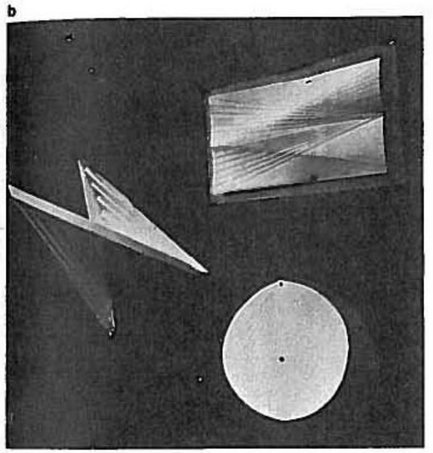
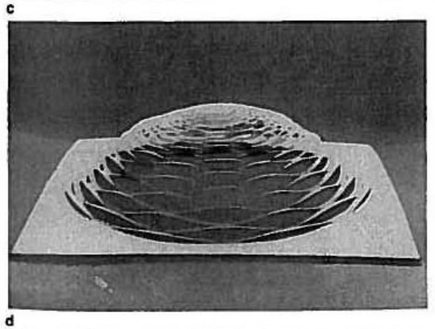
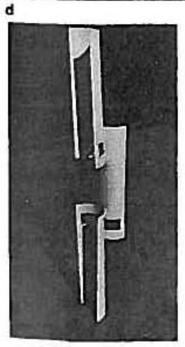
waag
technology & society

