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Folding Forms

Susan Tibbitts
Utah State University

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mfa exhibition

susie**tibbitts**

FOLDING FORMS

gallery **102** | m-f **10**am-**4**pm
chase fine arts center
utah state university

opening**reception** **5-7 pm 01** | **10** | twothousand**13**
12 | **10** | twothousand**12 - 01** | **11** | twothousand**13**

CAINE COLLEGE of the ARTS
UtahStateUniversity

Folding Forms (Design as Idea)

Abstract

"Folding Forms" is a creative research project that examined the process of converting two-dimensional graphics into three-dimensional forms for architectural and interior use. The work required a non-linear, design process involving hand sketching, digital graphics, printing, scoring, cutting and folding, resulting in conceptual, folded paper forms. Extensive prototype and exploratory models were built to achieve the desired outcome. The seemingly simple graphics produce complex forms.

Design Methodology

Although a designer, a conscious choice was made to navigate through the process like an artist, which required keeping the intended outcome vague. This change in process allowed for the scrutinizing of parts rather than a whole. The initial focus was on designing a basic building unit and determining how it could repeat to produce an architectural system.

Abstract, visual and volumetric thinking were integral to the creation of the transformative graphics. The geometry was generated and refined using functional mathematics to create the desired paper forms, therefore a non-linear process had to be adopted. Beginning as a rough sketch, the design was made into a digital pattern then printed, cut, scored and folded into a scaled model to test the geometry. Once the discrepancies were discovered the design was digitally revised and assessed again. Substantial learning came from physically manipulating the paper rather than working digitally with three-dimensional forms. This developmental process has the ability to perpetuate many experimental and innovative designs.

Hex, the first of many designs, helped to define and outline the scope of the project. The self-imposed design constraints became the following:

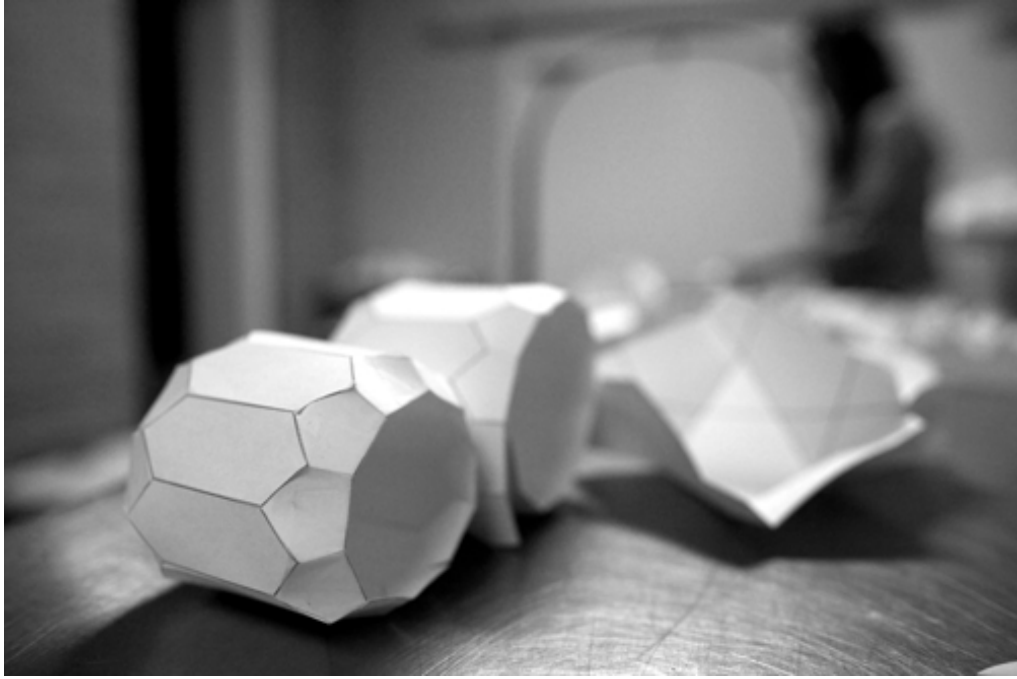
- Graphic to transform into a tangible form
- Foundation of a six-sided hexagon
- System of repeated parts that multiply to form a whole
- Lack of color (truly see the form as it is)

Design Outcome

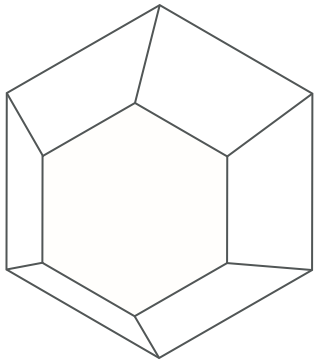
"Folding Forms" has generated a series of prototype models for use in architectural and interior product designs. Both two and three-dimensional versions of the graphics are intended for use. The products include but are not limited to, wall coverings, textiles, wall panels, acoustical tiles, and light fixtures. The conceptual designs have been developed in paper. Ideally, if the designs develop into products, they would be produced in a variety of mediums to best suit the needs of a specific product. Materials such as resin, aluminum, wood, cork, tile and fabric have been considered for future design production.

