

BÉTON

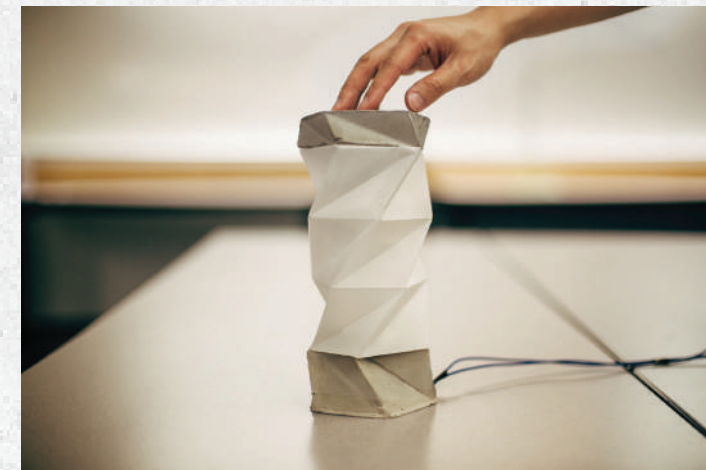
IAT 336 MATERIALS IN DESIGN

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Béton is a concrete and paper lamp with a form that expresses the qualities of the materials themselves. Utilizing a complex folding technique inspired by origami, the folded paper body becomes collapsible, allowing users to compress the body to a certain degree. This interaction allows the user to activate or deactivate the LED strip that is housed inside the paper body. Complimenting the folded paper form, the concrete base replicates a similar form despite its contrast in material properties. Thus a juxtaposition of materials meet to become as one in a single harmonious piece.

INTERACTION



To turn on, press the cap down until you feel a click.

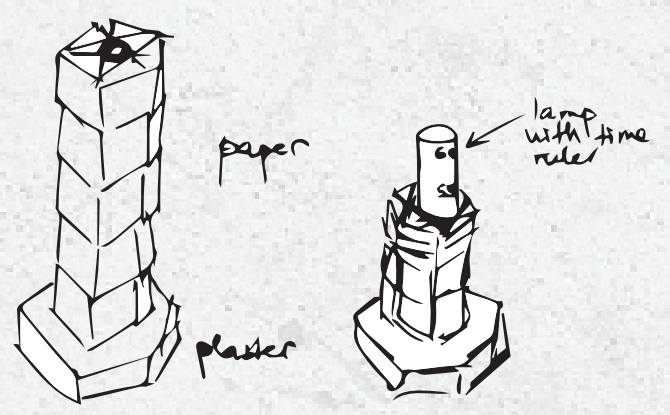


Let it go and enjoy the light.

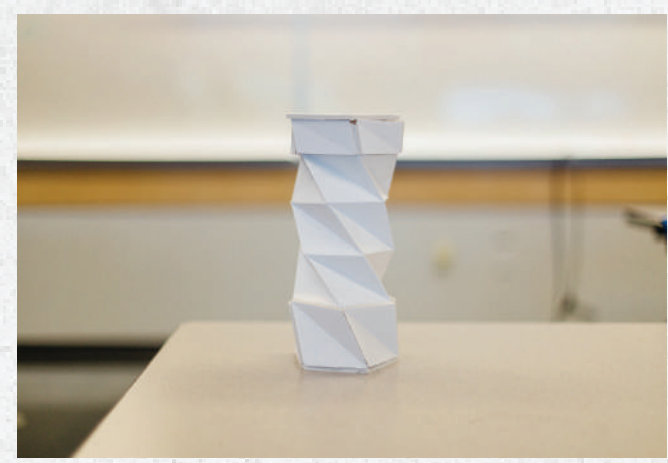


To turn off, press the cap again

IDEATION



Sketching and ideating ideas. Inspired by origami and the art of paper folding.



A cap and base was added & proportions were readjusted



Electric components became integrated into the lamp.



