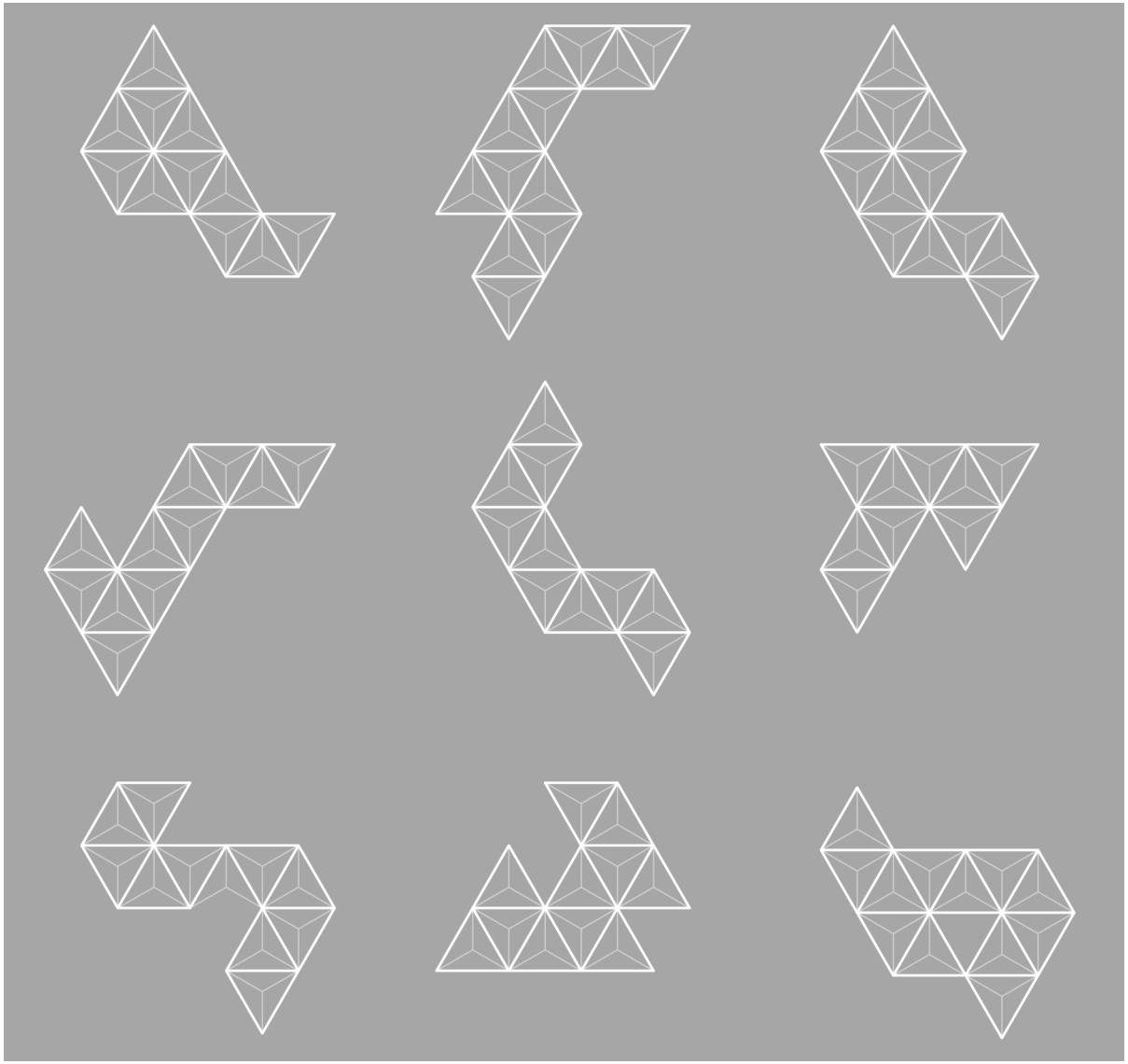


OBE stars

TABLE OF CONTENTS

CONCEPT

OBE stars is a collection of artistic work that complements and celebrates student work at the 2018 ESCH Awards Ceremony.

Using the form of modular sonobe triangles, the units are scalable to form varying sizes of a white icosahedron star. Inspired by Japanese origami, the triangulated components act as a base form for a series of custom lighting products.

