

**EXPERIENCE WORKSHOP**



**THE EXPERIENCE-CENTERED  
MATH/ART MOVEMENT**  
[www.experienceworkshop.org](http://www.experienceworkshop.org)



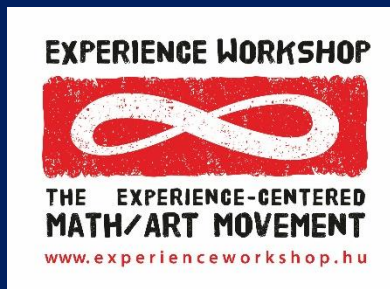
# Experience Workshop's STEAM Learning Material

## EXPERIENCE WORKSHOP'S 4DFRAME MECHANICAL INSTRUMENTS

Dr. Kristóf Fenyvesi  
University of Jyväskylä

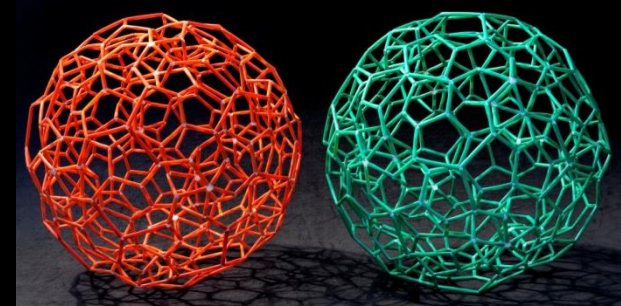


Co-funded by the  
Erasmus+ Programme  
of the European Union



# Introduction of 4D Frame

For Free Imagination and Infinite creativity

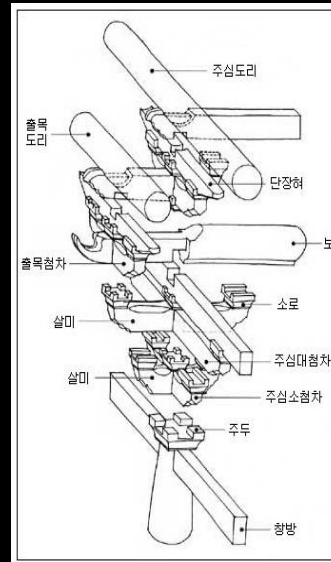


The 4Dframe educational modelling kit is based upon the analysis of building techniques utilized in the construction of Korea's traditional, wooden buildings, in which no any nails have been used.

- ❖ 4Dframe has been proved to be a very appropriate tool for developing various skills in the transdisciplinary framework of STEAM learning.



Traditional Korean Wooden Palace



Principle of Architecture



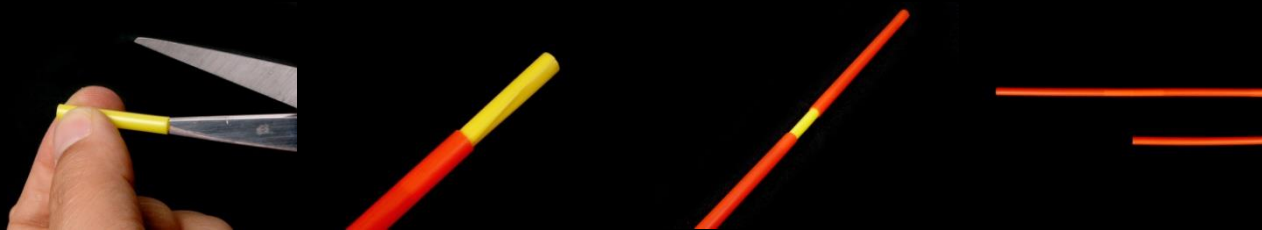
4D Frame Tube

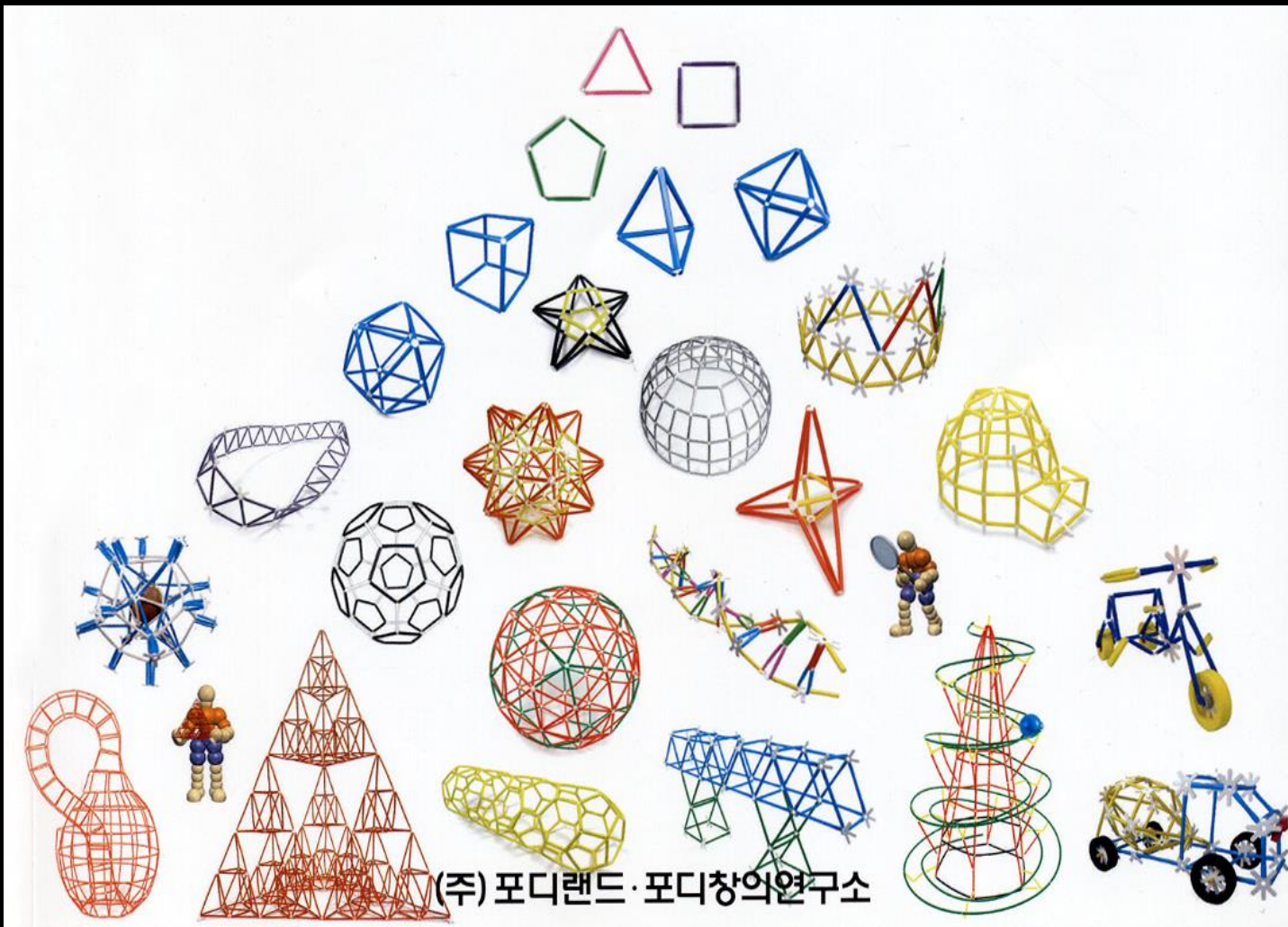


4D Frame Connector

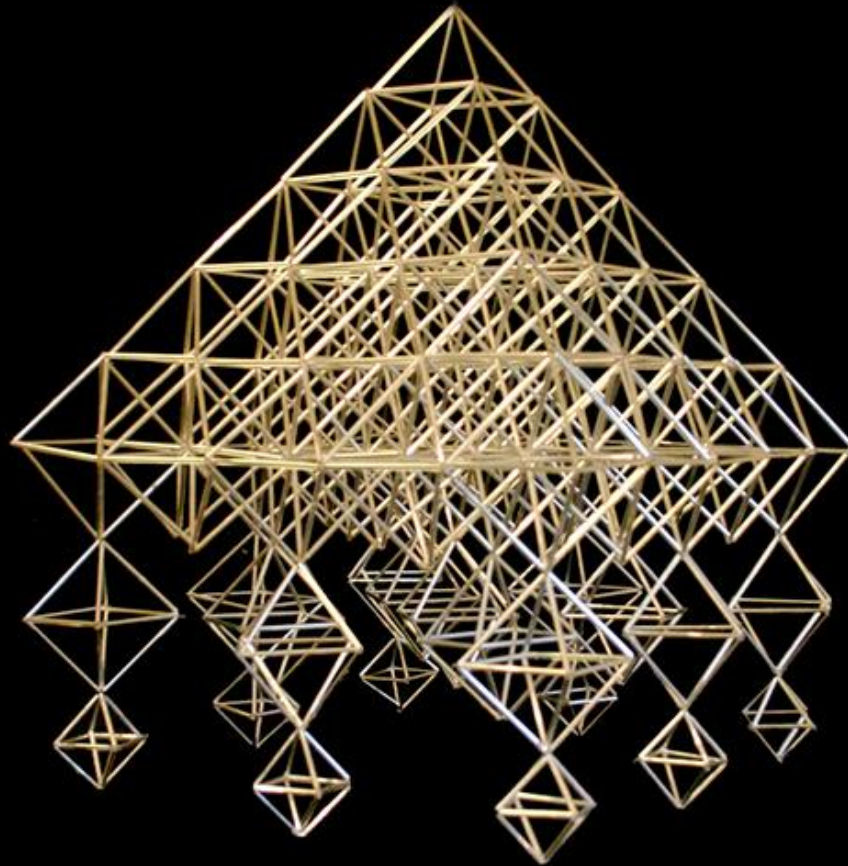


Bend, Cut & Connect!