Material testing began; a medium level prototype

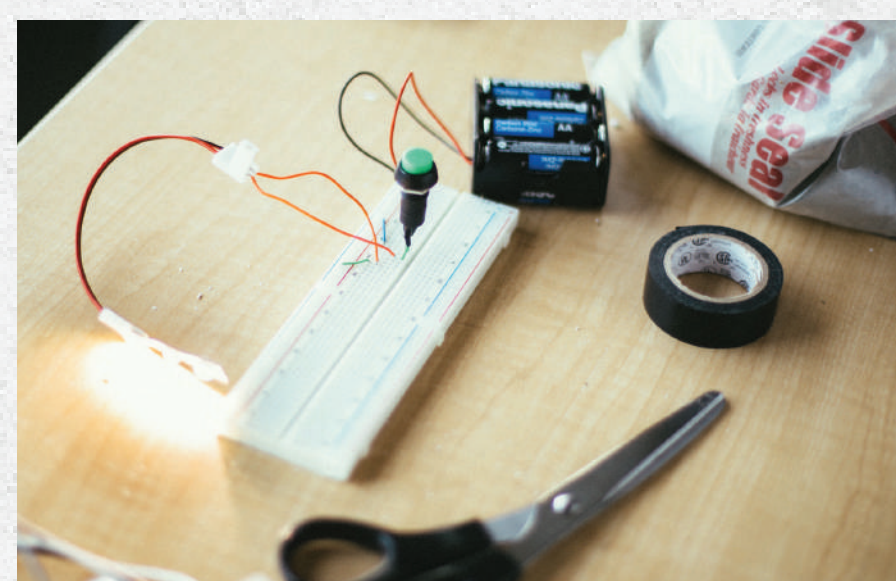


The final working form of Béton was achieved.



INSPIRATION

The form of Béton was heavily inspired by the natural properties of the materials themselves. With the natural transparency and foldable nature of paper, we created an angular collapsible paper structure. This folded body not only helps support the user interaction of the lamp, but is also quite aesthetically pleasing when left alone. As for the concrete, we replicated a similar form from the paper structure. This created a more cohesive design, as well as acts as an ironic statement of the juxtaposition of characteristics between paper and concrete.



TECHNOLOGY

The top cap of the lamp, which is supported by a small spring, presses the on/off switch, which is situated three quarters of the way up the lamp. The folding nature of the paper allows for the downward press and the slight compression in lamp height. The LED strip is coiled around the inner tube, providing light via a 12V power adapter.