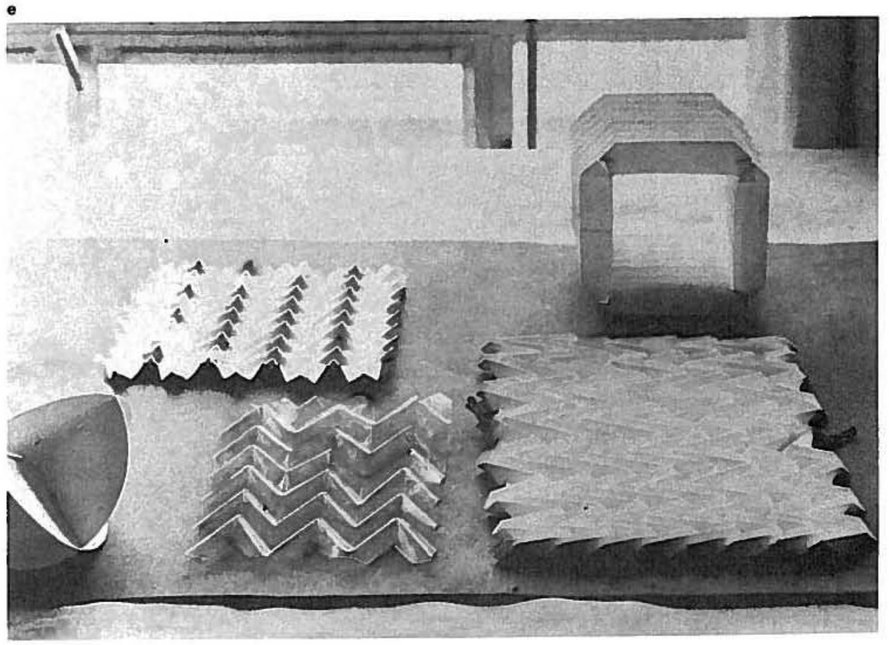
Maker Morning

24 april 2019 - Frank Vloet



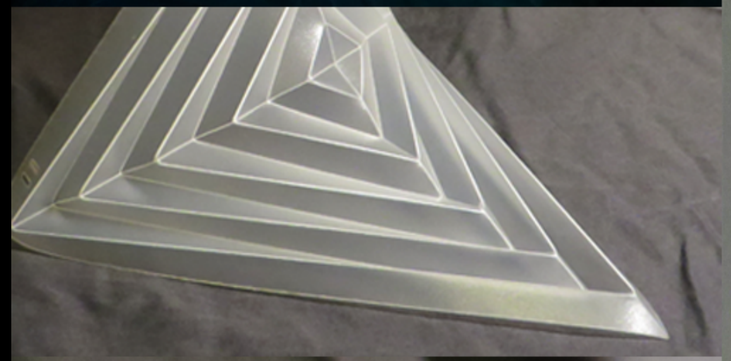


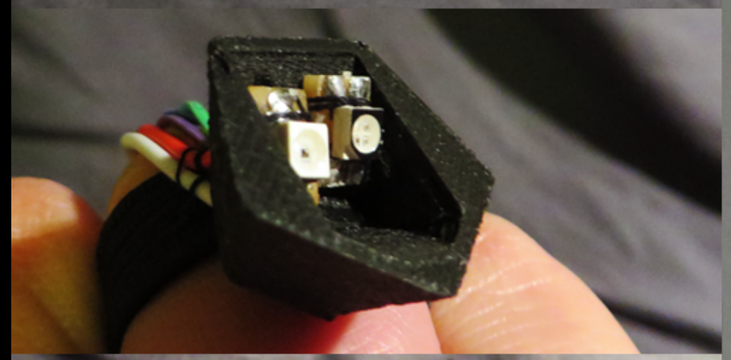


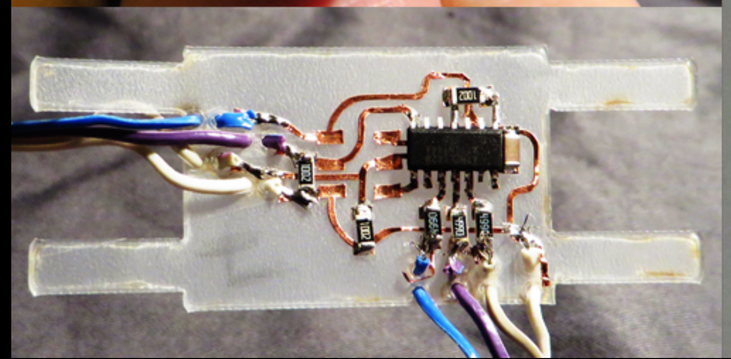


b
Students in Albers's preliminary course: paper study. 1927–28. Foliate construction: a circular piece of paper was folded like a fan, from two opposite points of departure. This resulted in a shrinkage which altered the periphery (form) of the sheet.—Square sheet: here too the paper was folded fanlike from two opposite sides. The folds cross each other and result in a "snake" effect—one edge curves up, the other down.
Wing form: automatic result of folding concentric squares.
c
Students in Albers's preliminary course: paper study. 1927–28. The dome-shaped structure evolves from a flat sheet of paper by means of cuts which make extension into a dome shape possible.
d
Students in Albers's preliminary course: paper studies. 1927–28. Both exercises took advantages of a given material quality: the paper was rolled and tended to remain rolled. The columnar form (left) resulted from cuts. The conic forms (right) derive automatically from cutting two concentric circles out of rolled paper.
e
Students in Albers's preliminary course: studies with paper and acetate. 1927–28. Various zigzag folds—fundamental exercises. Two-dimensional shrinkage is one result of such folds in the case of flat structures. Two of these structures are made of paper; the transparent one in center foreground is made of acetate. Iridescent colors in the corners of the acetate structure indicate areas of especially high tension. The camera bellows (upper right) is the result of zigzag folds in a single direction. The corners were so rounded off that only a single overlap resulted; bevels were not permitted because otherwise the specific qualities of a camera bellows, light and air impermeability, would not be achieved. The task of constructing a camera bellows was assigned by Albers to every student; the student had to solve it entirely independently. No technical explanations were given.

Werken met papier in Bauhaus Basiscursus (1927 - 28)
bron: http://erikdemaine.org/curved/history/







Color Changing Origami

Frank Vloet - Fab Lab Amsterdam

These flexible origami structures change color depending on what you touch

A color sensor, embedded in a ring, reads a color. The color value is send via I²C to flexible circuits that control RGB LEDs
All circuits are powered by a universal USB powerbank
It is a modular system that can easily be extended

Color sensor

- Flexible circuit; polypropylene and copper foil
- ATtiny44 with phototransistor and RGB LED
- 3D-printed housing for LED and transistor

Origami structures

- Polypropylene with flexible RGB LED circuits
- cutting and scored folding lines with laser cuter

3 korte filmpjes

InkScape: kort uitleg technisch tekenen met behulp van raster.
(20 minuten)

Demo laser + origami
Demo plooien en stomen

Links

This Book is a Planetarium by Kelli Anderson - filmpje pop-up boeken:
https://www.youtube.com/watch?v=HgyS8vgsL4o

Trailer van documentaire ‘the origami code’
https://youtu.be/iESI4o8M-pM

Plissé, artikel en filmpje over het werk van Bakri Skoukeh
https://www.nhnieuws.nl/nieuws/212782/nh-onderneemt-befaamde-modeontwerpers-in-de-rij-voor-plisse-van-syrische-vluchteling

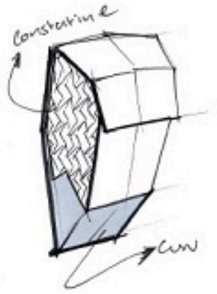
Bauhaus Foundational Course, instructies voor geometrisch vouwen
http://www.origamitessellations.com/2018/01/bauhaus-foundation-course-instructional-booklet/

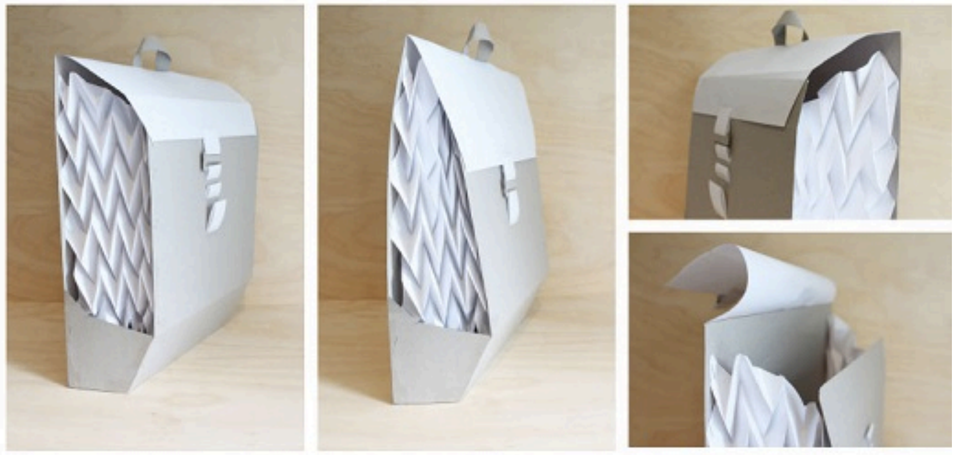
Boek Folding techniques for designers - Paul Jackson
https://www.bol.com/nl/p/folding-techniques-for-designers/1001004010979789/

Video’s bij Folding Techniques for Designers:
https://vimeo.com/41072878 en
https://www.google.com/search?q=folding+techniques+for+designers&source=lnms&tbm=vid&sa=X

toepassingen

https://www.designandpaper.com/diy-origami-lampshade/





https://www.carryology.com/bags/moondarra-expanding-backpacks-contextual-use-2/

Inkscape

- technisch tekenen met raster
- paden kleven