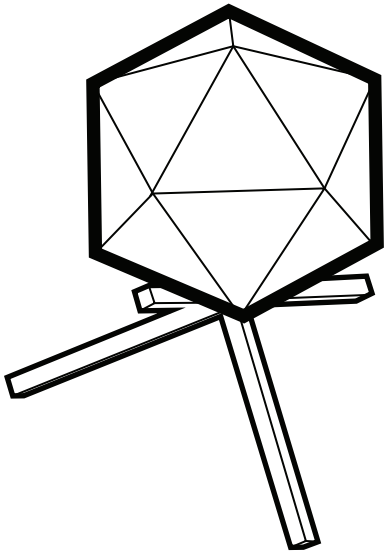
Ryerson University's blue and gold branding are accentuated through colour against the white forms. Interaction with the installations are encouraged as the patterned light visuals respond to the surrounding environment.

The design team is comprised of a group of Ryerson University FEAS students, affiliated with the Design Fabrication Zone (DFZ).

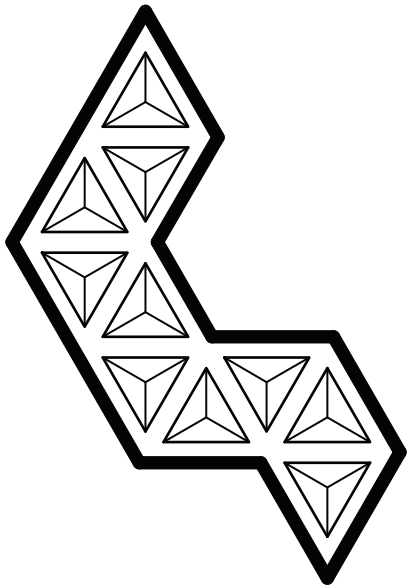
Designed by: Abrar Ahsan, Vishal Mehra, Ernest Wong, Agnes Yuen
Fabricated by: Martina (Mimi) Cepic, Adrian Chiu, Arnel Espanol, Eleanor Kuan, Corrine Schonewille, Kyle Wong