(주) 포디랜드 · 포디창의연구소



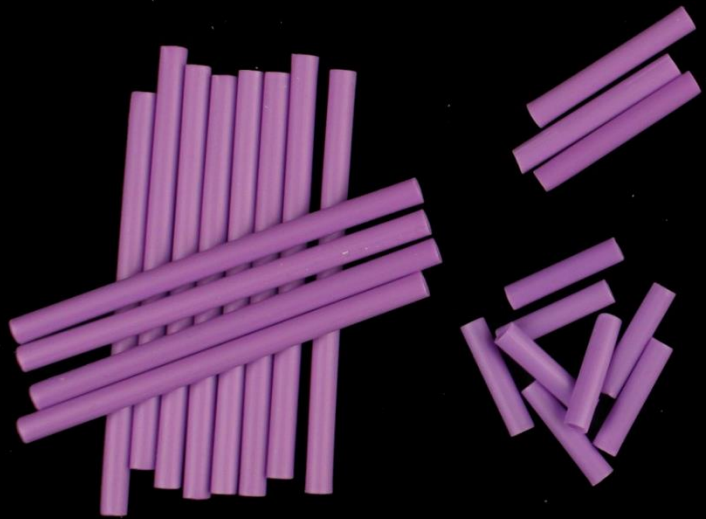
The traditional Nordic  
christmas decoration:  
the himmeli