The two-dimensional graphics and three-dimensional paper forms will debut in a public gallery. To provide the appropriate experience, the scale of the prototype graphics will be altered to reflect a real-life application. The evolutionary process has been documented with still imagery and documentary filming.

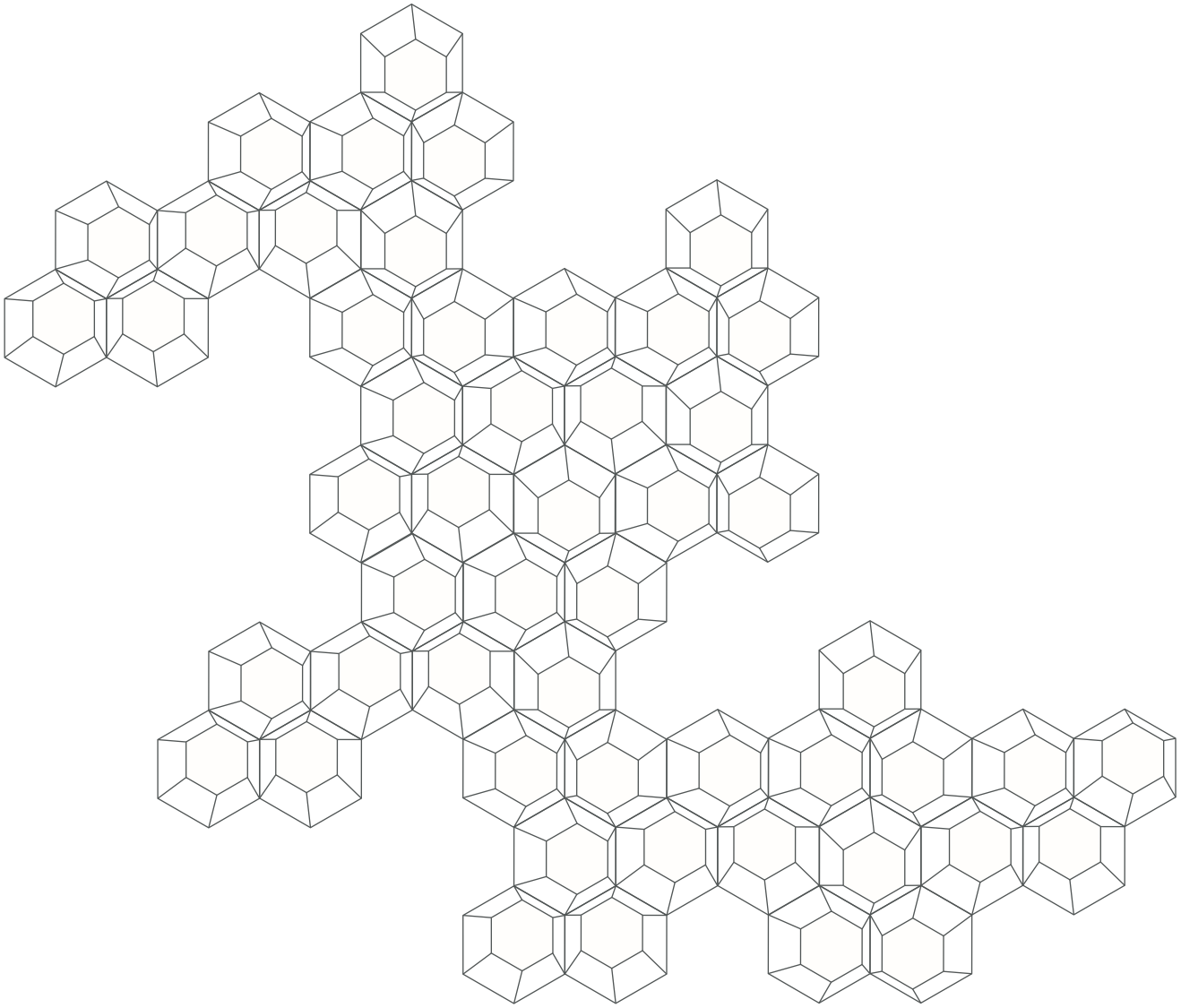