Design Fabrication Zone

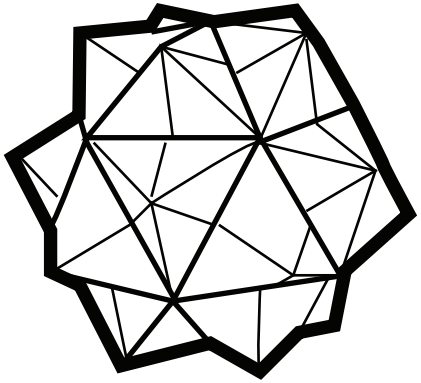
INSTALLATION



STAGE SCULPTURES

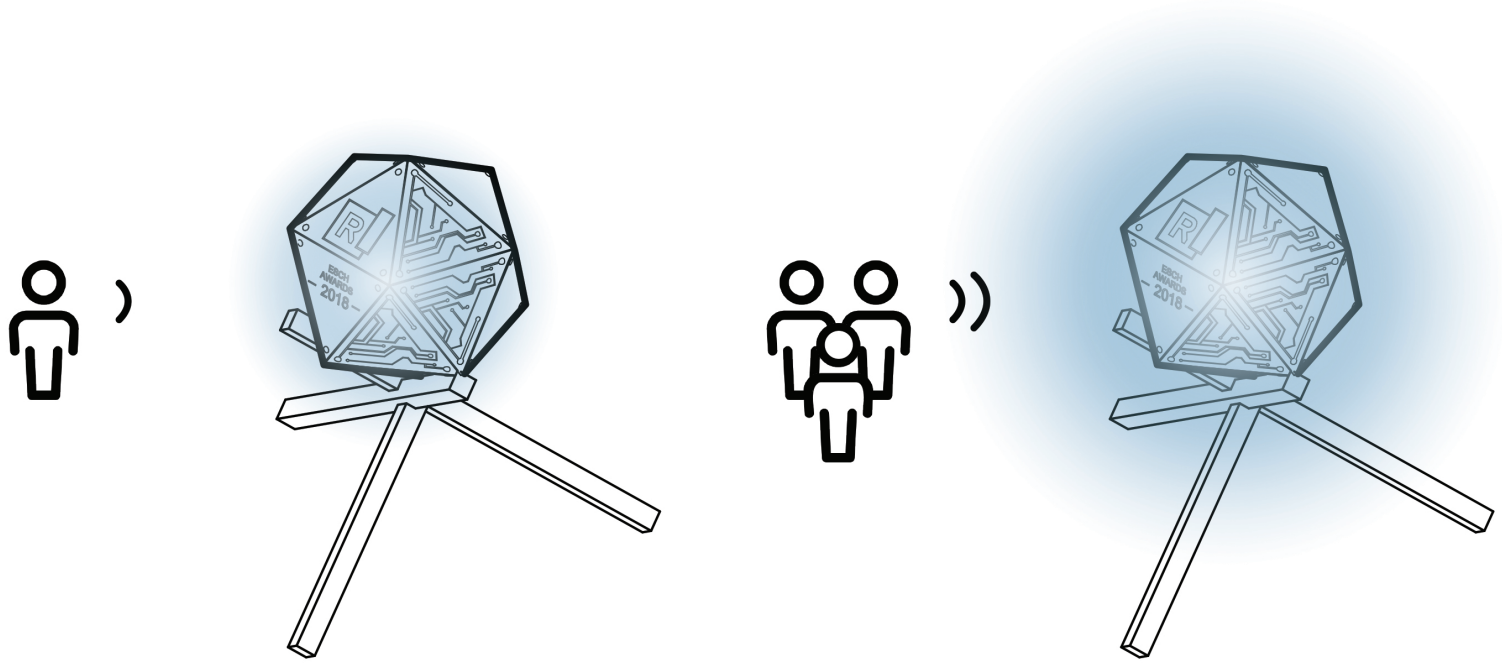


WALL



CENTERPIECES

INSTALLATION | Stage Sculpture



AUDIENCE RESPONSE

Using a microphone and Arduino microcontroller, a responsive system is created that visualizes the frequency spectrum of the venue and displays it via LED lights within the sphere. The light diffuses through the cut patterns on the surface of the sphere. The greater the sound is detected through the microphone, the light and pattern is intensified.

INSTALLATION | Stage Sculpture

COMPONENTS

5 Triangles per component
20 Total

CAP 1
1 FLAP PER

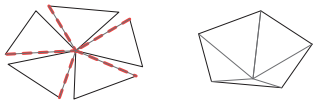
ROW 1
1 FLAP PER

1 FEATURE FACE PER COMPONENT

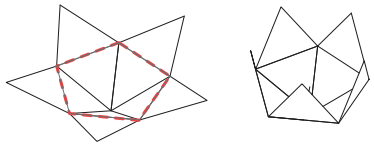
ROW 2
2 FLAP PER

CAP 2
2 FLAP PER

ASSEMBLY



1



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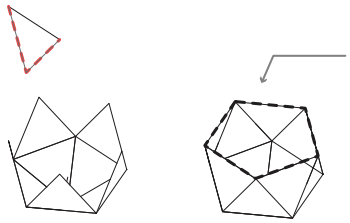