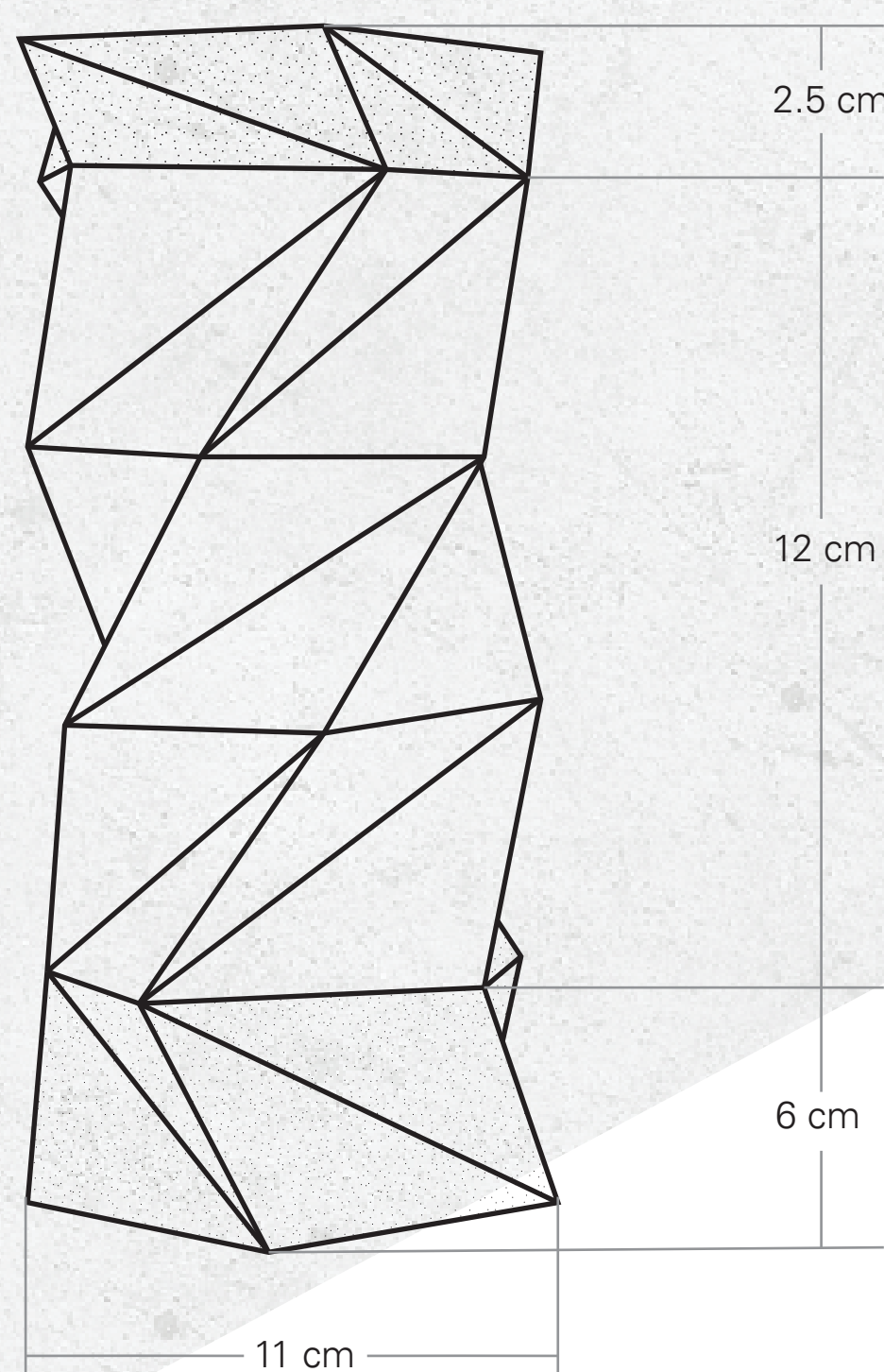
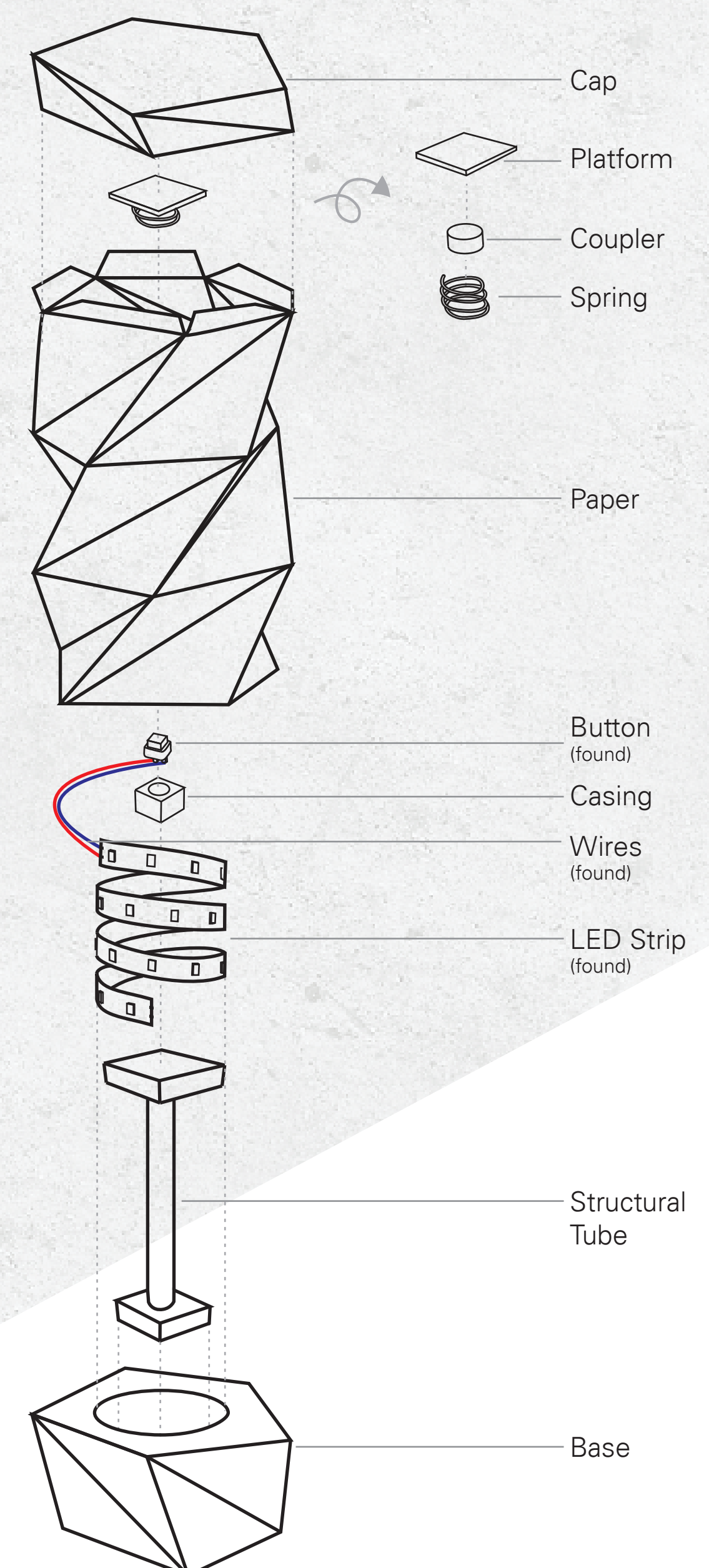


