

Task 3

Filippa Sandberg, Ekin Ünlü,
Verner Mäntysaari and Sanni Lares



The Dragonfly



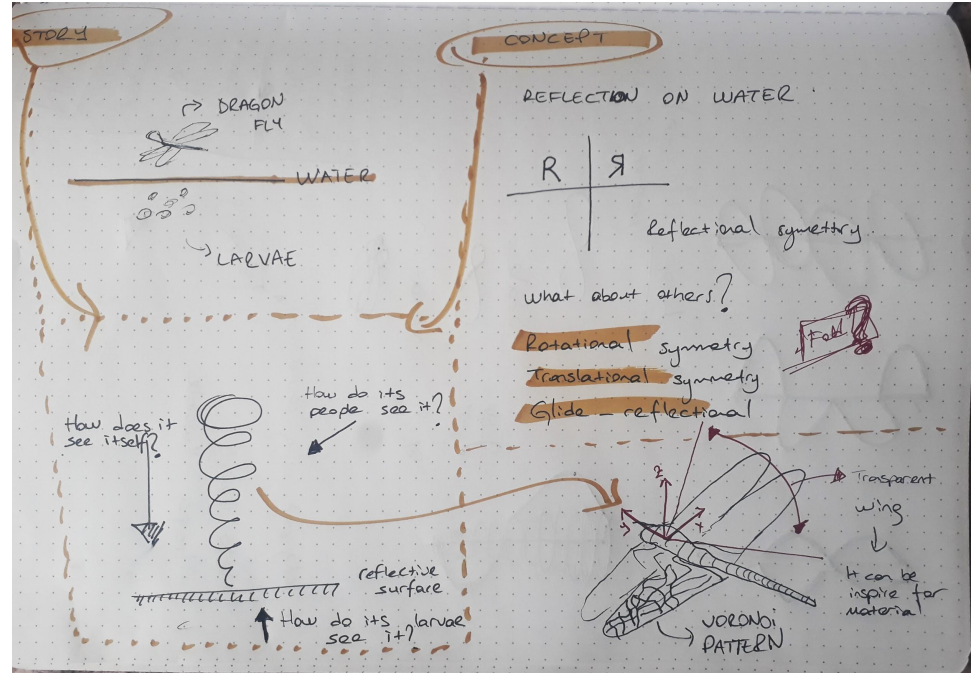
Statement

“A mathematical taxidermy of a dragonfly”

A dragonfly is an insect that constantly flies over the water. The reason for this is that their larvae are underwater. The water surface is a period of dragonfly's transition from birth to life. The reflective symmetry that occurs lasts forever. Birth, life, death and rebirth In this endless loop, he sees all stages of dragonfly life through reflection.

Mirrors create the illusion of a dragonfly on the water. Something that isn't really there is shown.

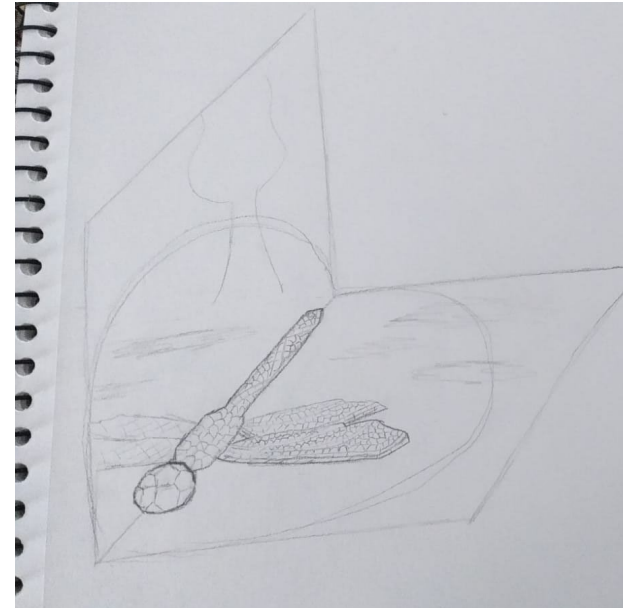
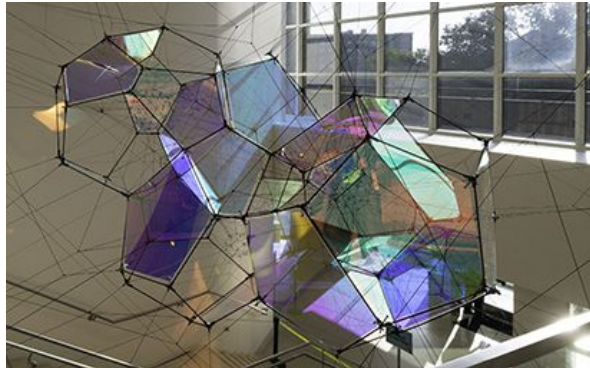
The dragonfly has a really interesting pattern on its wings. Voronoi shape/pattern - minimal surface