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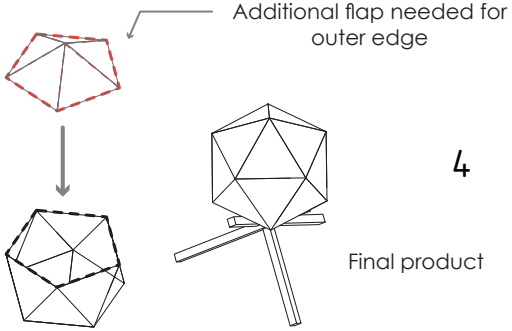
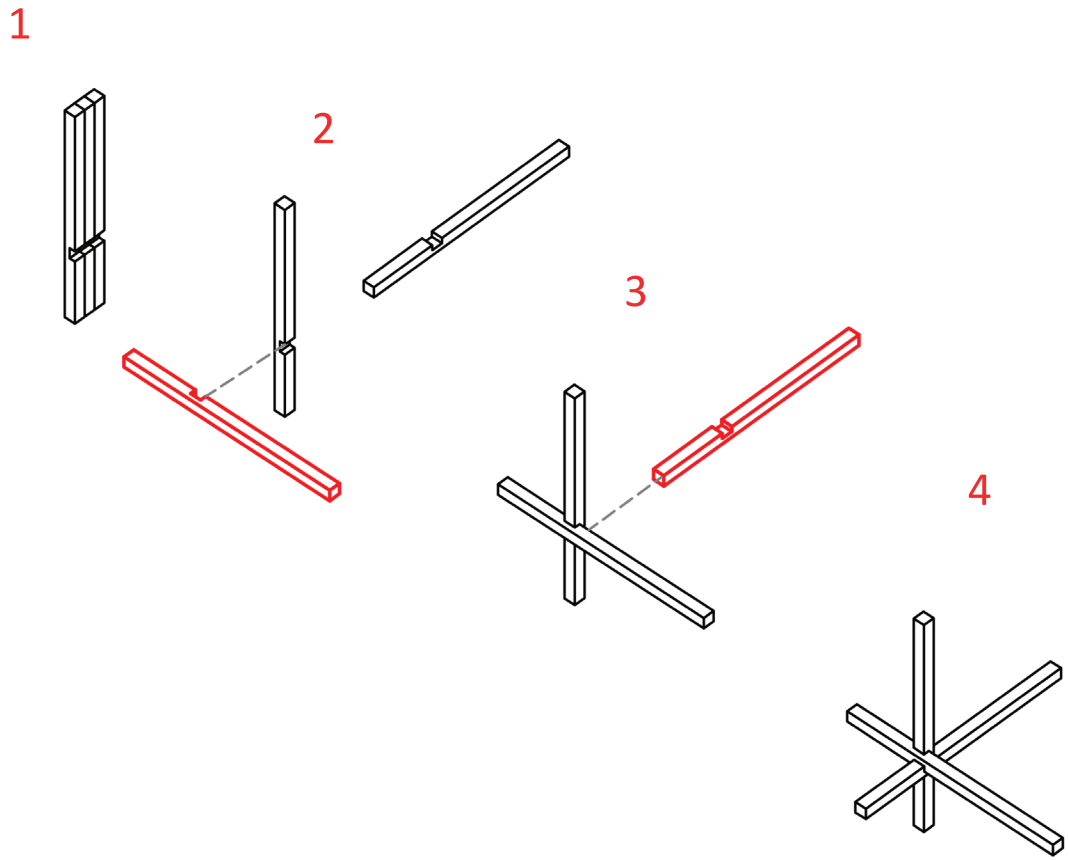
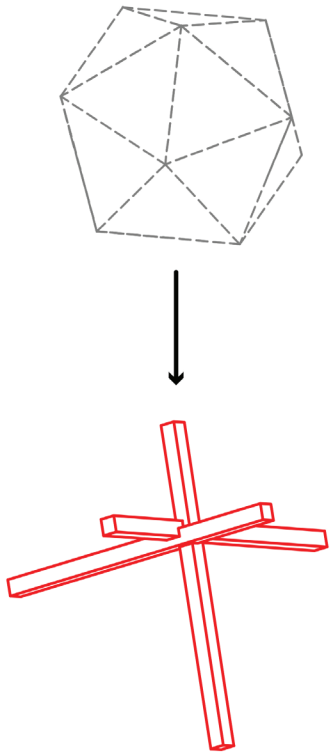