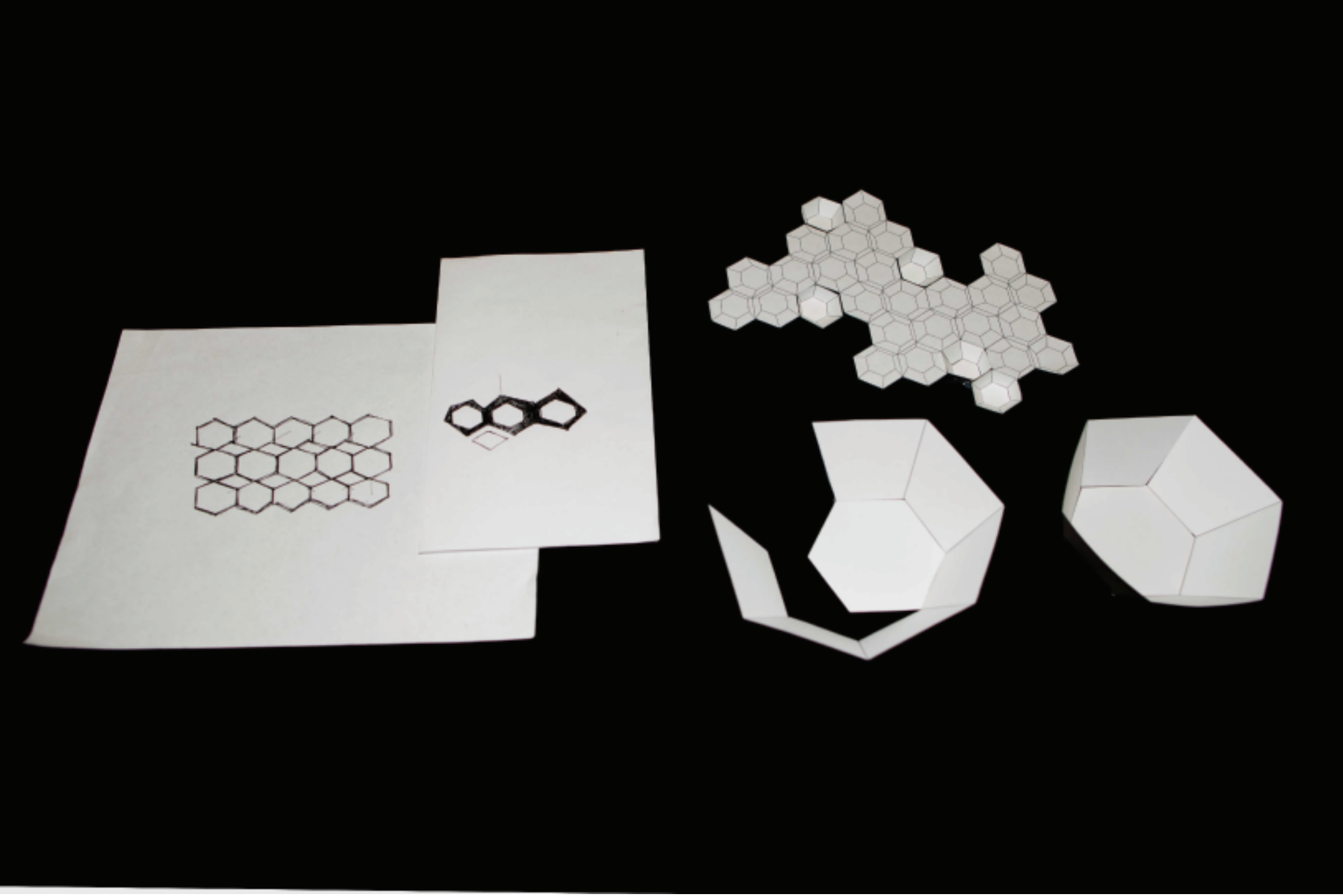




single graphic



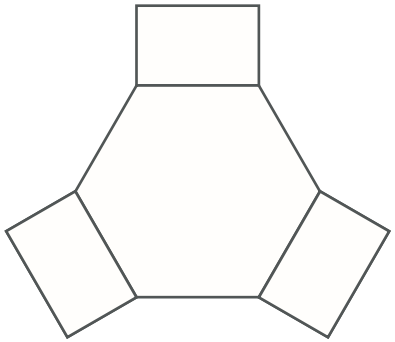
[hex] two-dimensional graphic



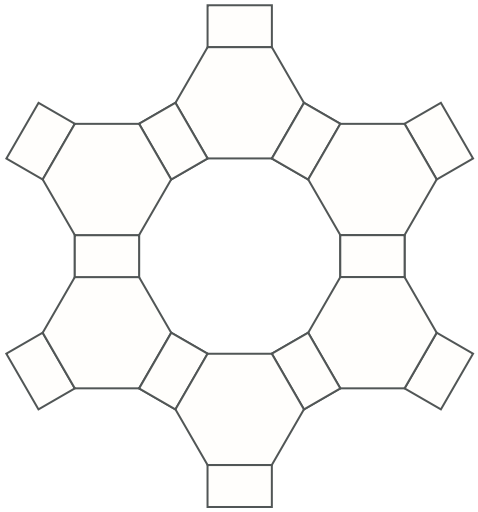