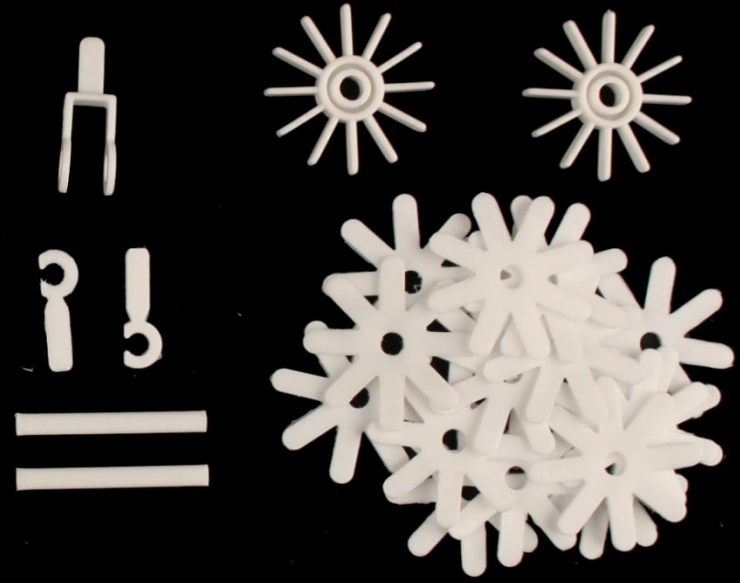






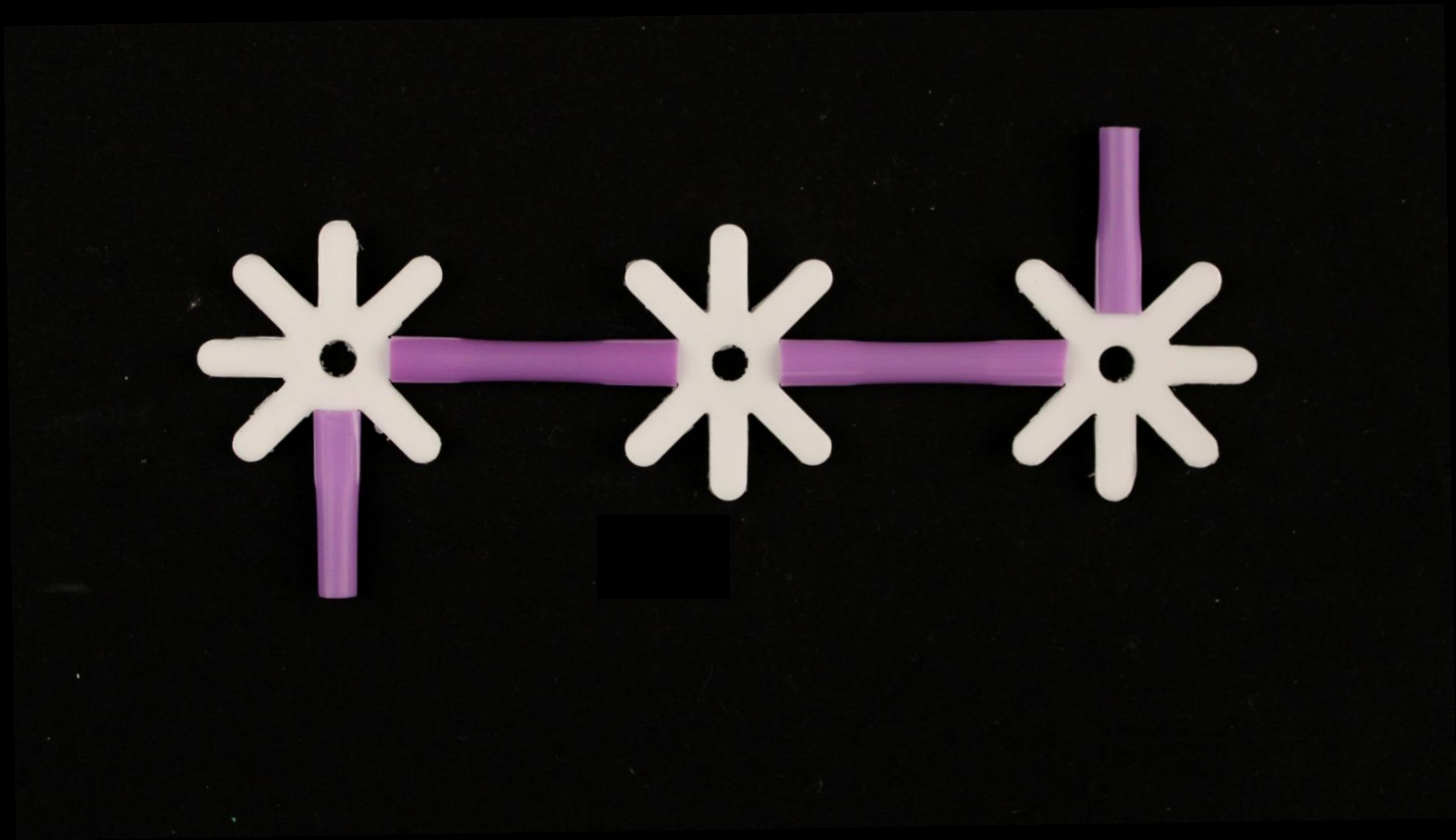


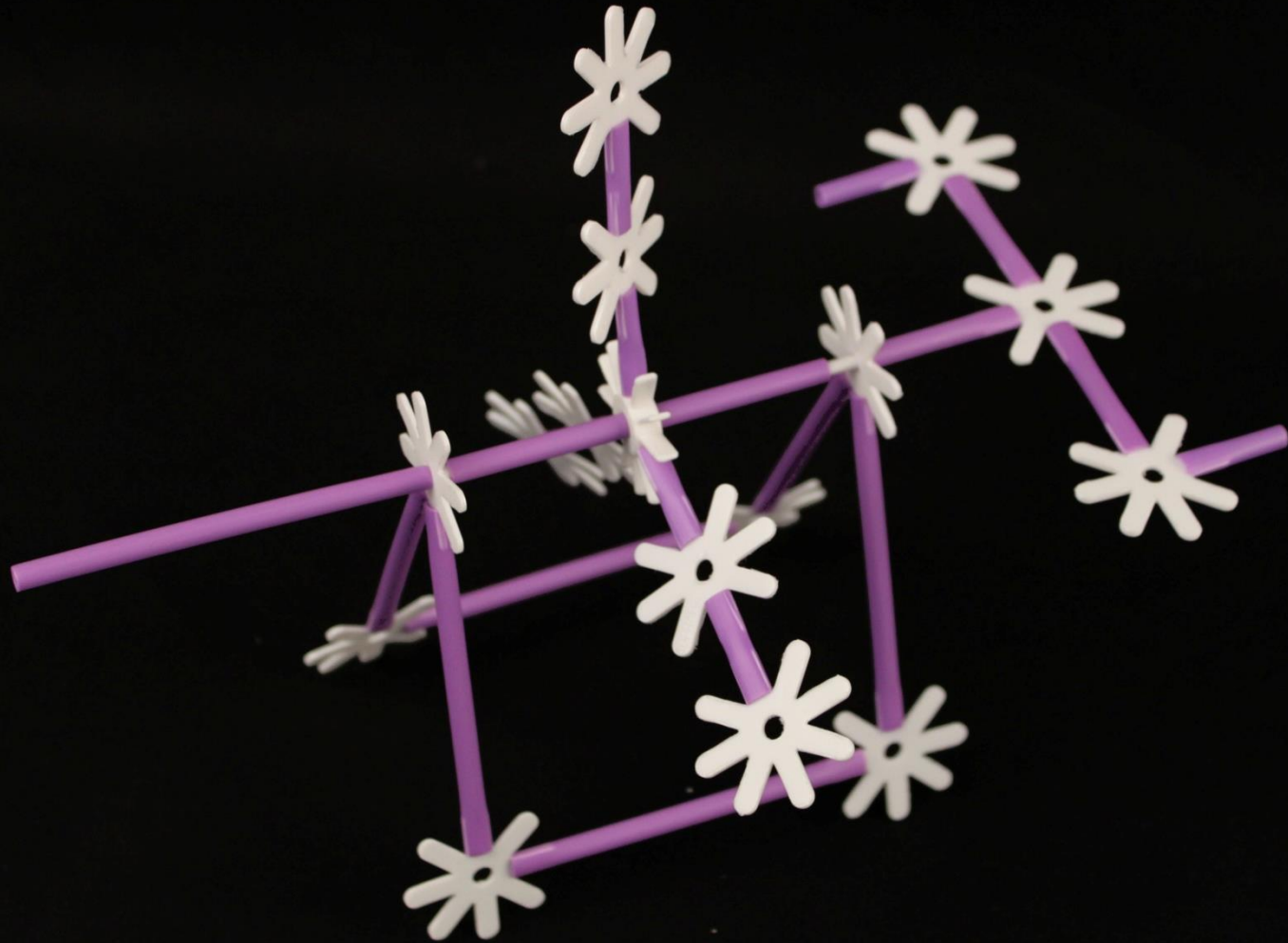
Tube

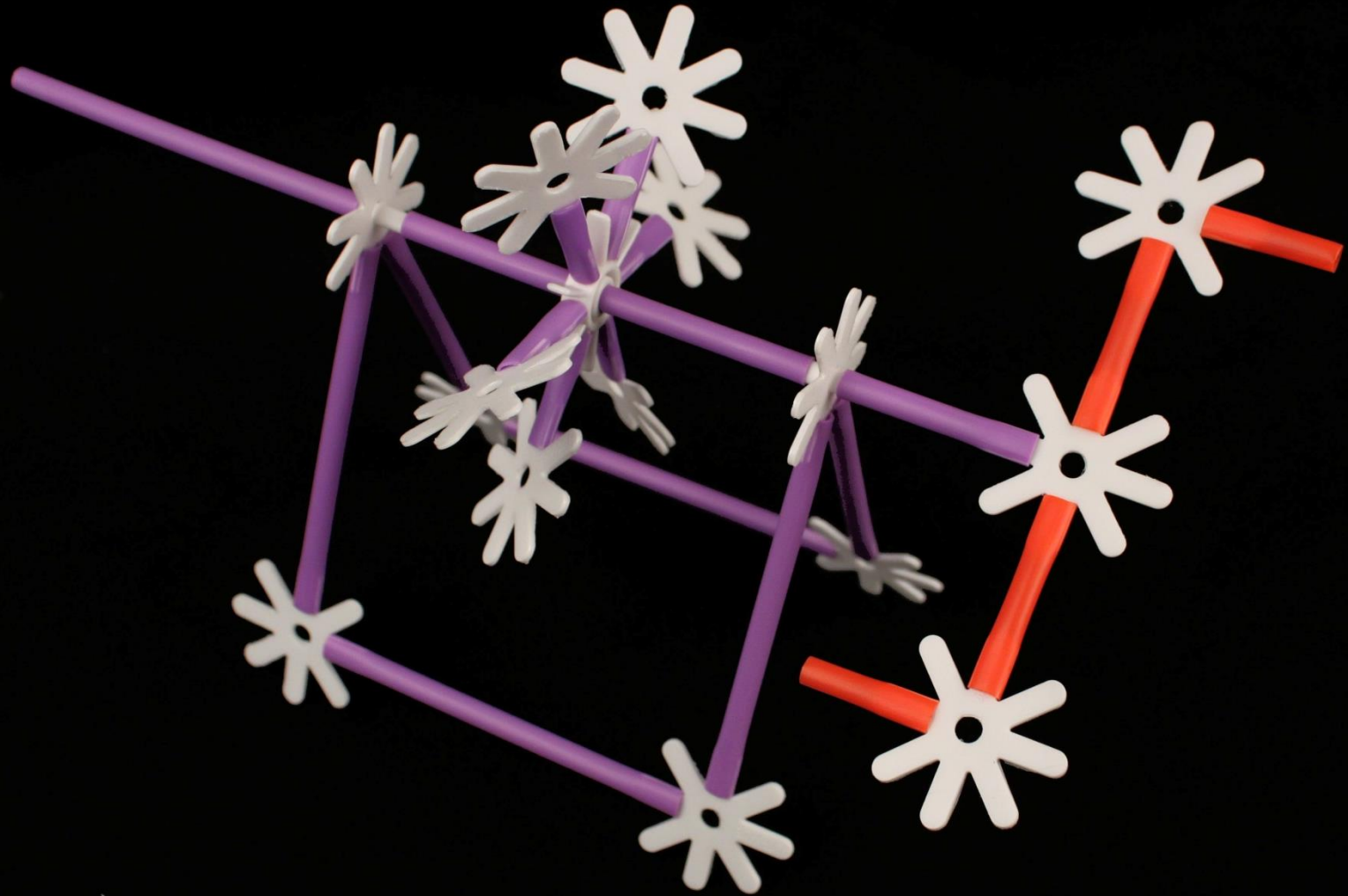


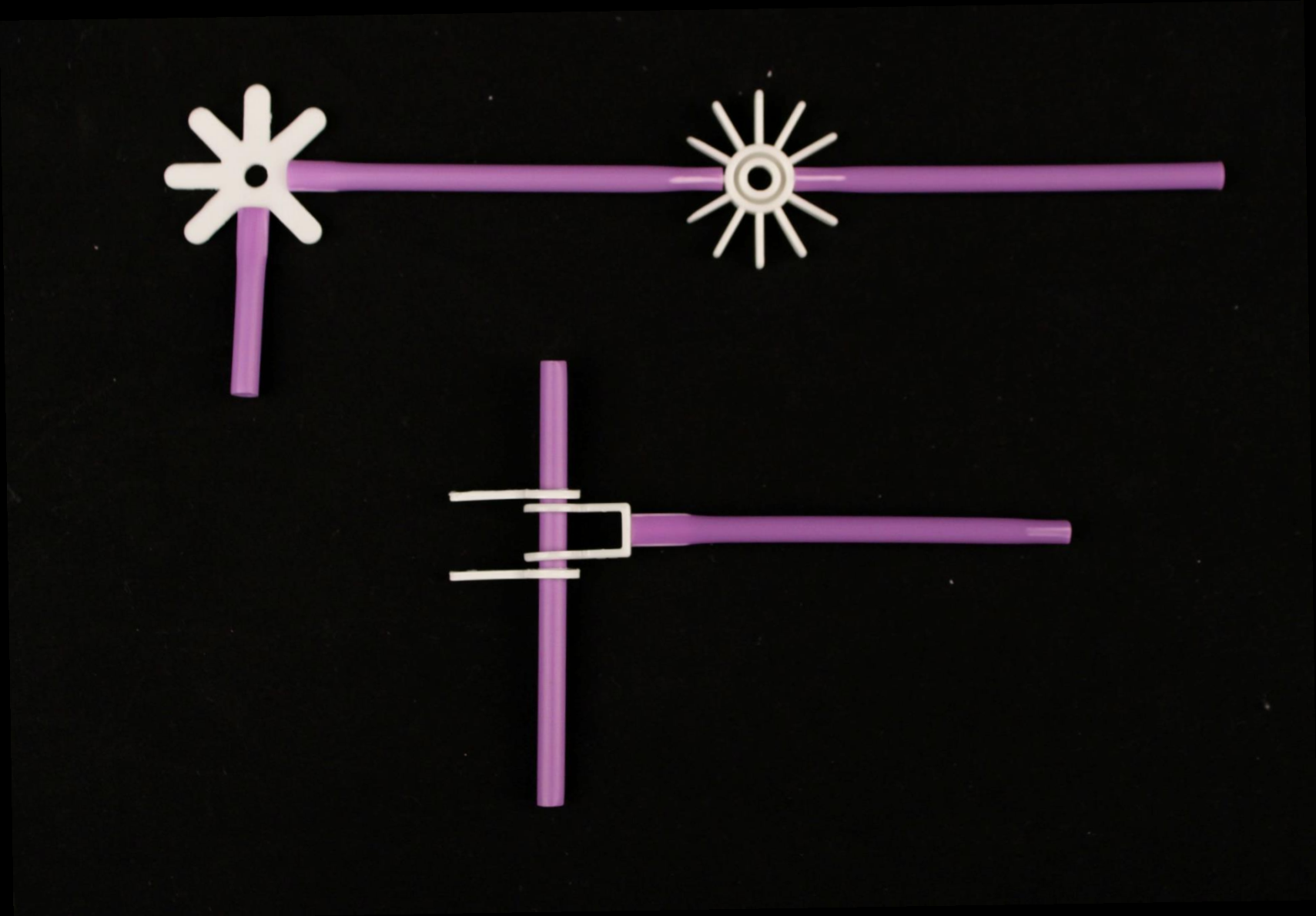
CONNECTING  
BRIDGE

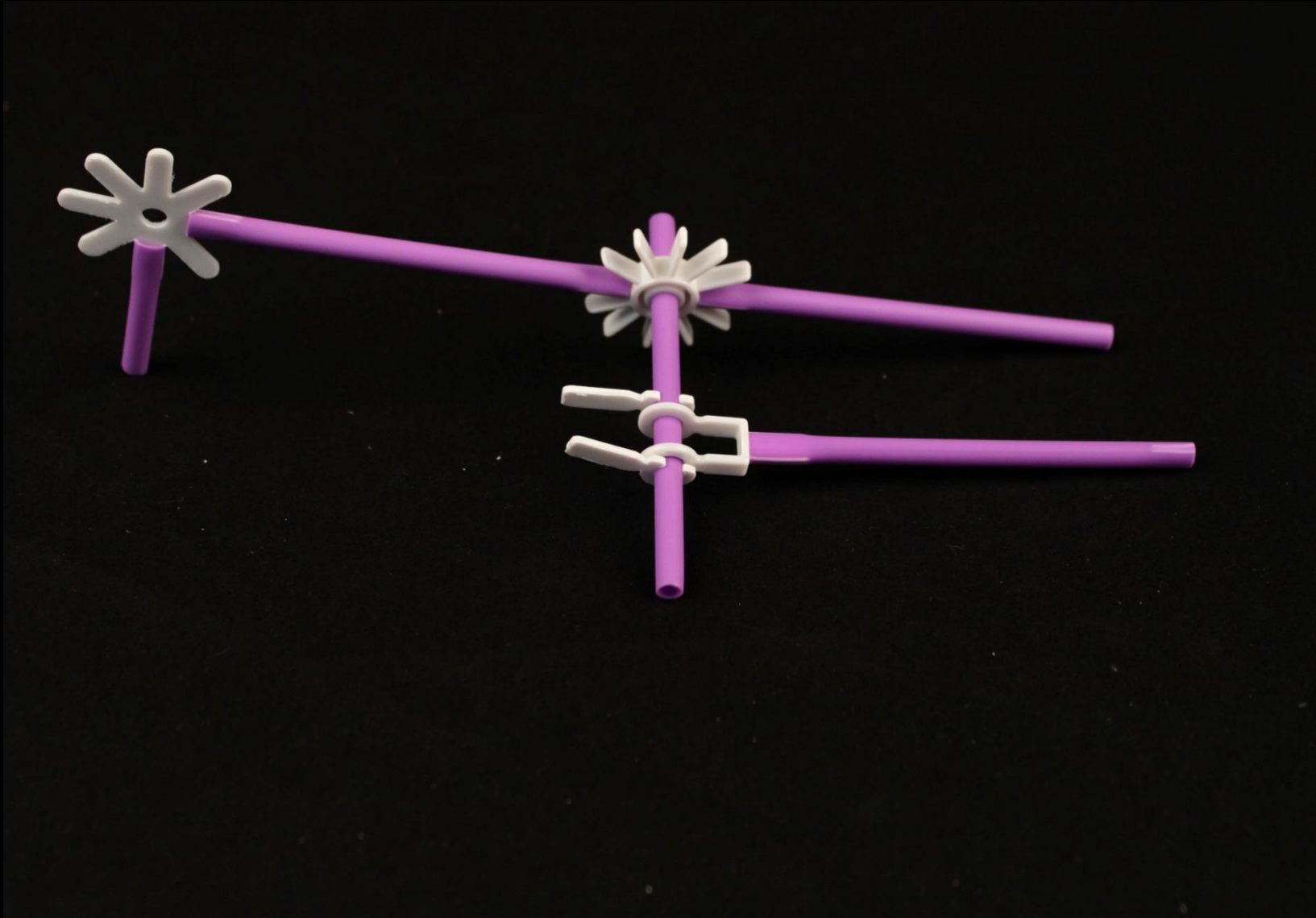