4

INSTALLATION | Stage Sculpture

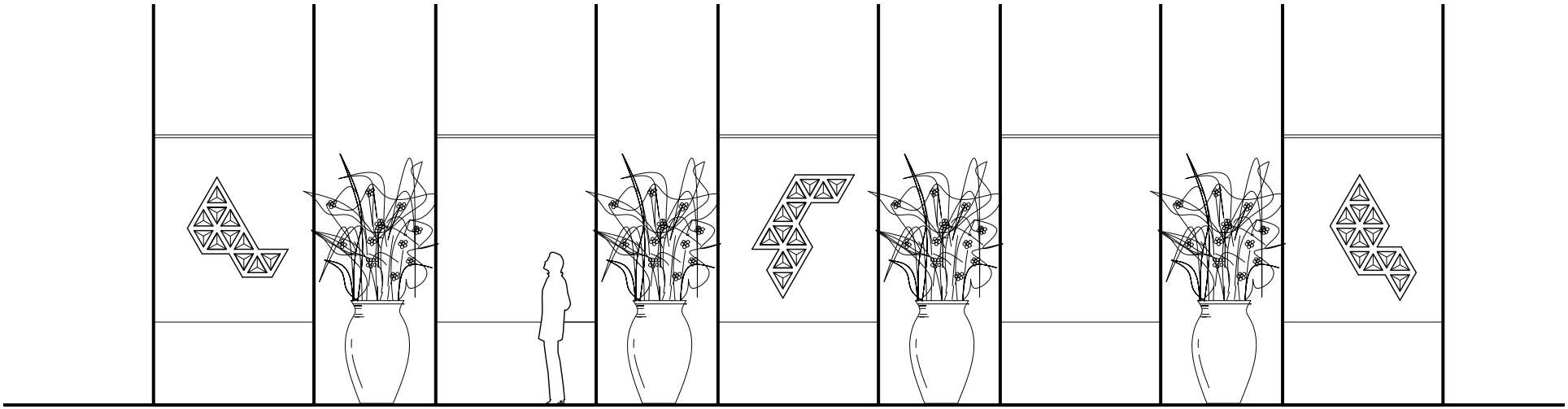




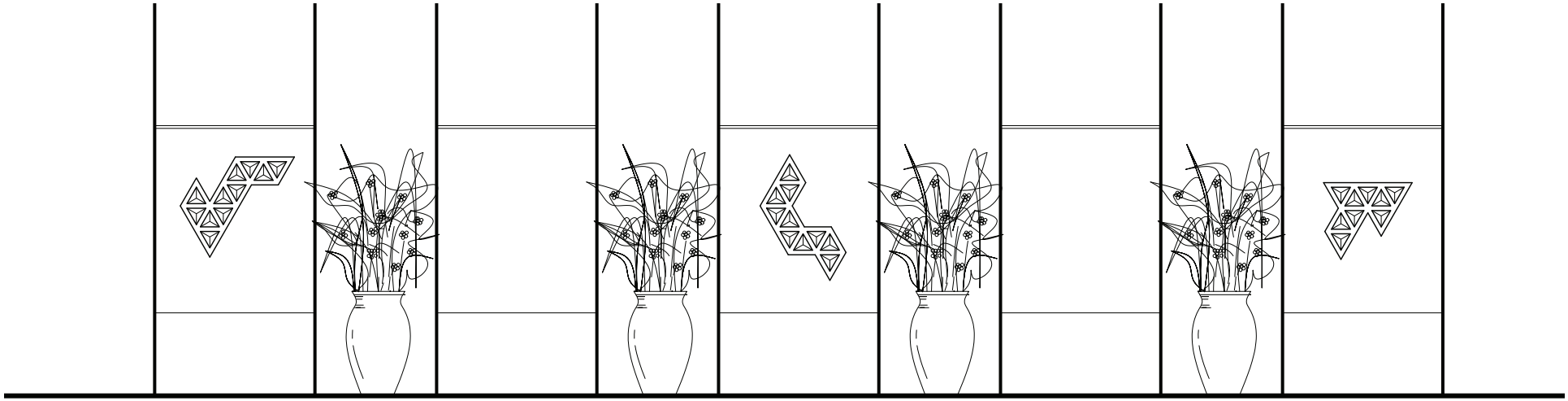
BASE

Three wooden dowels are interlocked to create a tripod-like stand for each sphere. Dimensions of the base are to be proportional to the scale of each icosahedron.

