

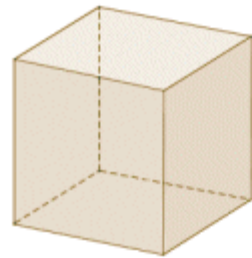
# **COLLAPSIBLE POLYHEDRA**

**by Barney Maunder-Taylor  
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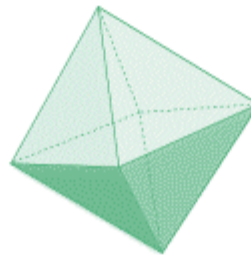
# Platonic Solids?



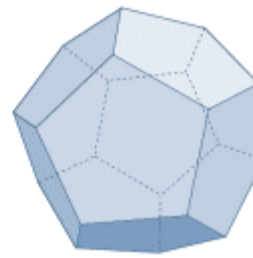
Tetrahedron



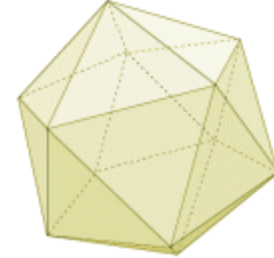
Hexahedron



Octahedron



Dodecahedron



Icosahedron

# **“Flatonic” Solids!**

# Flatonic Axioms:

- **MODIFICATION:**
  - Fold a face
  - Skip an edge

# Flatonic Axioms:

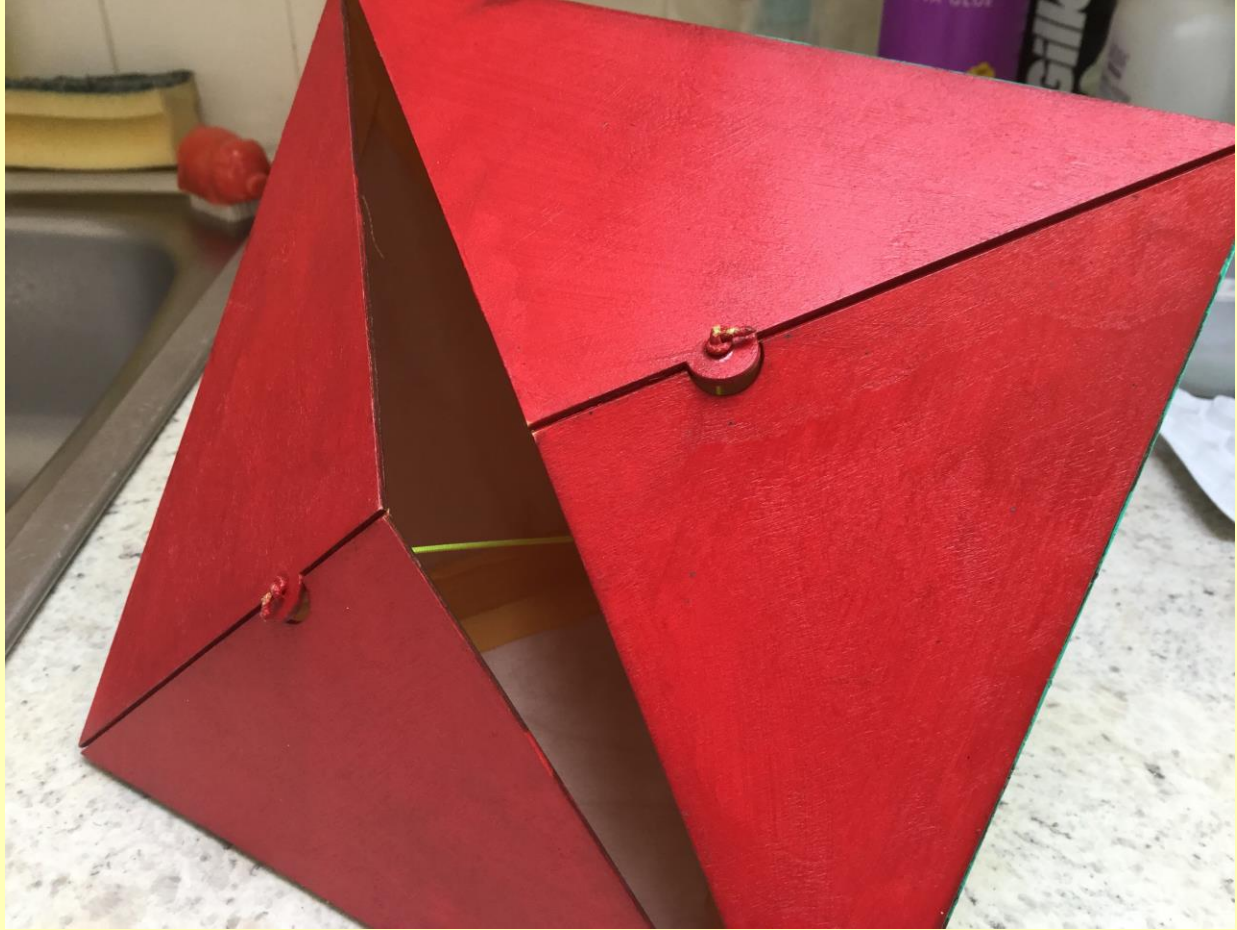
- **MODIFICATION:**
  - Fold a face
  - Skip an edge
- **CONVEXITY**

