses. This is not (necessarily) a bad thing but at times this abstraction can become too far removed for us to fully grasp it, or apply the information it gives us. This is when the best thing we can do is to get practical and physical, to quite literally get in touch...

The art or skill of origami allows us to do just that; bring the abstract and physical together. It is also, even in its seemingly complex form, accessible to all. It forms a bridge between our 2D and our 3D understanding of the world and has an unnameable amount of applications. One fold and we move from the flat surface to the world of objects.

In practice, many people shy away from origami as it has a reputation for being rigid, or even purist, and overly complex; designed for those with endless patience and chess-master brains (trust me this is far from true). And maybe in order to open up the idea of using origami as a tool in education, and, in general, our understanding through making, I should perhaps just refer to it as folding<sup>1</sup>. Over decades, the value of using folding skills in education has been advocated by the likes of Maying Soong, Friedrich Froebel, Josef Albers, Norma Boakes, Paul Jackson and many others.

*Children need to explore geometric shapes and objects first hand, allowing them to develop their own understanding of geometric relationships. Whether it is building a three-dimensional model, drawing two-dimensional shapes, or working with manipulatives, it is this active play that enhances children's spatial skills.<sup>2</sup>*

Its playful, explorative, rhythmic and precise – as well as intuitive and organic – evolutions are used across a wealth of industries; from space travel to micro design to medicine and the folding of DNA. We only have to look around our direct environs and we see numerous examples of folding and unfolding.

When creating through folding it can be free form or structured, intuitive or stringent but whatever way you transform the paper its simplicity and simultaneous sophistication are not just aesthetically pleasing but also intellectually intriguing.



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<sup>1</sup> Translates as *ori* (folding) *gami* (paper)

<sup>2</sup> Boakes, Norma. 2008, *Origami-Mathematics Lessons: Researching its Impact and Influence on Mathematical Knowledge and Spatial Ability of Students*.

Artist Josef Albers in his Bauhaus teaching emphasises the importance of exploration through doing.

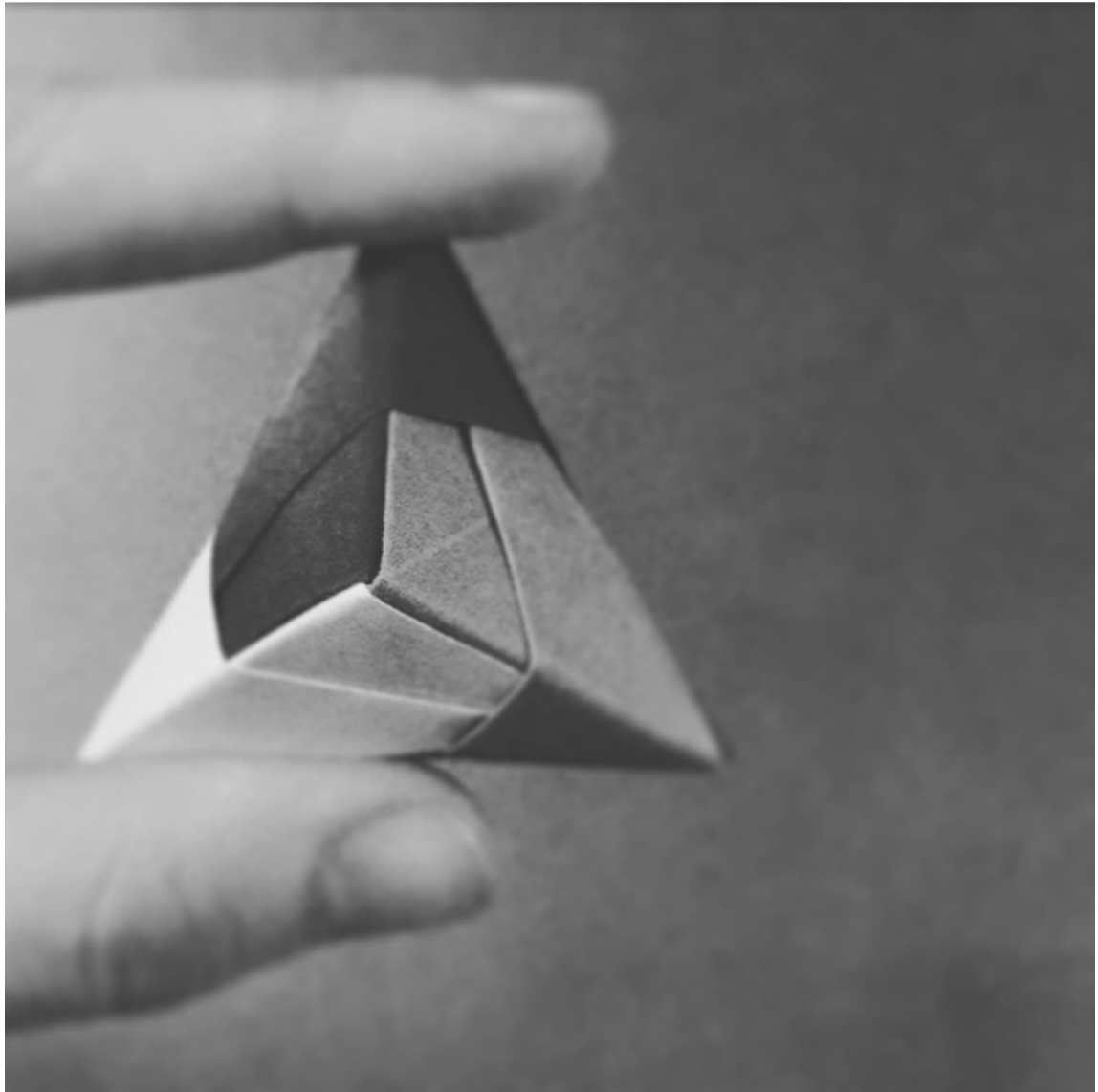
*Consciously roundabout ways and controlled mistakes sharpen criticism, teach by experience, and promote the desire to do things better and more accurately.<sup>3</sup>*