[hex] sketches & process models



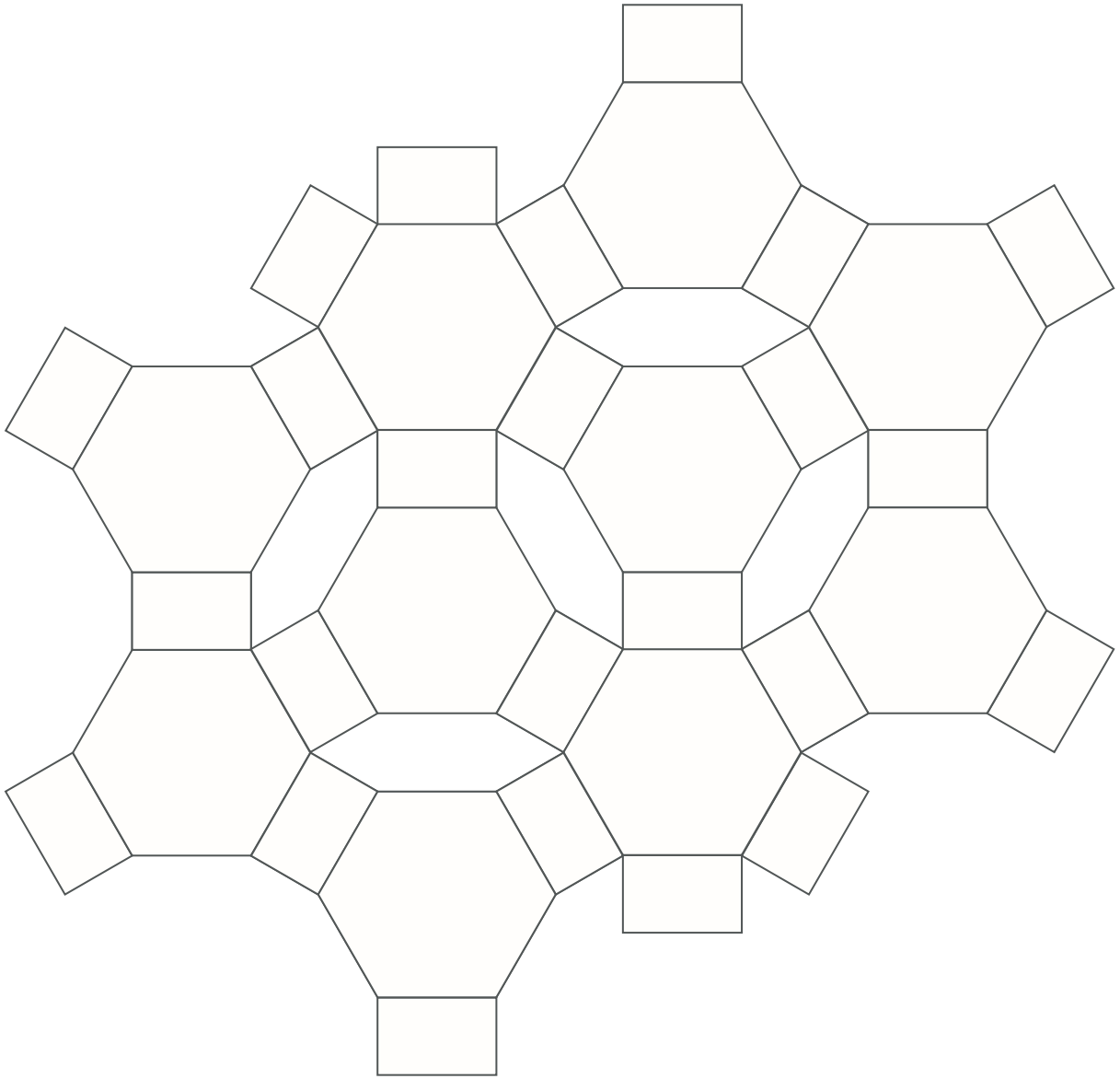
[hex] three-dimensional prototype



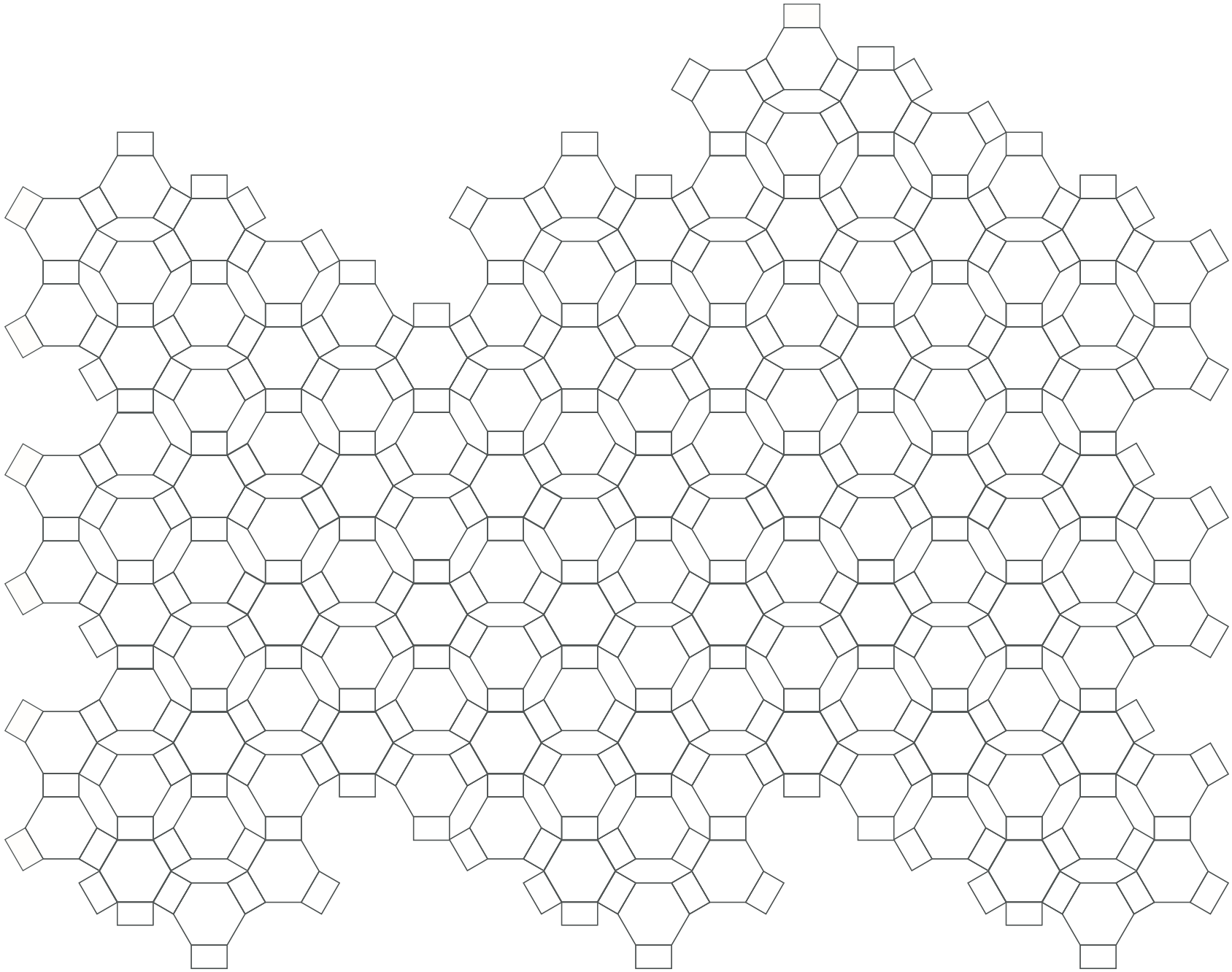
single graphic