FABRICATION

There were three main techniques used to create Béton: molding, folding, and gluing.

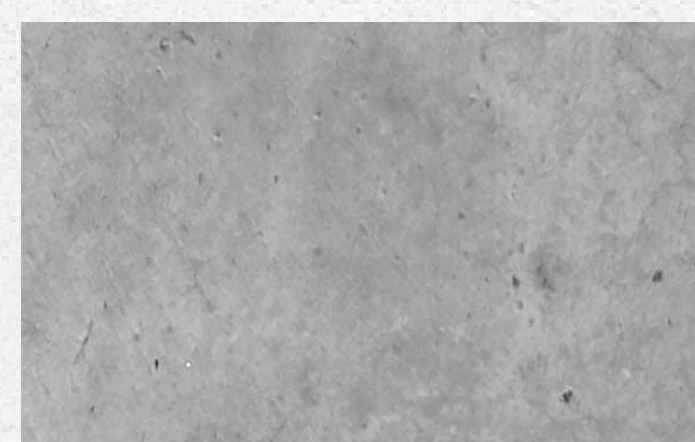
We chose the folding technique for our paper materials as we felt that it was the technique that best expressed the properties of this material. We also used glue to hold the paper together and to connect it to the concrete.

As for the concrete base and cap, because the shape is quite complicated and will cause numerous undercuts in the mold, we had to create a custom made mold that could be destroyed and discarded when releasing the concrete form.



PAPER

Grafix Draft paper was used because it is strong, rigid, and translucent, as well as holds to creases and gives a nice distribution of soft light.



CONCRETE

The fast-setting Quikrete was chosen as it dries fast and has a smooth and clean appearance that compliments the texture of the paper.

ALTERNATIVES

One of the visions we had for Béton was to create a lamp that is composed of different materials but looks seamlessly as one material. For this idea, we would implement the use of different kinds of plastic as this material is known for being great imitators.



PERSONA

Brock Lee is a 5th year SIAT student who loves working in teams and prefers designs that are modern and sleek.

CONTEXT

Béton is meant to be used in Studio A, which lacks the natural lighting present in the other studios. However, it can be readily used in any context where more light is needed.