# Flatonic Axioms:

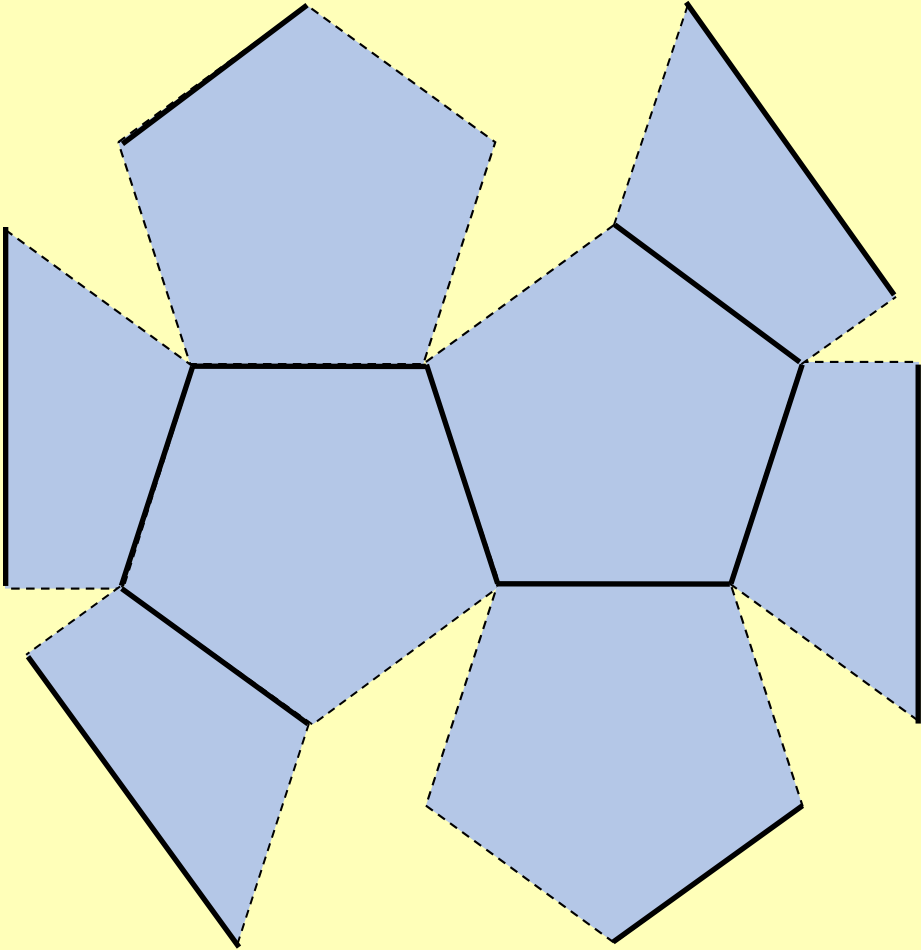
- **MODIFICATION:**
  - Fold a face
  - Skip an edge
- **CONVEXITY**
- **RIGIDITY**