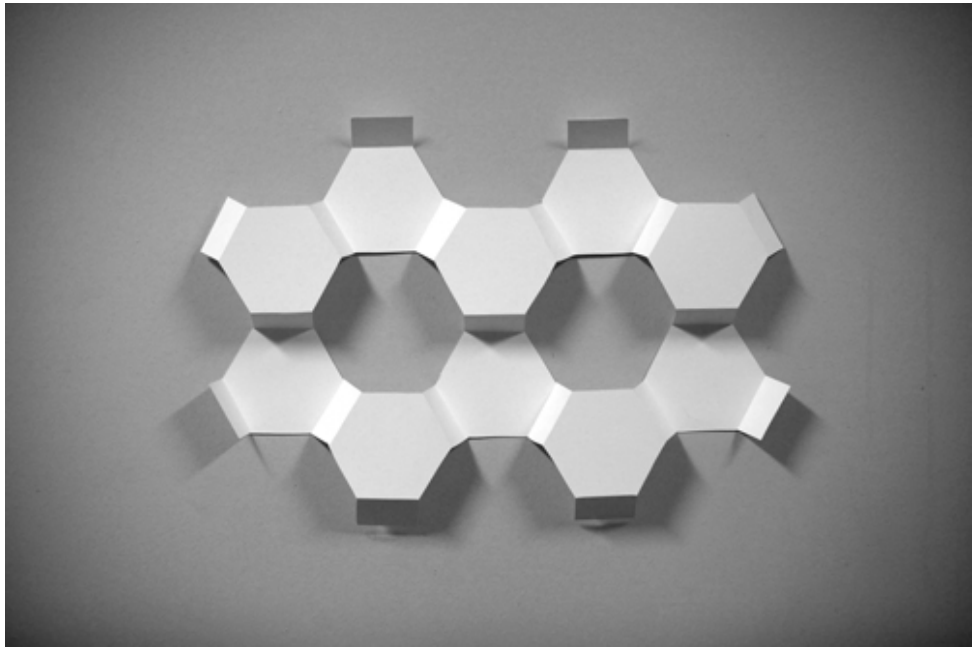
single repeat

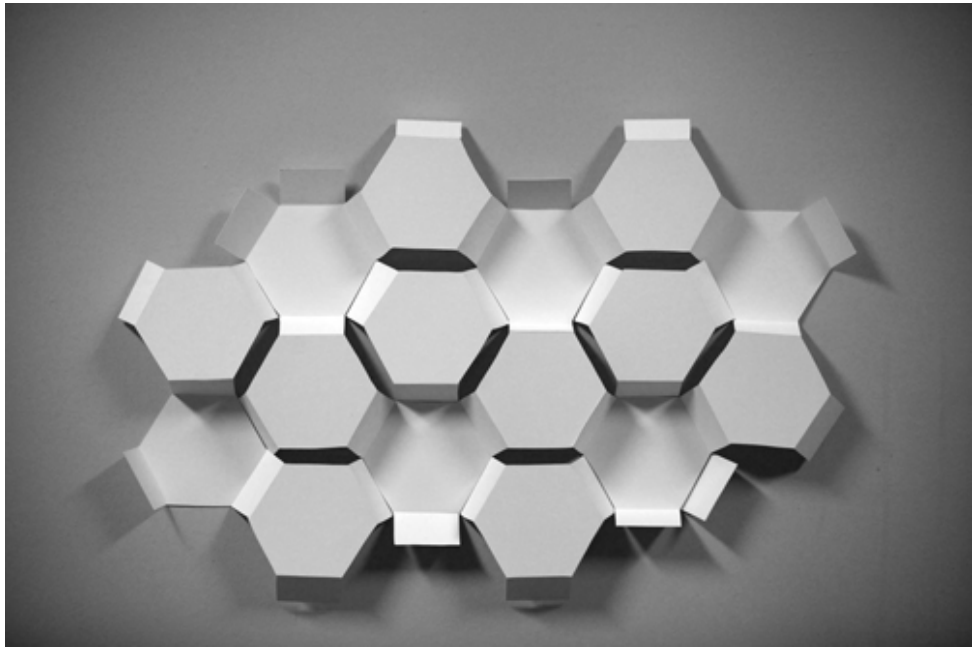


[triglyph] two-dimensional graphic



[triglyph] two-dimensional graphic