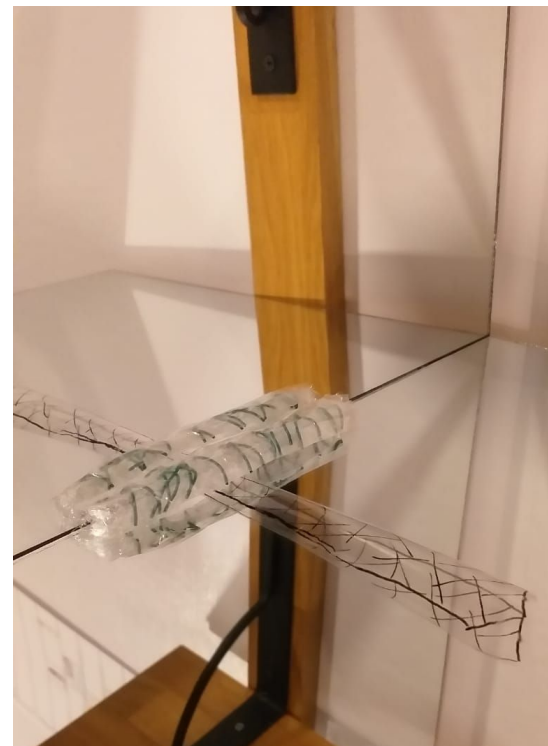
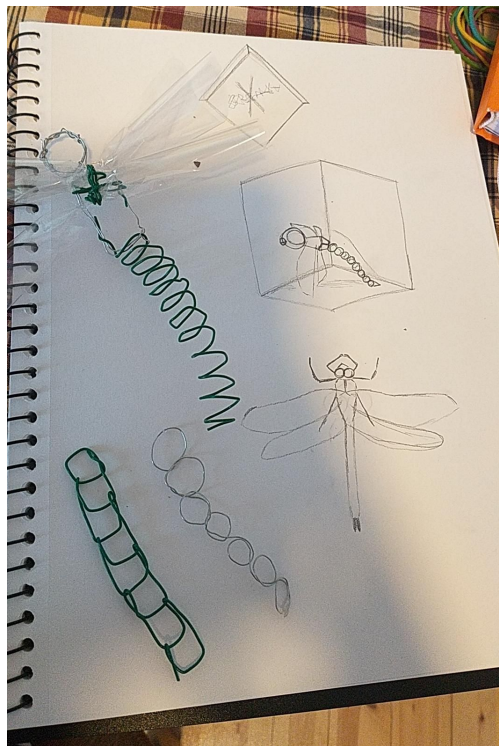
Implementation

2D pattern on the wings and 3D voronoi pattern structure for the body.

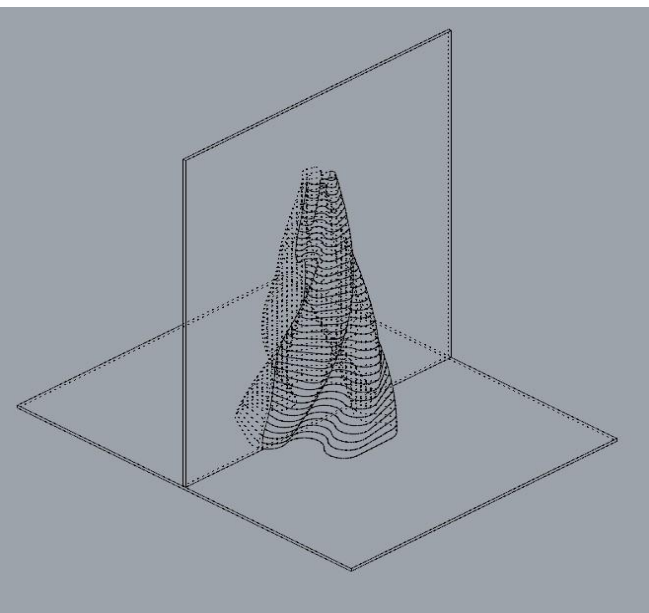
The reflections in 2 mirrors to create an image of a whole but the actual structure is only a quarter of the dragonfly.