# Design Sound



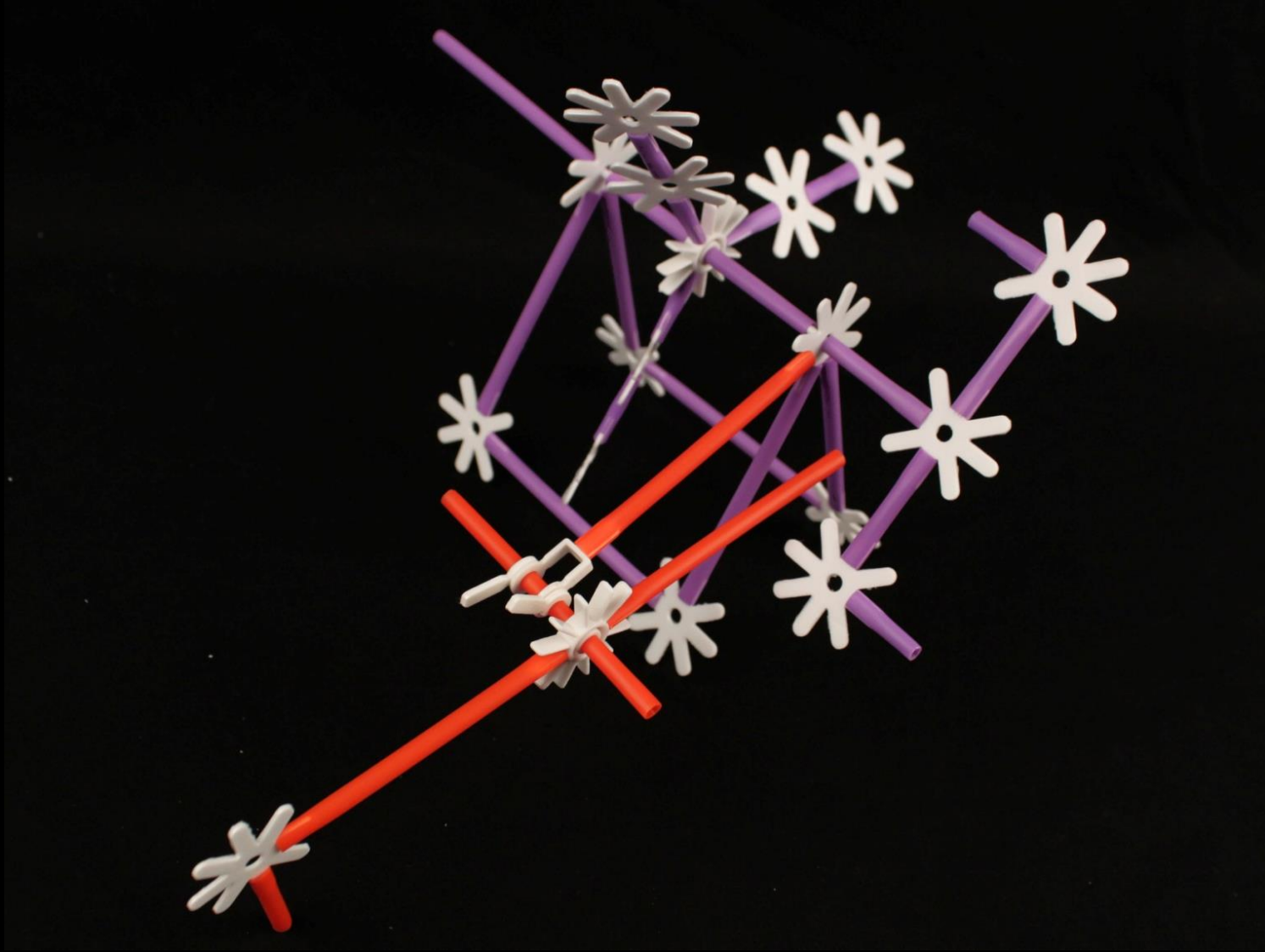


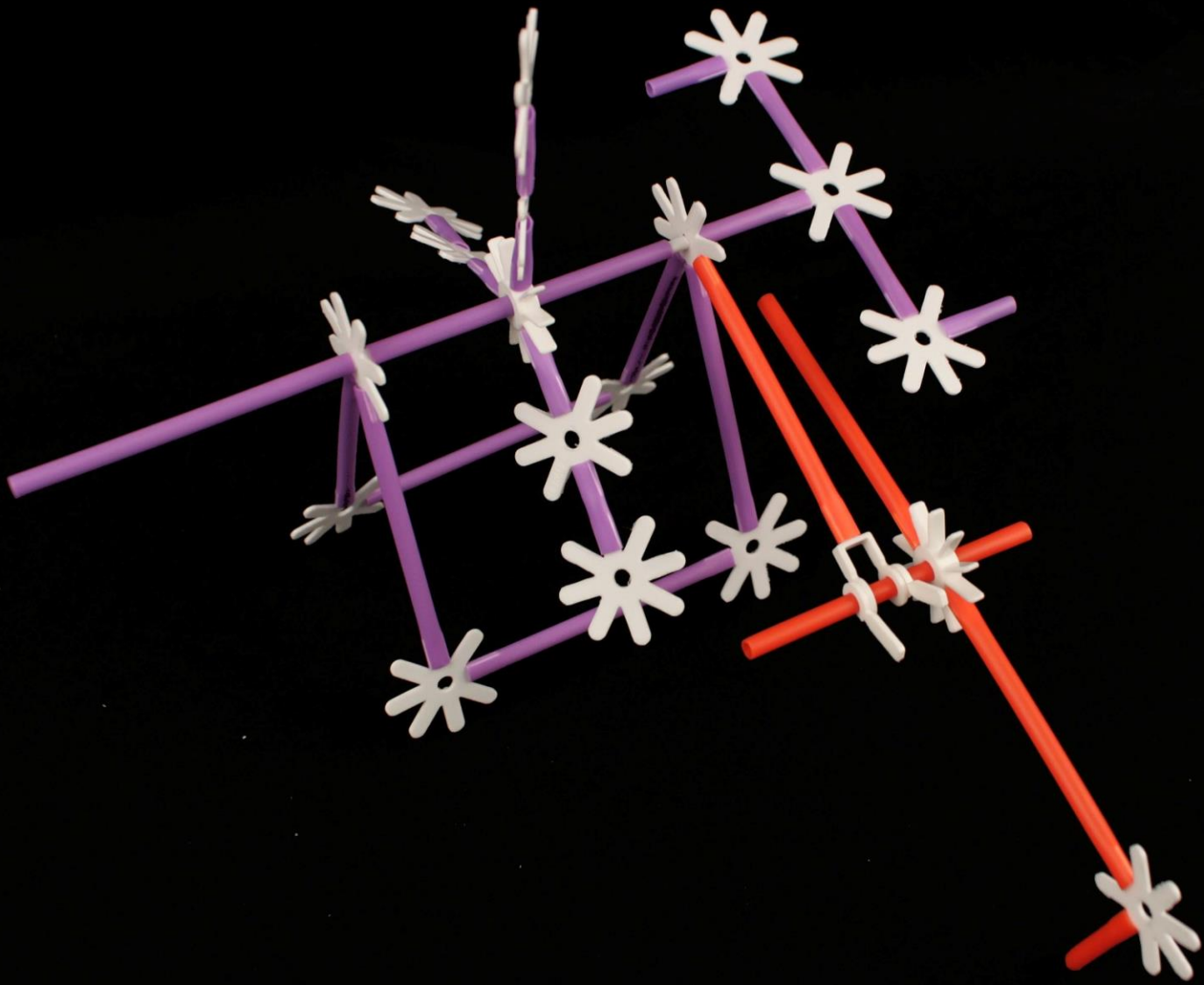


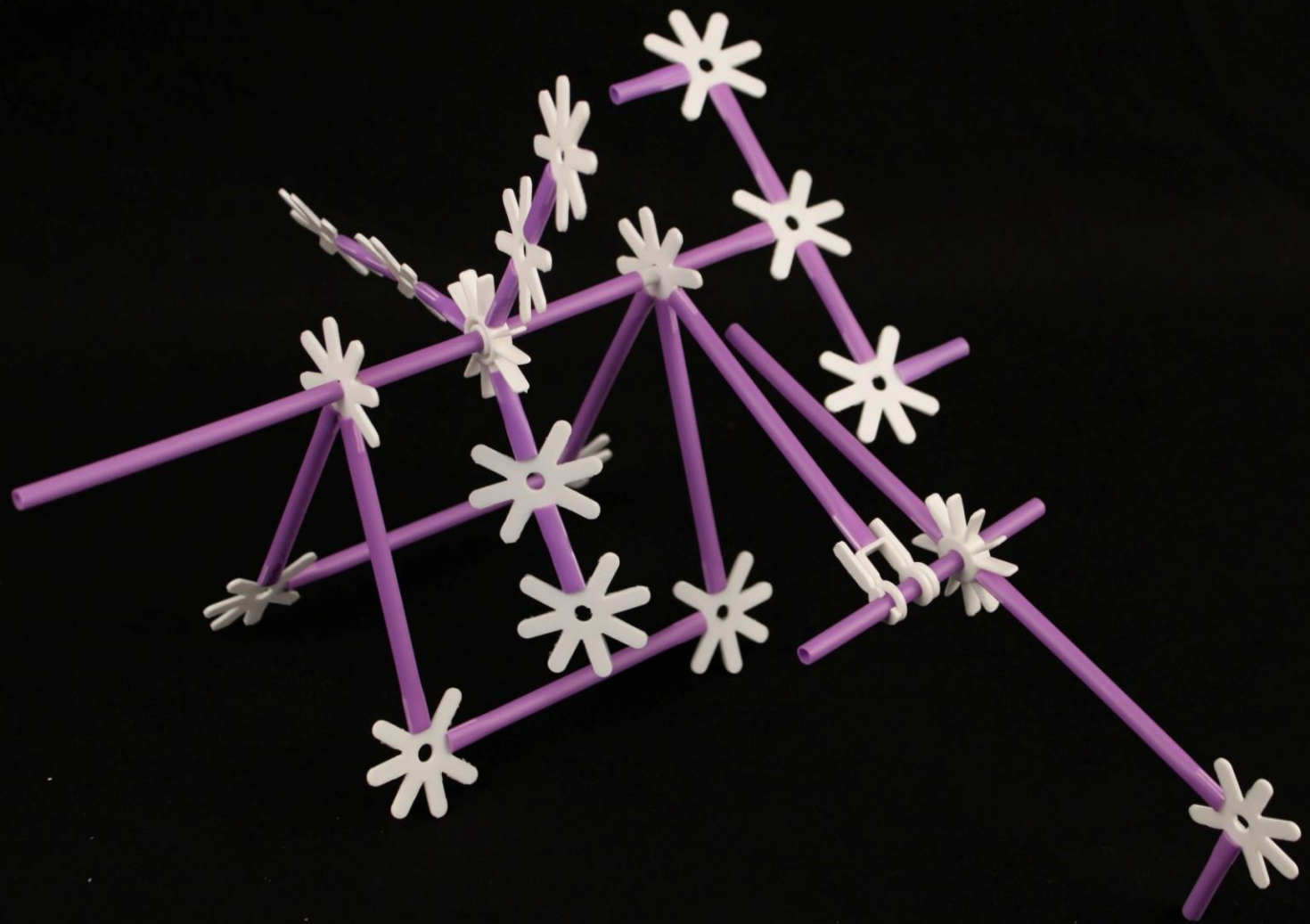


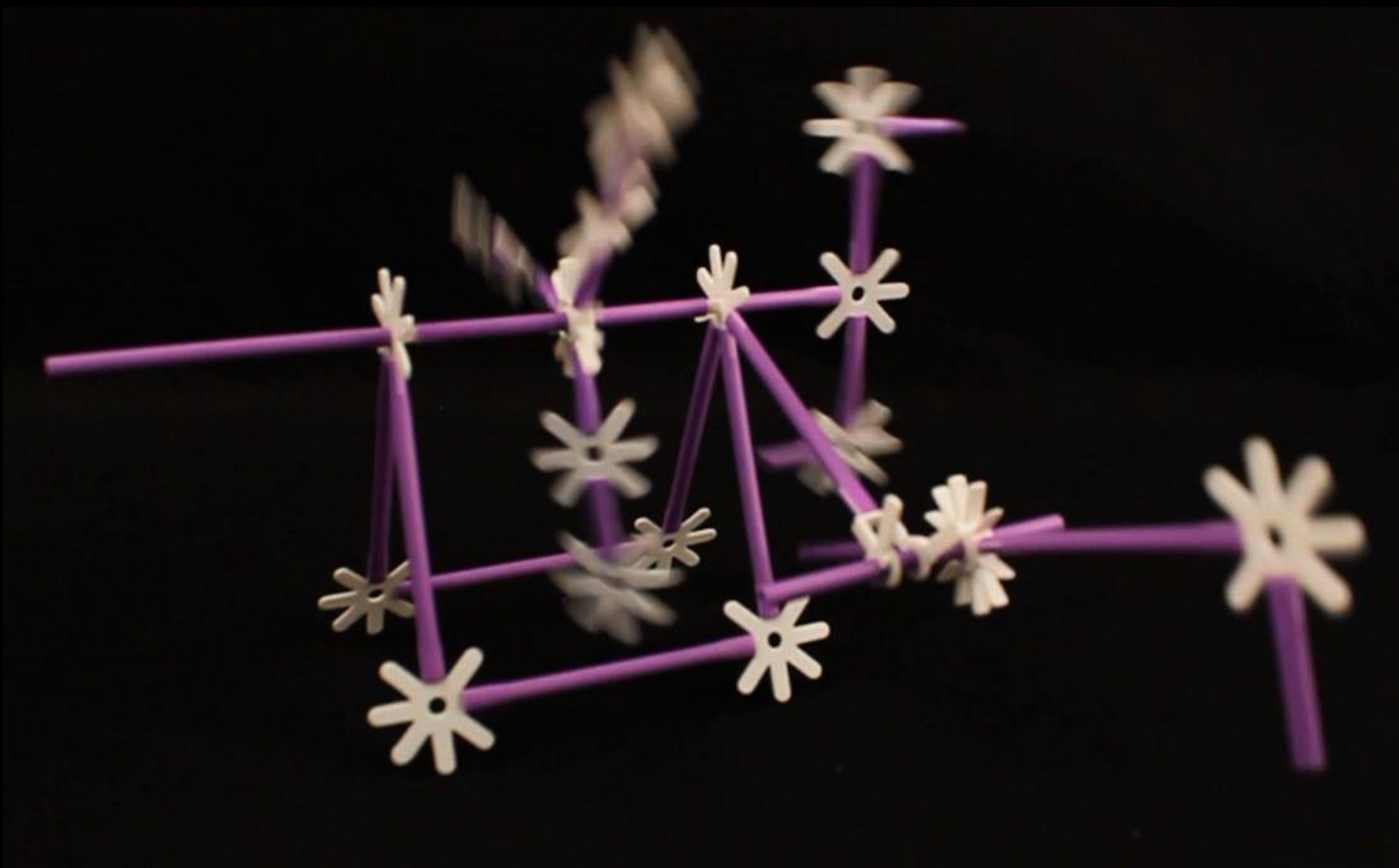




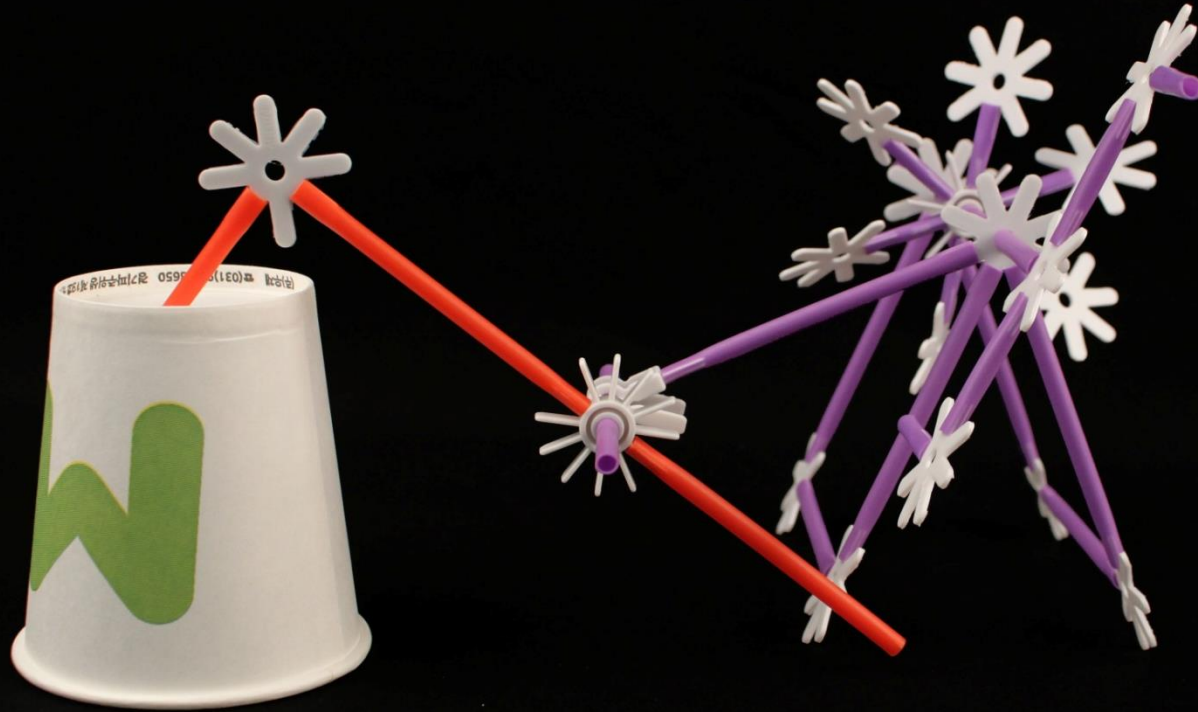


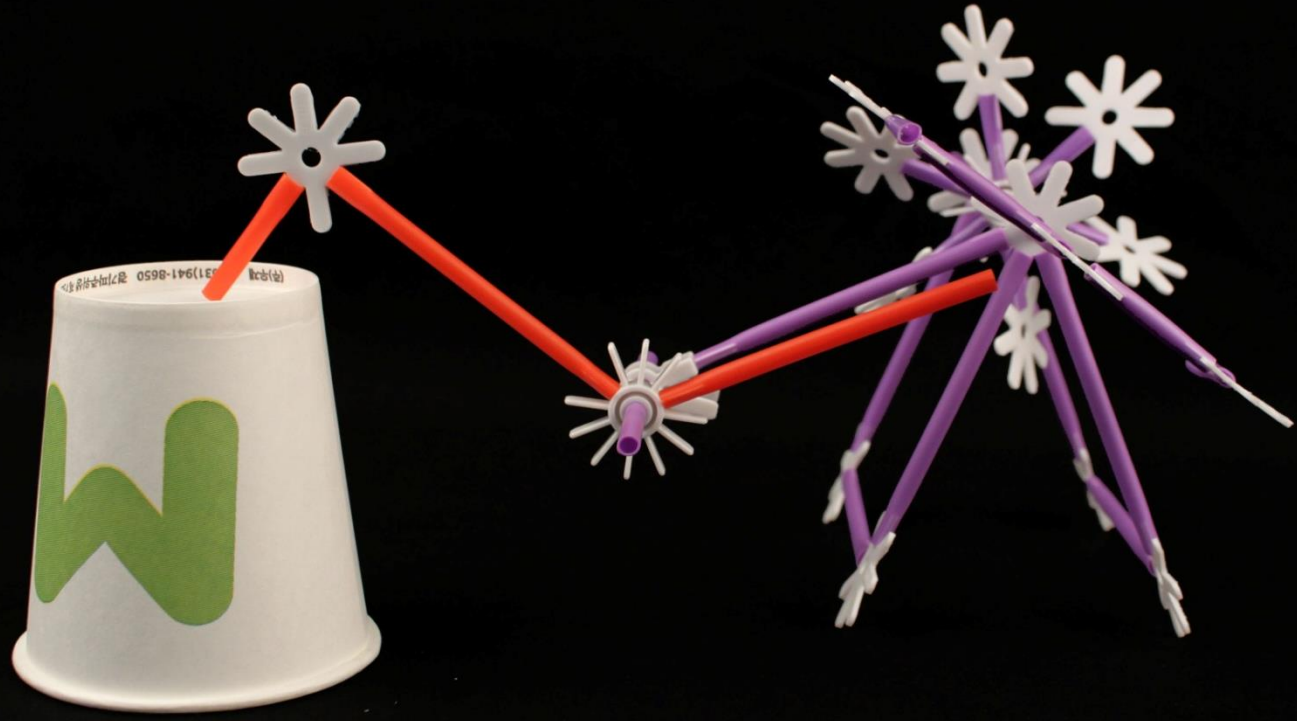