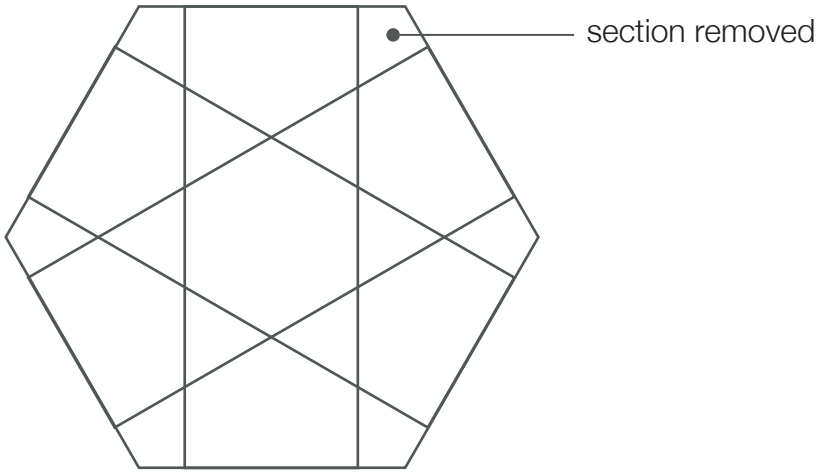




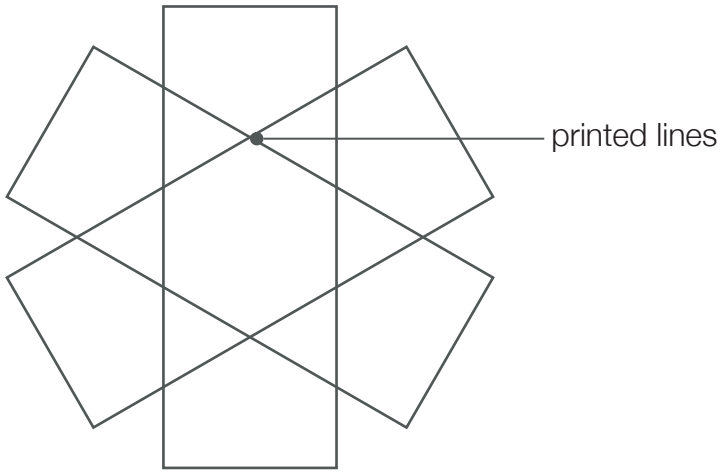




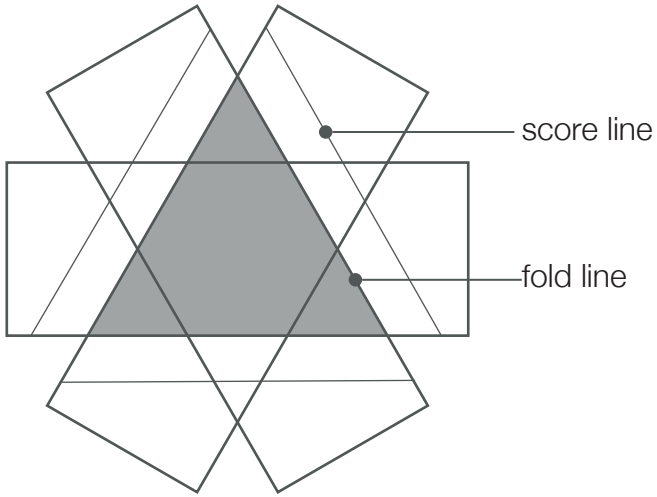
[triglyph] three-dimensional prototype



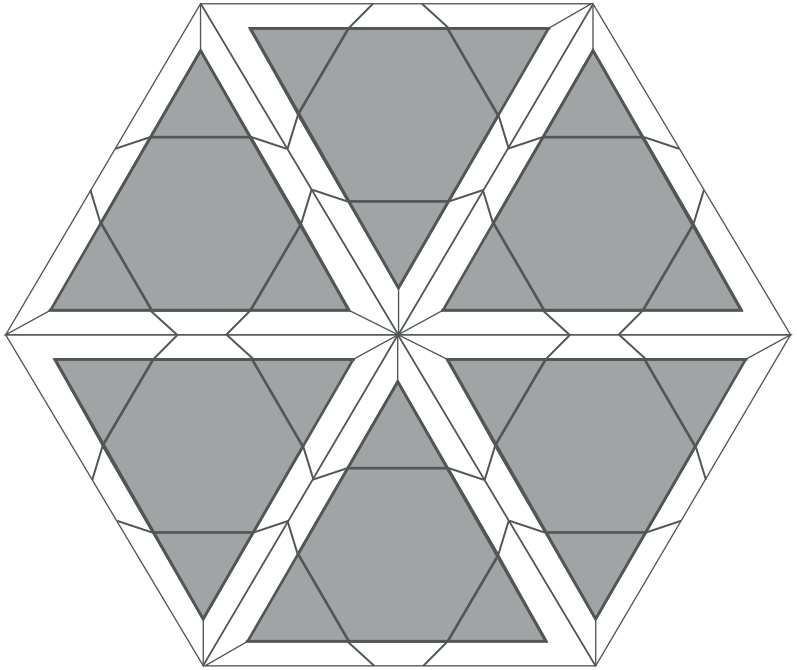