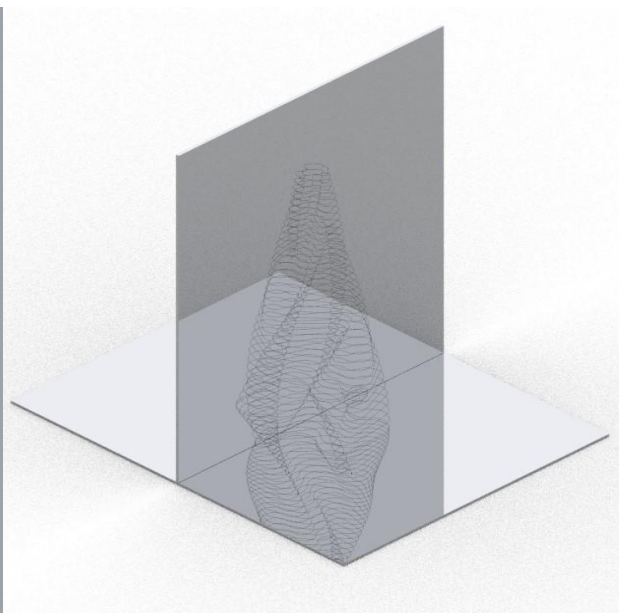
Prototyping



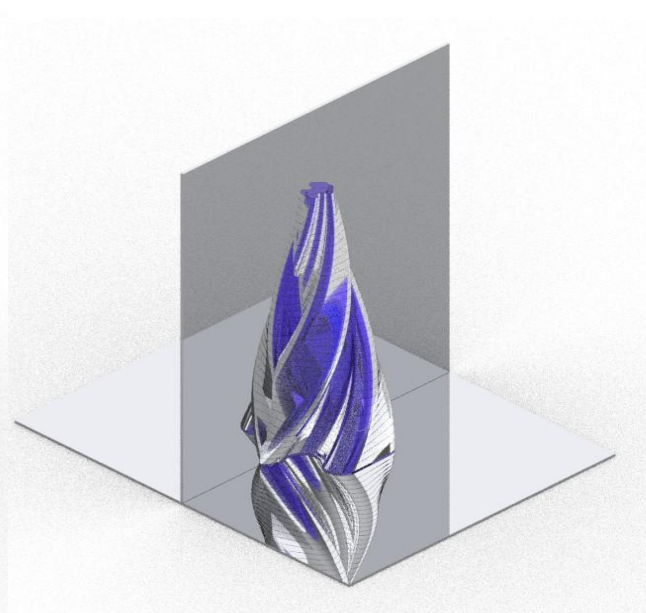
Experiment-1 (spiral surfaces- inspired by the dragonfly's body and habitat)