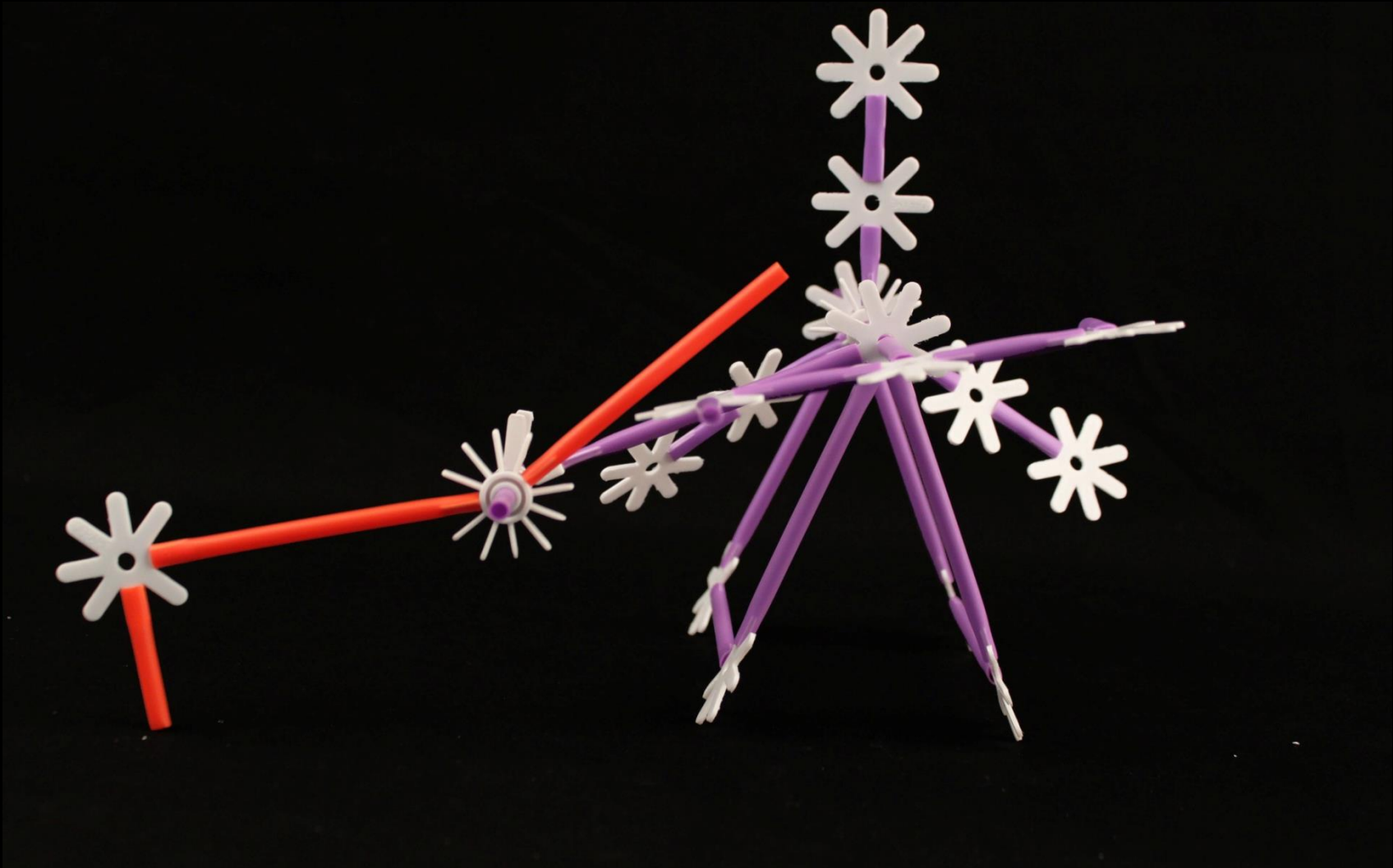




# Change conditions

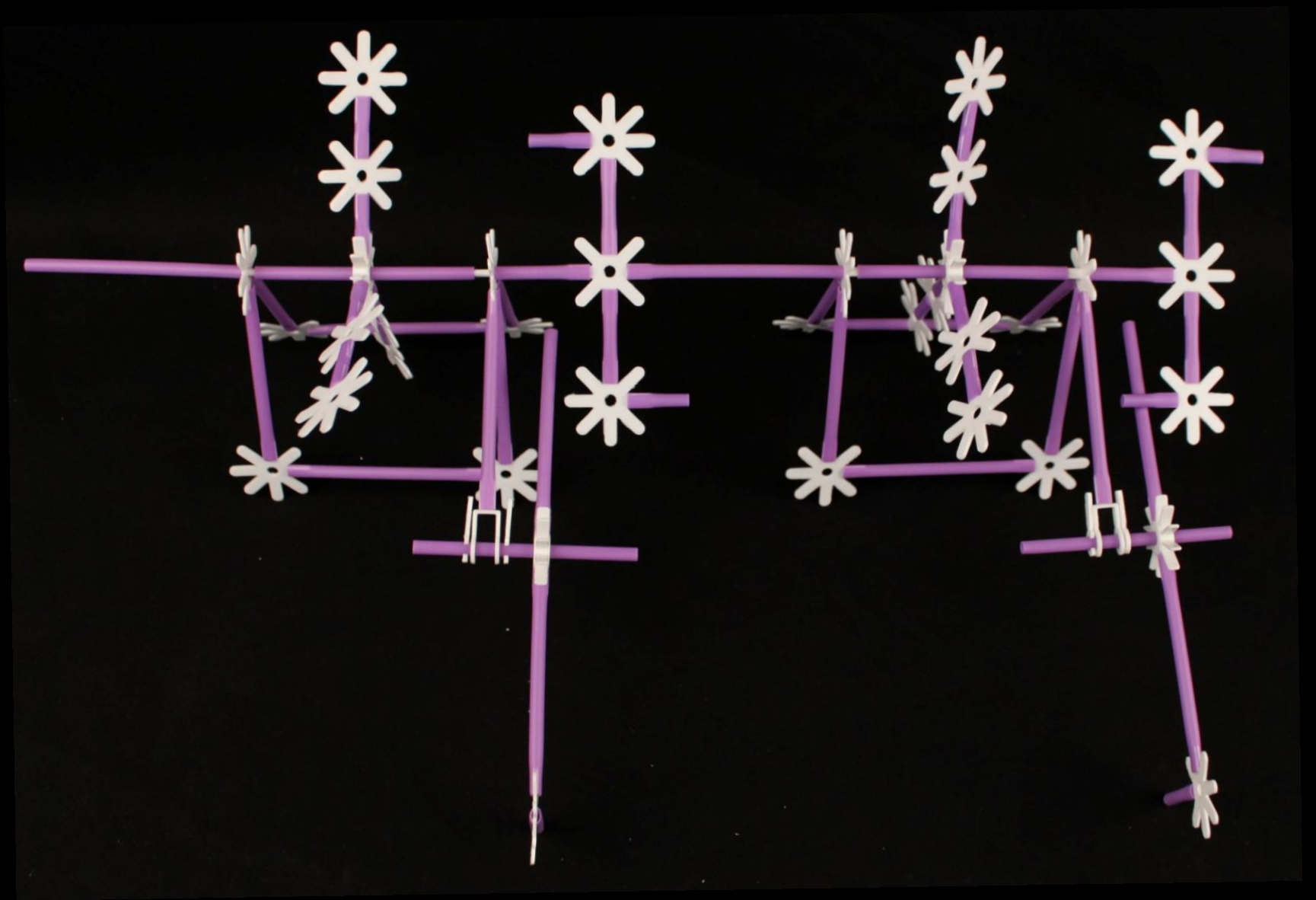


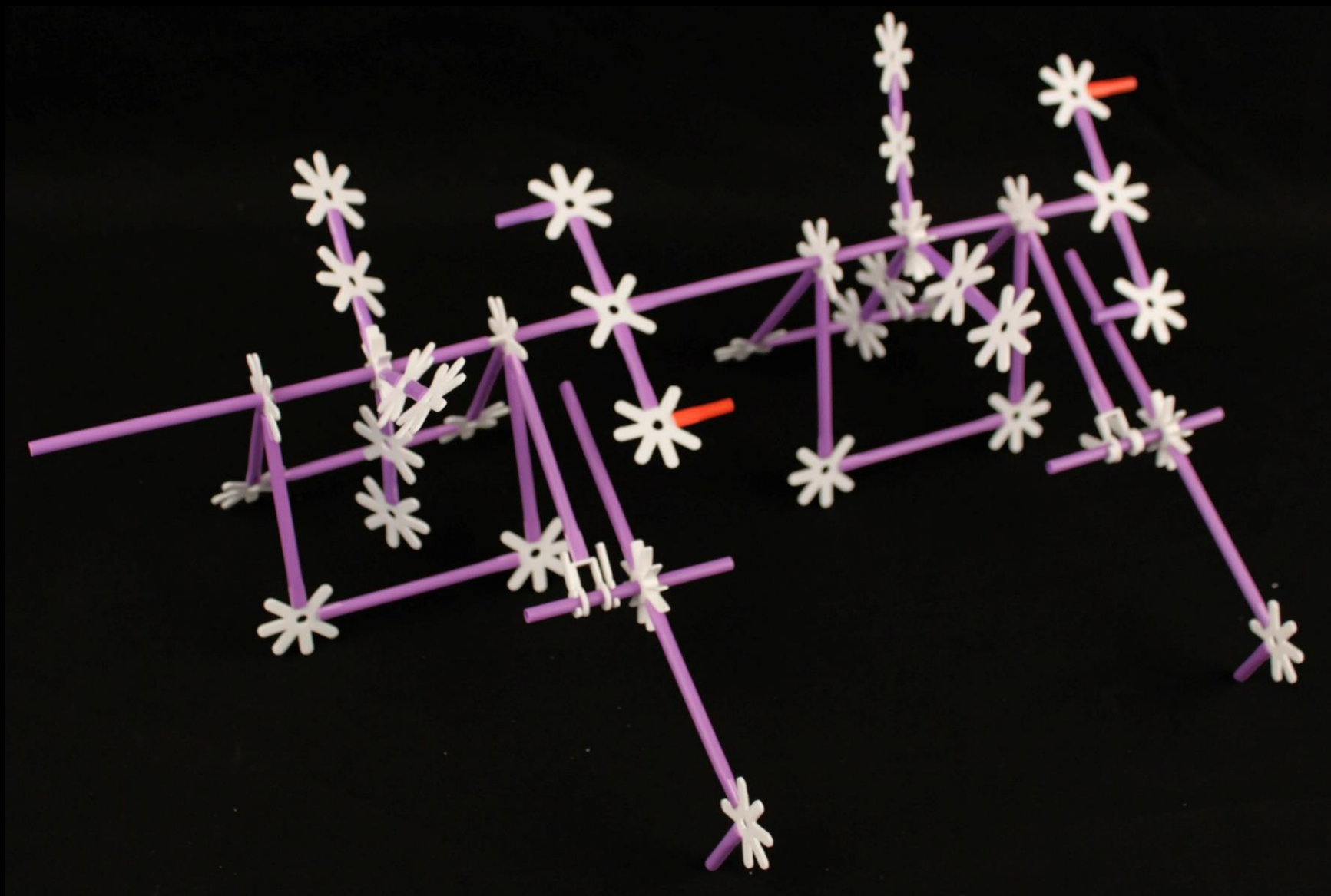




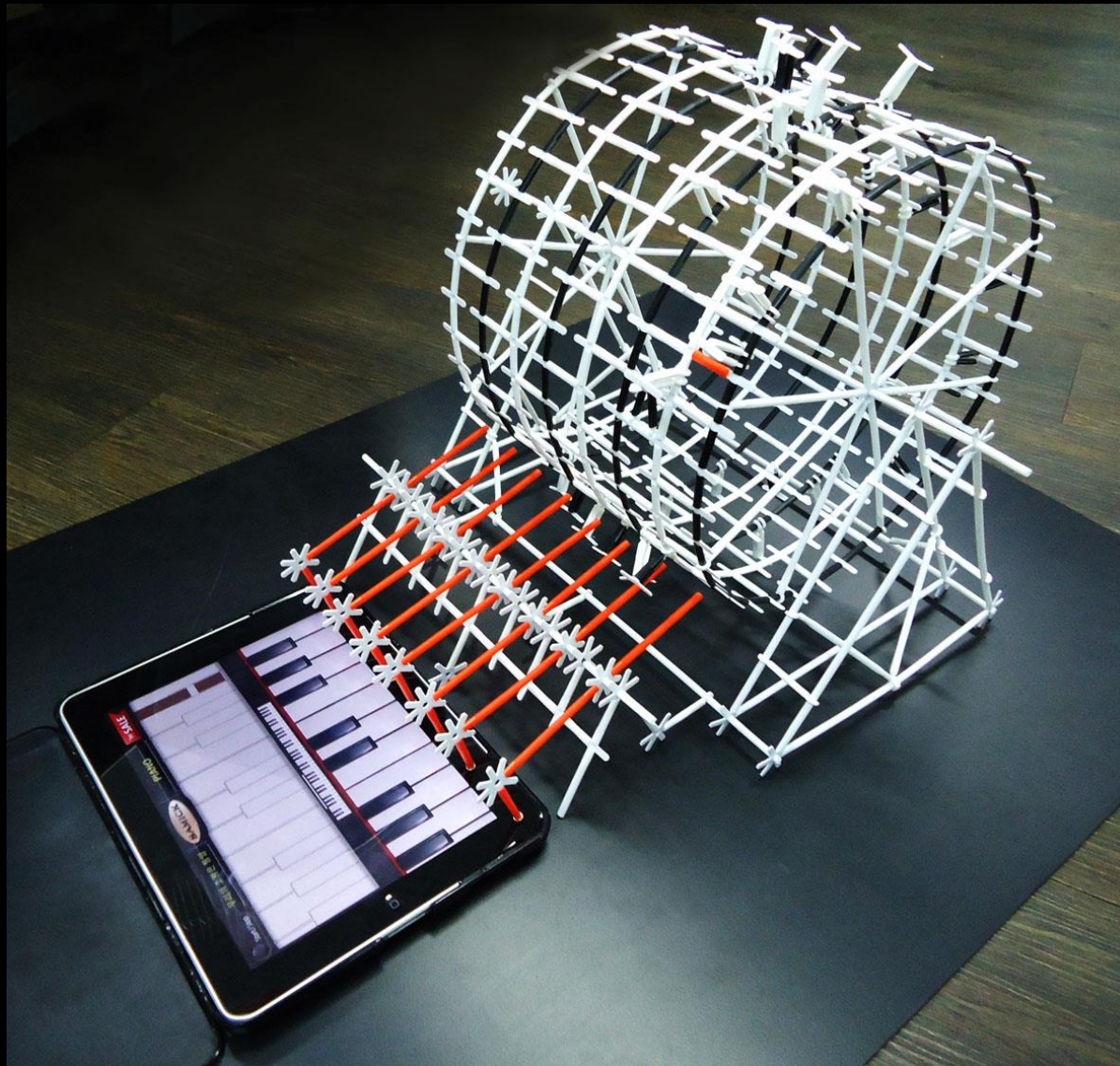
# Design Ourselves

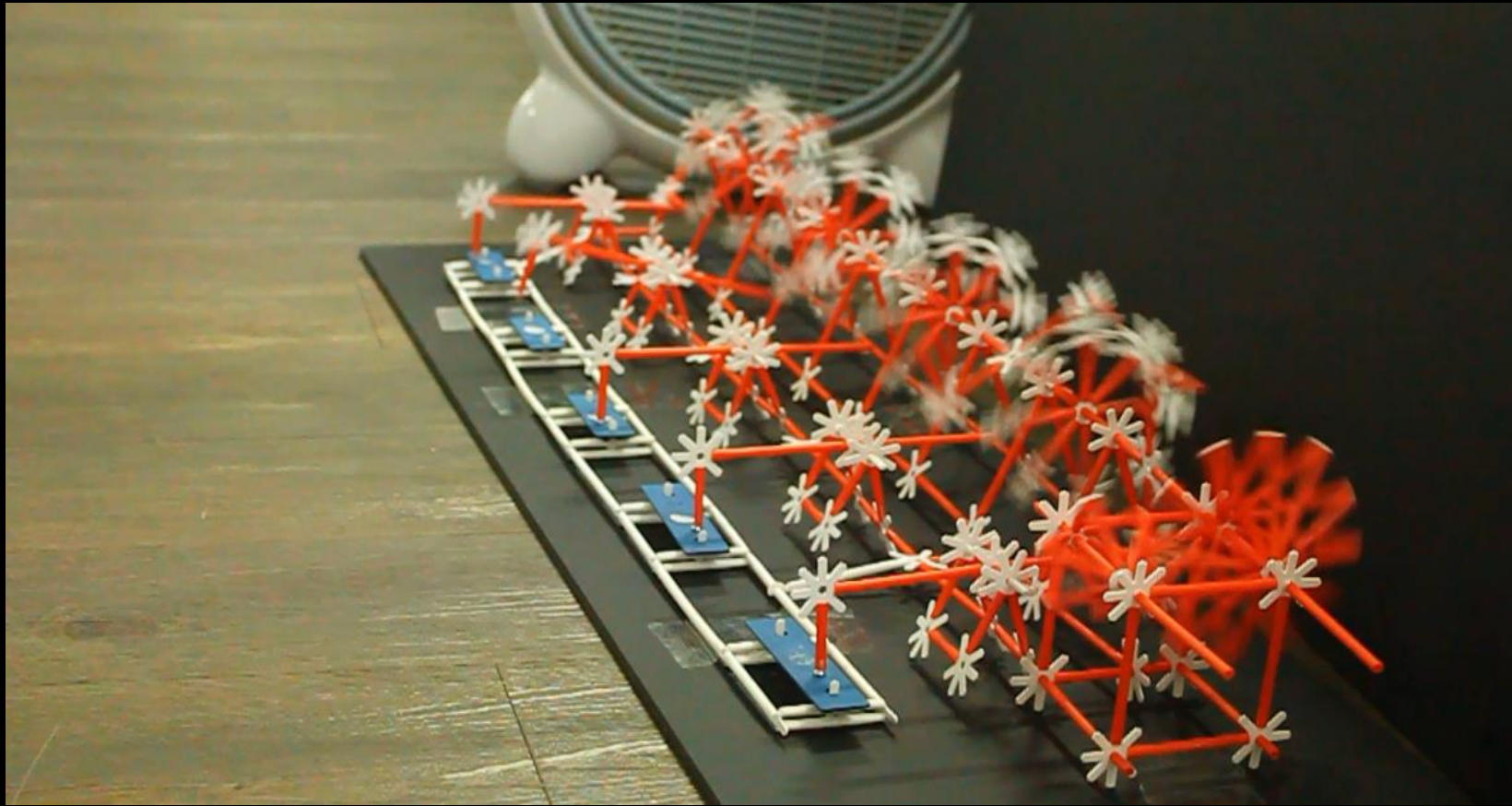