original hexagon



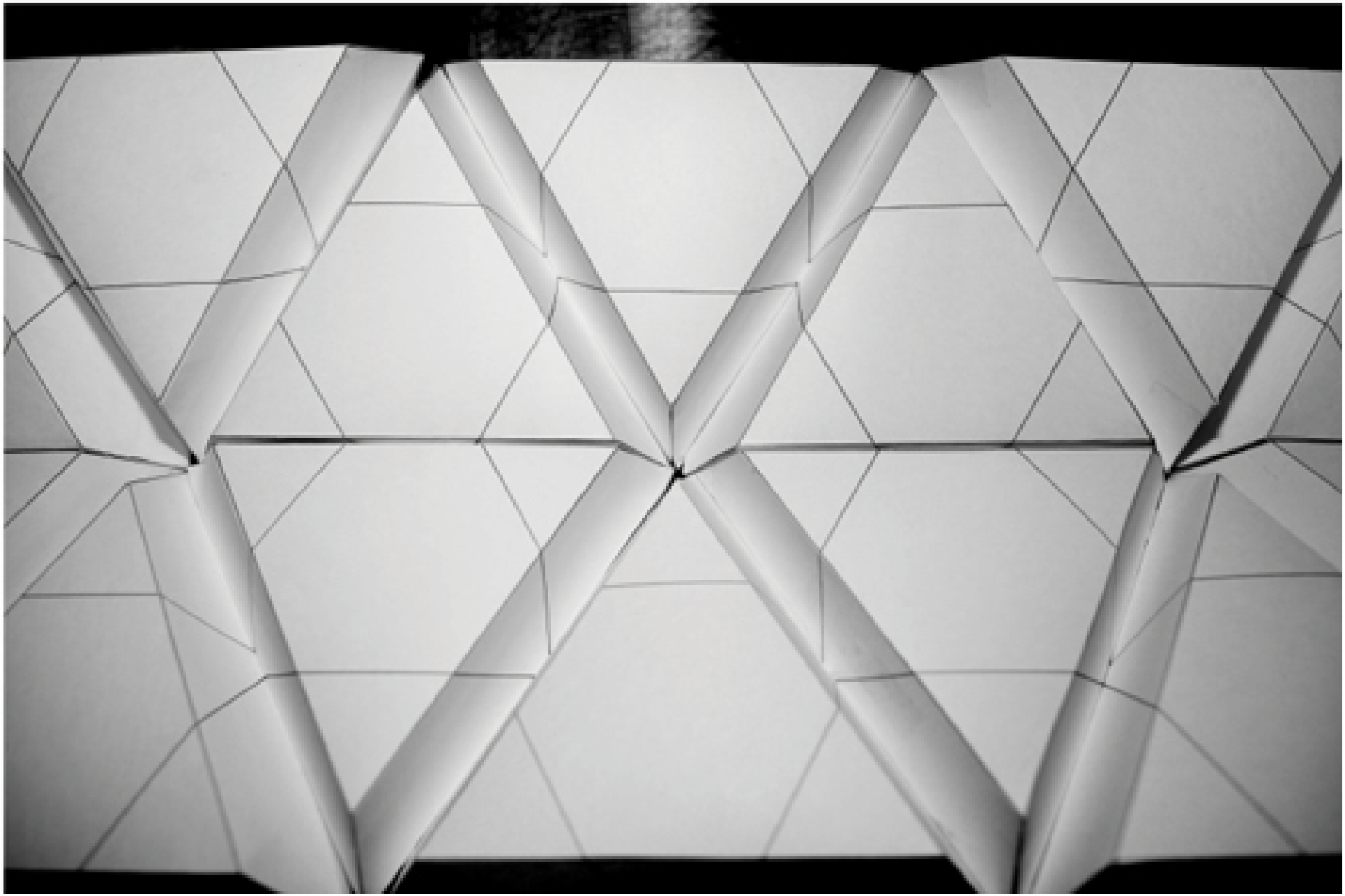
single graphic



process diagram



[x] two-dimensional graphic



[x] three-dimensional prototype