INSTALLATION | Wall

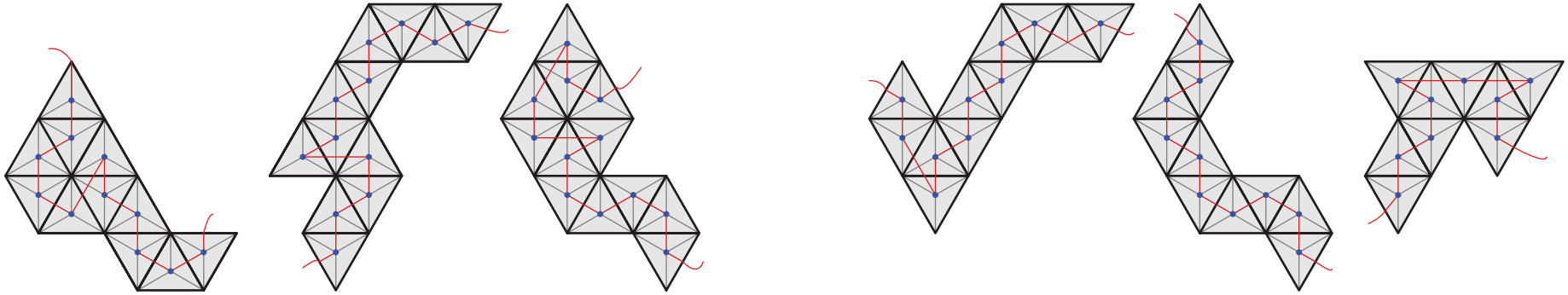


North Elevation
1:75



South Elevation
1:75

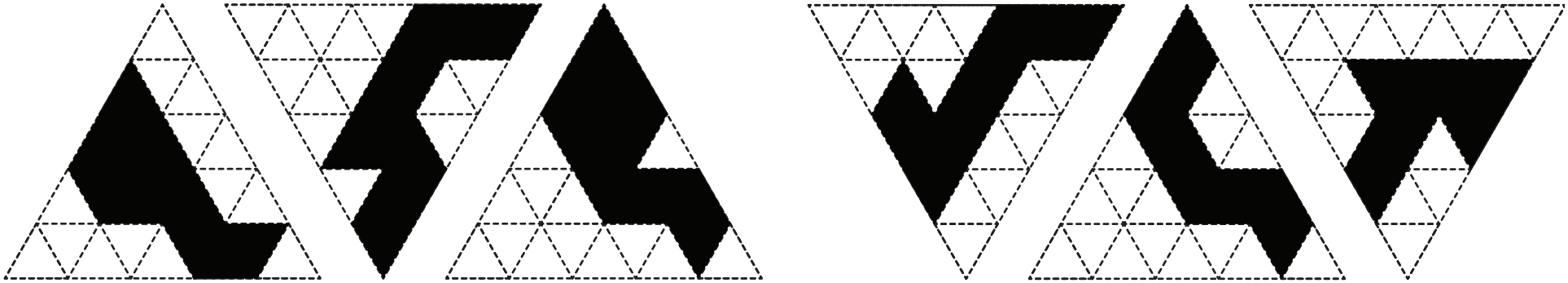
INSTALLATION | Wall



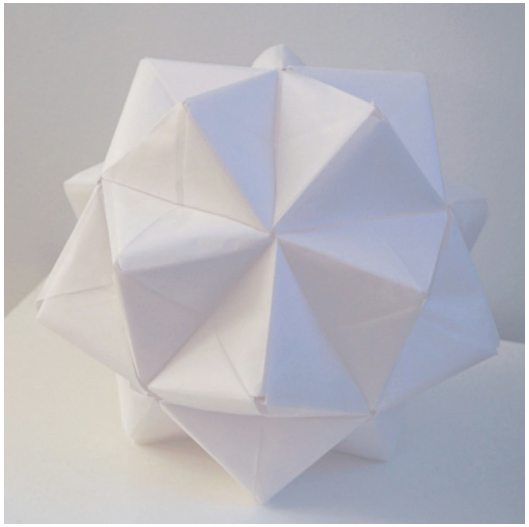
1 2 3 4 5 6

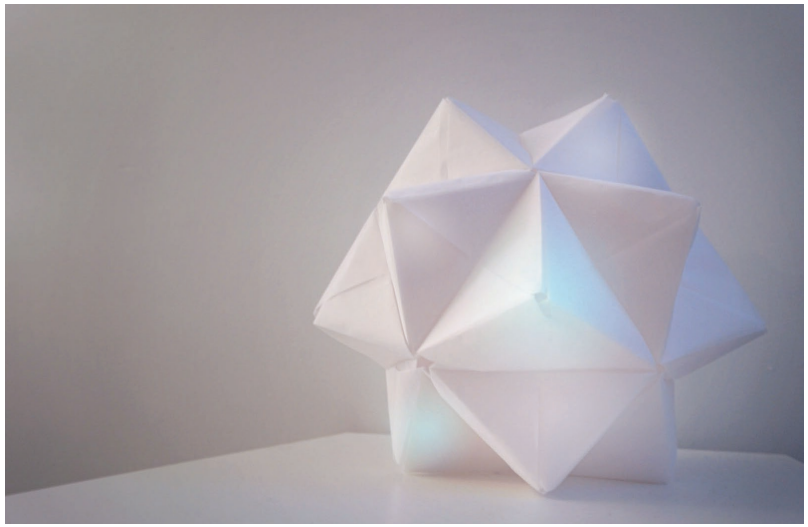
CUSTOMIZATION

Reusing a triangulated styrene grid, each unique pattern is cut out and the voids are filled with a white styrene pyramid. Blue and yellow LEDs are wired in a linear arrangement and shine through the punched perforations and the node of each triangle.