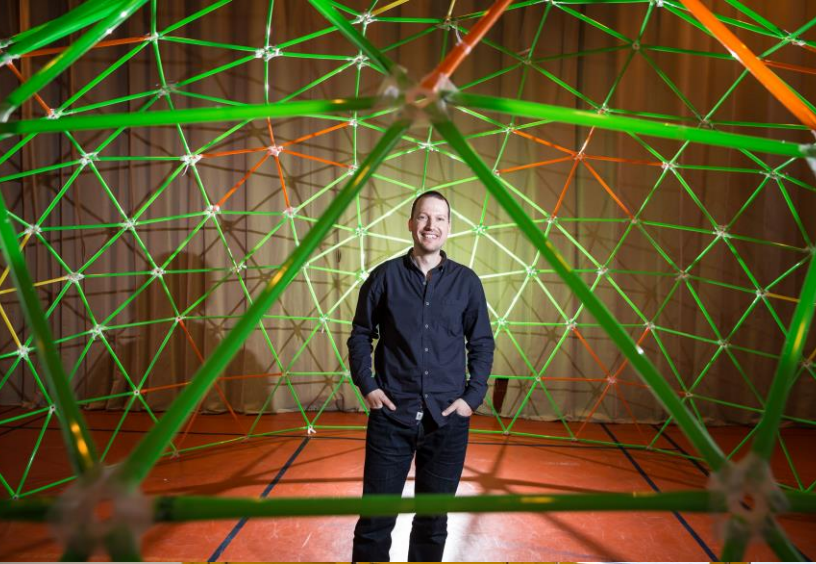




Work in pairs or in small groups! Work as a team of engineers!

You need to solve a given problem within a given amount of time, based on a given amount of resources:

- Set goals
- Make plans
- Do tests
- Record the thinking / design process
- Do more with less



**EXPERIENCE WORKSHOP**  
  
**THE EXPERIENCE-CENTERED  
MATH/ART MOVEMENT**  
[www.experienceworkshop.org](http://www.experienceworkshop.org)



Interested in STEAM? Looking for support in connecting mathematics & art in education? Do you have a good idea?

Contact us: [info@experienceworkshop.org](mailto:info@experienceworkshop.org)

Website: [www.experienceworkshop.org](http://www.experienceworkshop.org)

Facebook: [www.facebook.com/experienceworkshop.math.art](https://www.facebook.com/experienceworkshop.math.art)