technical drawing

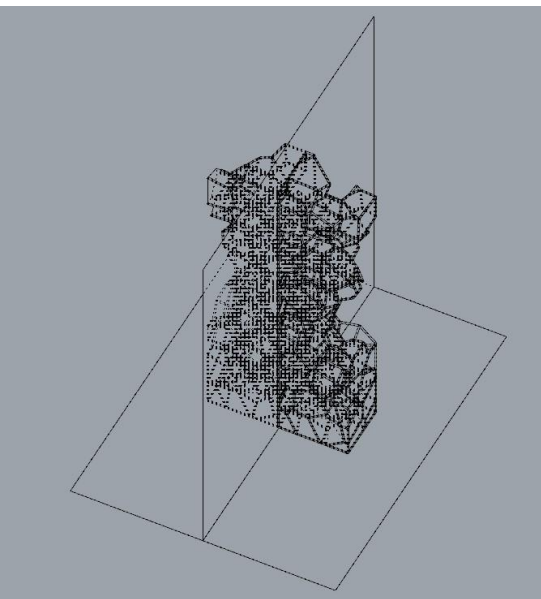


skeleton

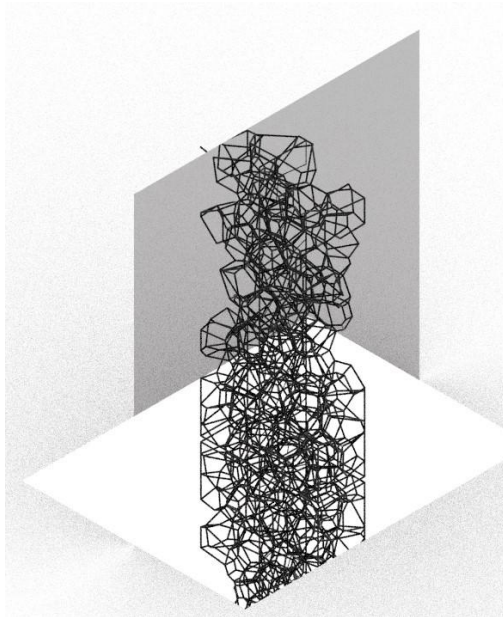


skin

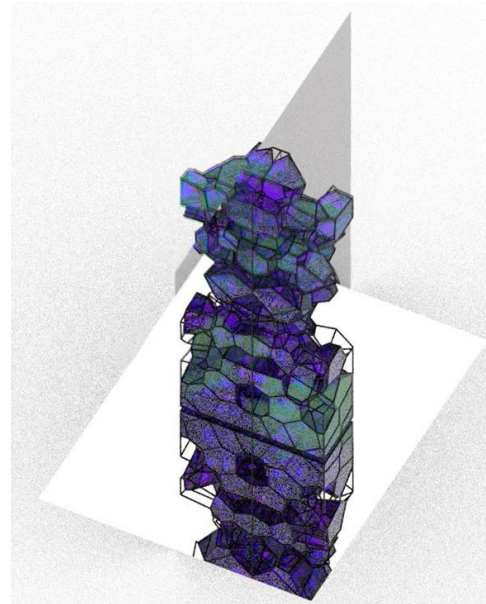
Experiment-2 (voronoi tessellation 3d structure- inspire by dragonfly wing pattern)



technical drawing



skeleton

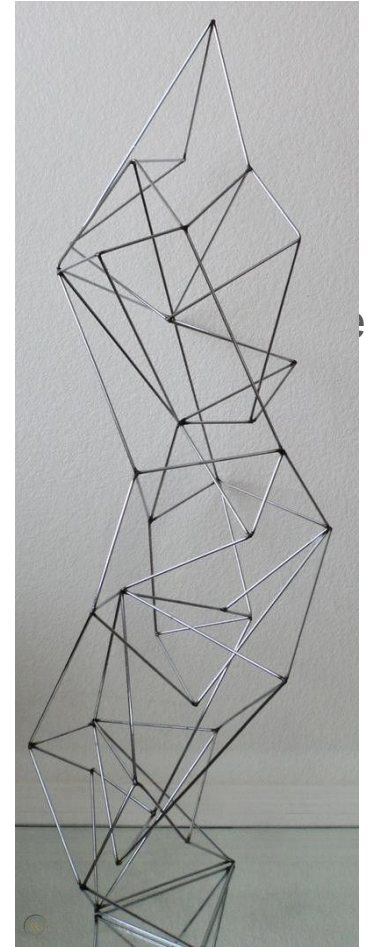
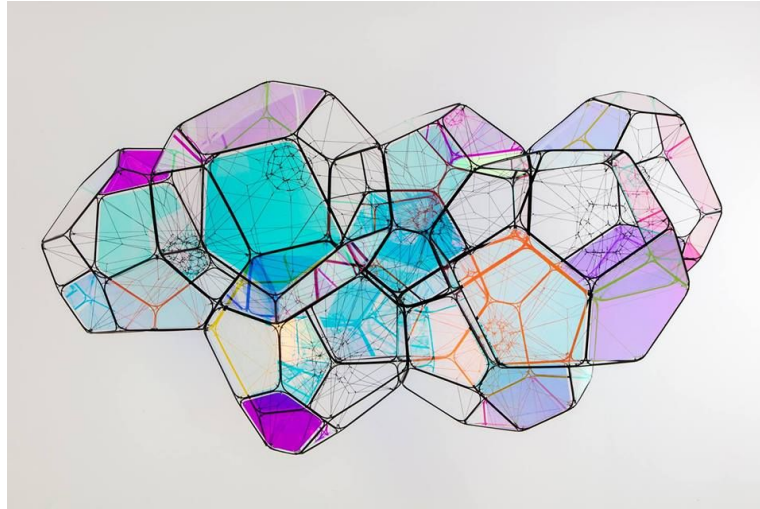
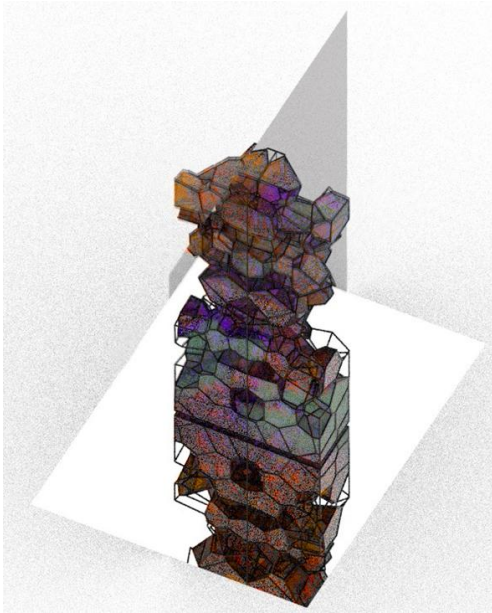


skin

Materiality

Skeleton created by bending metal wire or by welding.