He himself was intrigued by geometric shape and its connections with our surroundings, bodies and nature. He was a fervent advocate of learning through doing and how the exploration of material and space is crucial in not only our spatial and relational understanding but also abstract and creative thinking.

I am singing the praises of origami as I am intrigued by its rhythm, patterns, structures, rules and applications as well as wanting to investigate, disrupt, ignore and challenge its restrictions. My intrigue and constant curiosity are simultaneously due to a lack of fully grasping the extent of its potential and my lack of understanding its endless mathematical complexity. This, however, has never stopped me from trying to comprehend it in other ways or to feel my way through it. I have always enjoyed the basic ability to fold the piece of paper, its accessibility and humble material, range of applications and universal appeal. I realise that I am stating the obvious but by taking the mystery out of the sometimes overwhelming or seeming complexity of folding I hope to disperse some of its reputation and show its extensive possibilities for creative exploration, and as a learning and teaching opportunity. With this simple tool-less skill we can grasp so many ideas and abstractions. It lets us explore more easily mathematical concepts like equations, geometry and building structures but it can also apply to elements in biological patterns in nature, and the macro and micro world around us. Simple hand–eye coordination, intention, concentration, spatial understanding, and many other fundamental and transferable skills have been recognised to benefit greatly from working with origami as a teacher.

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<sup>3</sup> Josef Albers, Creative Education from "VI. Internationaler Kongress für Zeichnen, Kunstunterricht und Angewandte Kunst in Prag, 1928" ("Sixth International Congress for Drawing, Art Education, and Applied Art in Prague, 1928"), published in Prague 1931.





What better way of taking the mystery out of something than to try it?

I would like to introduce you to a humble component origami shape. This *Dipyramide* is made with 3 square pieces and only needs 4 folds each.

The wings, as I call them, that are created through the folds fit neatly in the little envelopes of each neighbouring unit, together forming a solid form.

This last step, of putting these three modular components together, can puzzle some and is tricky the first time around, but as with any puzzle, it will give great satisfaction when achieved! So persevere and come and join us in Manorhamilton for the Regional day on the 23<sup>rd</sup> of February to try lots more!

## DIPYRAMID

### STEP-BY-STEP



#### Links to information:

Documentaries/ video:

Between the fold: <https://documentaryheaven.com/between-folds-art-of-origami/>

Origami Code: <https://vimeo.com/198671884>

Our origami world: <https://www.pbs.org/video/nova-our-origami-world/>

Links to useful sites:

British Origami Society: <http://www.britishorigami.info/>

Folding didactics: <http://foldingdidactics.com/>

Tesselation blog: <http://www.origamitesellations.com/>