INSTALLATION | Centerpieces



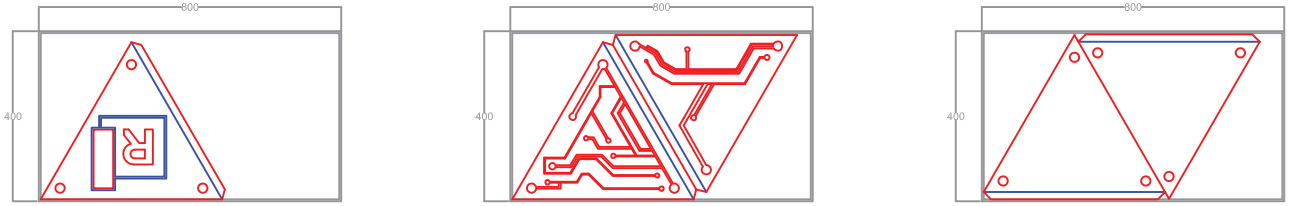


SHOP DRAWINGS

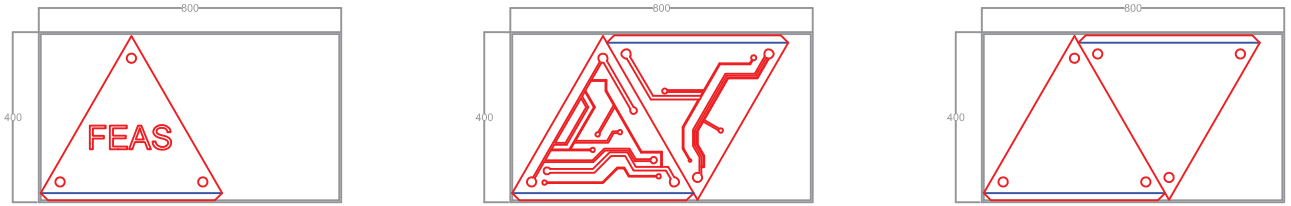
Total pieces: 20 Triangles
4 parts (5 per part)
Max triangle = 480mm (length)