Iridescent (acrylic) plexiglass to fill the gaps in the metal.



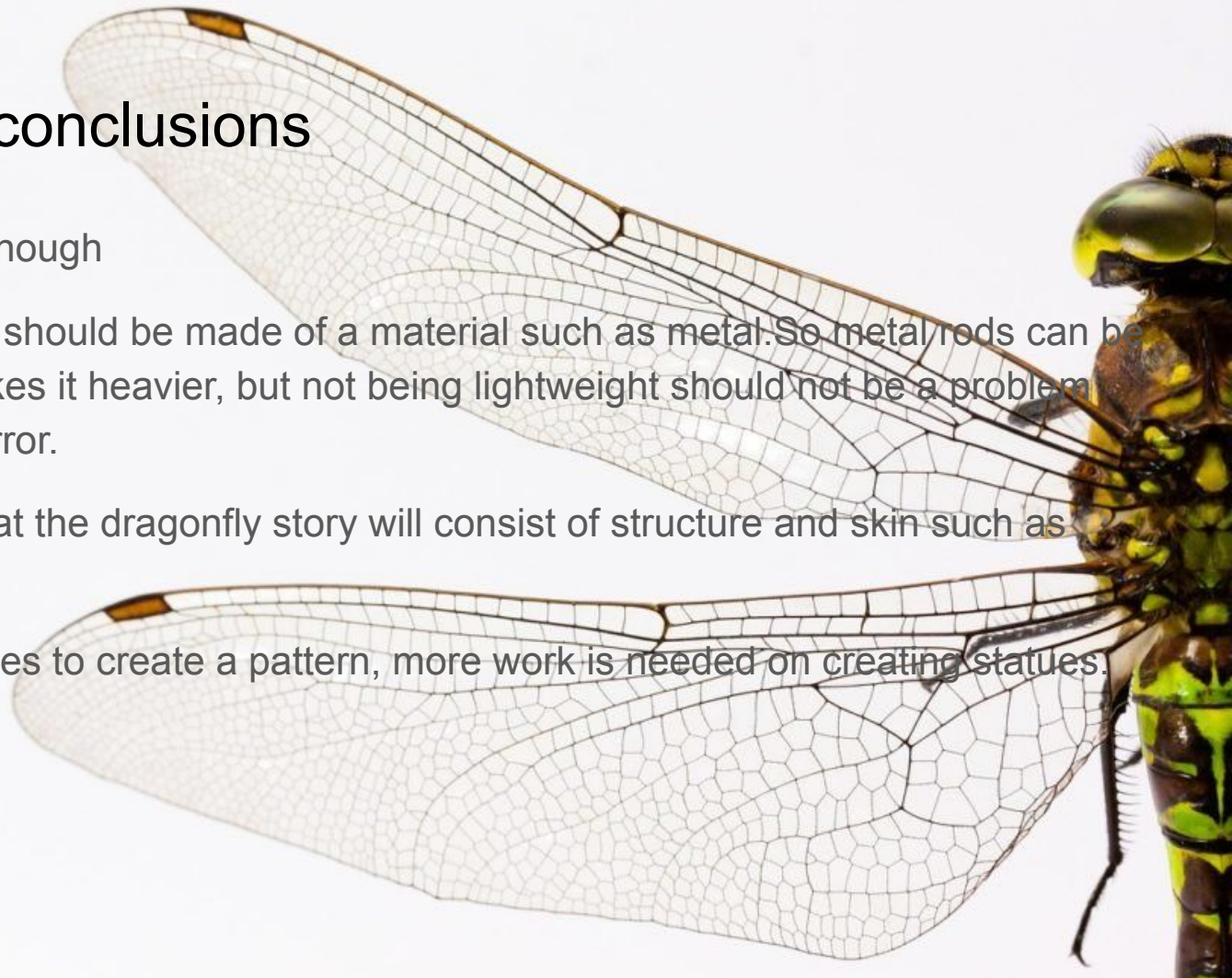
Challenges and conclusions

Making the body quickly enough

We think that the skeleton should be made of a material such as metal. So metal rods can be difficult to shape. This makes it heavier, but not being lightweight should not be a problem since it is laying on the mirror.

As a result, we decided that the dragonfly story will consist of structure and skin such as body and skeleton.

In order for design strategies to create a pattern, more work is needed on creating statues.



Thank you!