LASER TEMPLATES

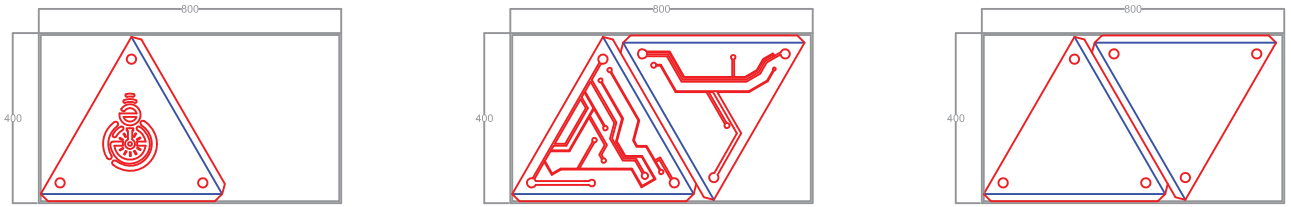
Cap 1
1 flap each



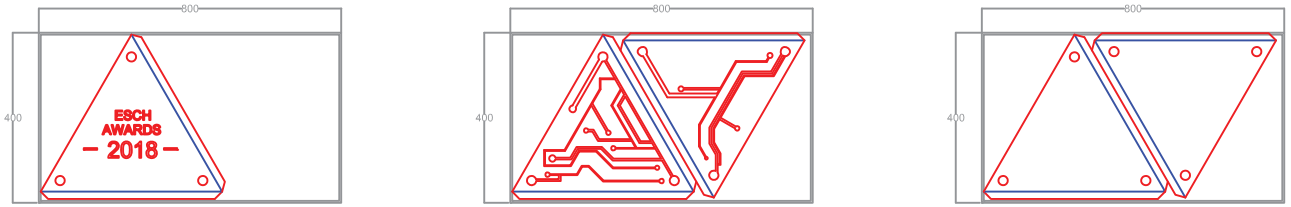
Row 1
1 flap each



Row 2
2 flaps each



Cap 2
2 flaps each



1:20

BUDGET

As of: Jan 2 2018

Item	Quantity (unit)	Cost / Quantity (unit)	Subtotal	Tax	Contingency	Total	Purchase By	Notes
STAGE SCULPTURES	**3**							
Cardboard (white)	24	$1.96	$47.04	$6.12		$53.16	Ernest/Shop	https://www.uline.ca/BL_1858/White-Corrugated-Pads (Cut for small laser 800 x 450 mm)
Mylar paper (by ft x 42")	4	$3.59	$14.36	$1.87		$16.23	Ernest	for transparent/logo surfaces to diffuse light; Aboveground sells single sheets https://store.abovegroundartsupplies.com/products/gfx-mylar-by-the-foot-42-%7CR3M4201.html
Microphone	1	$12.45	$12.45	$1.62		$14.07	Vishal	
Wood (1x2x8) for Legs	2	$1.26	$2.52	$0.33		$2.85	Ernest	https://www.homedepot.ca/en/home/p.1x2x8-framing-lumber.1000173739.html
Arduino	1						Abrar	In-kind
Neopixels	90 + 30						Vishal	In-kind
Wires							Vishal	In-kind
Subtotal						**$86.30**		
WALL	**6**							
Mounting Tape	1	$3.79	$3.79	$0.49		$4.28	Agnes	http://www.canadiantire.ca/en/pdp/scotch-heavy-duty-mounting-tape-0676146p.html#srp
Wires	(see cad file)				1.5		Vishal	In-kind
Double-sided tape	1						Shop/Agnes	(u-line red roll)
Power supplies	6						Vishal/Abrar	
Arduinos	6						Abrar	In-kind
Subtotal						**$4.28**		
CENTERPIECES	**8**							
Coin battery 4pk	5	$12.47	$62.35	$8.11		$70.46	Agnes	https://www.walmart.ca/en/ip/energizer-coin-lithium-battery-2032bp-4/6000189940523
Vellum (9x12) 50sh	5	$5.99	$29.95	$3.89		$33.84	Agnes	https://store.abovegroundartsupplies.com/products/canson-foundations-tracing-pad----9x12---50-sheets-95743.html
10mm White LED 5pk	2	$3.75	$7.50	$0.98		$8.48	Agnes	https://www.creatroninc.com/product/10mm-led-white-5-pack/
5mm Blue LED 10pk	1	$2.50	$2.50	$0.33		$2.83	Agnes	https://www.creatroninc.com/product/5mm-super-bright-led-blue-10-pack/
Subtotal						**$45.14**		
EQUIPMENT								
Step Ladders							DFZ	In-kind
Powercords	1						CEIE	In-kind
Solder and soldering iron							DFZ	In-kind
Subtotal						$0.00		
Total						**$135.72**		

SCHEDULE

Tasks	Date	Time	Action	Comments
			DESIGN	
MEETING	Wed Dec 20	11am - 3pm	Design Charette and Introduction Meeting	Schematic Design completed; location in VIC (to count and measure pieces)
MEETING	Wed Dec 20	6pm - 7pm	Meeting with Lily	Discuss design, shop equipment... inquire about storage
DESIGN	Thurs Dec 21 - Weds Dec 27		Design development	
TECH	Thurs Dec 21 - Weds Dec 27		Tech design development	
DESIGN	Wed Dec 27		Finalize Design	
TECH	Fri Dec 29	By 6pm	Complete arduino code	
DESIGN	Thurs Dec 28 - Fri Dec 29		Create construction and presentation drawings; confirm spec sheet	
FABRICATION	Sat Dec 30 - Sun Dec 31		Gather materials; clean up old materials	
TECH	Tues Jan 2	By 12pm	Complete arduino LED prototype	Video update and photos update
DESIGN	Tues Jan 2	Before 5pm	Submit design proposal	Run design by Lily; submit budget and design package to Nisreen
MEETING	Weds Jan 3		Update meeting	Progress; attendance mandatory
			FABRICATION	
TECH	Wed Jan 3 - Wed Jan 10		Wiring and soldering	
FABRICATION	Wed Jan 3 - Wed Jan 10		Fabrication	In DFZ shop; paper folding lanterns
TECH	Jan 10 2017		Resolve bugs	
FABRICATION	Jan 10 2017		90% of project must be completed	
FABRICATION	Thurs Jan 11	6pm - 8pm	Touch Ups	
INSTALL	Thu Jan 12	6pm - 8pm	Test Install	Move installation to VIC?
INSTALL	Mon Jan 15	4:30 - 7:30pm (3:45 - 8:30pm)	Install at SEARS Atrium	
ADMIN	Tues Jan 16 - Fri Jan 19	By the end of the week	Follow up and wrap up	Collect receipts