# Flatonic Axioms:

- **MODIFICATION:**
  - Fold a face
  - Skip an edge
- **CONVEXITY**
- **RIGIDITY**
- **SIMPLICITY**

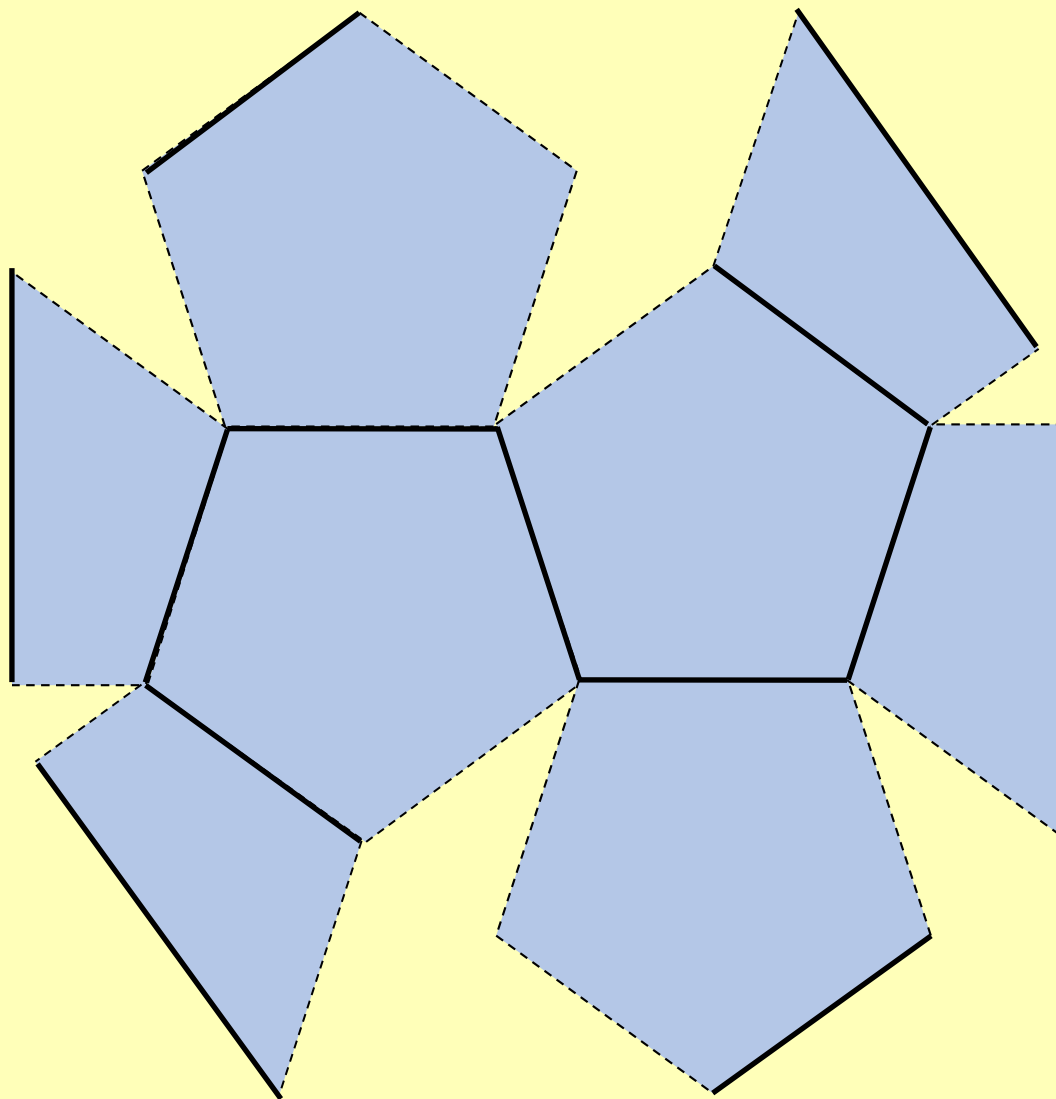


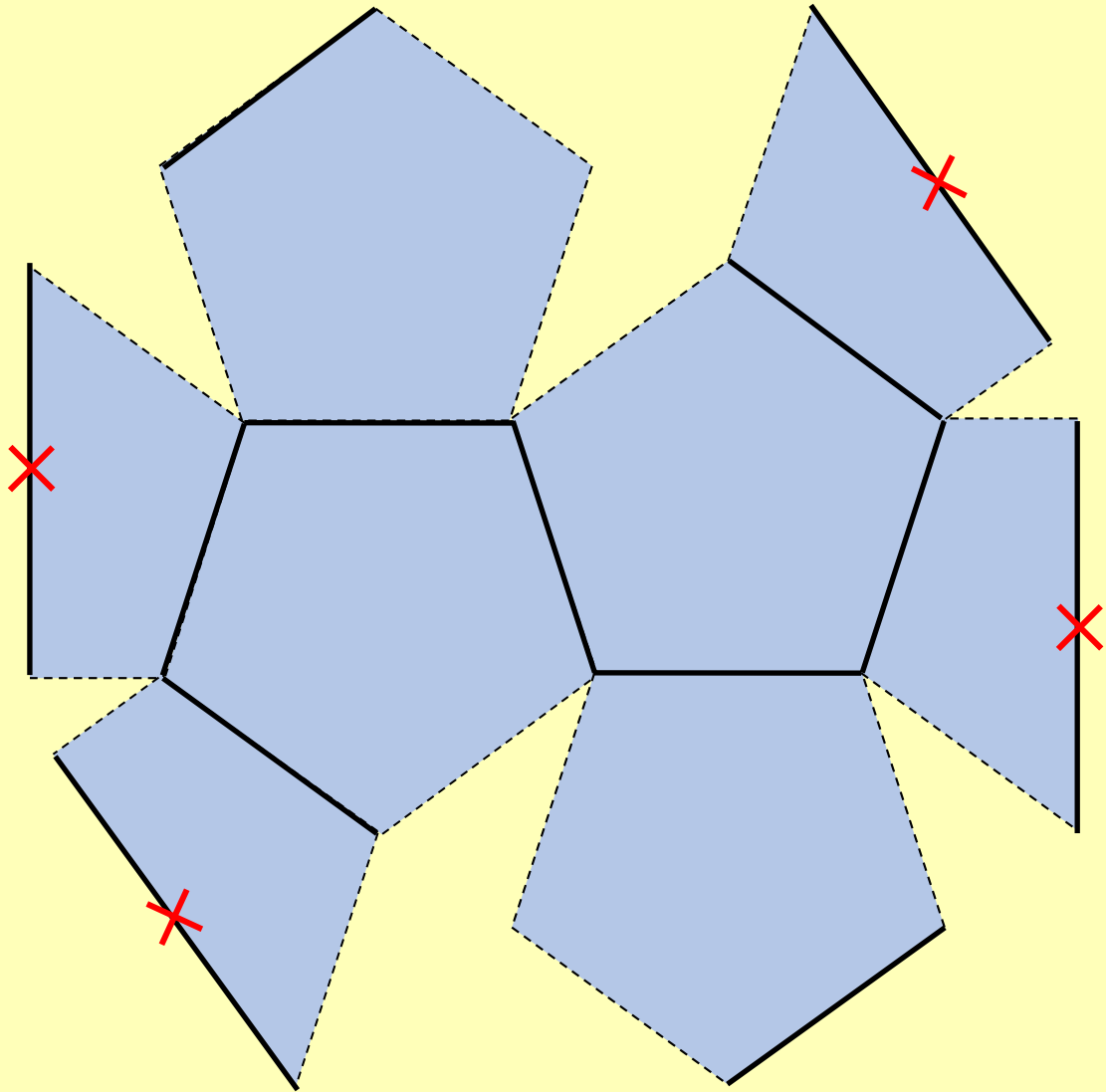
FLATONIC  
DODECAHEDRON  
NET:



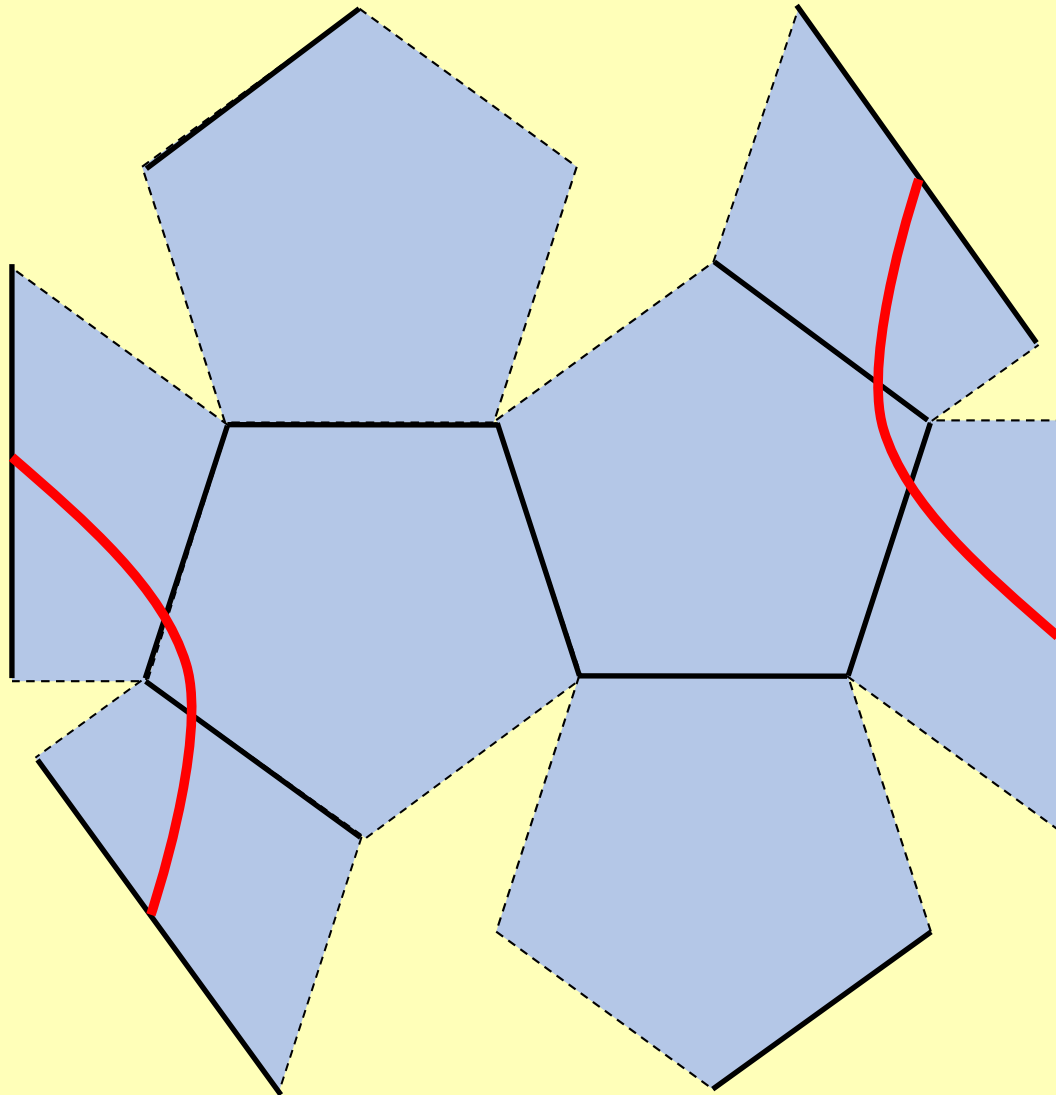
KEY:

- Hinged joint
- - - - - Free edge

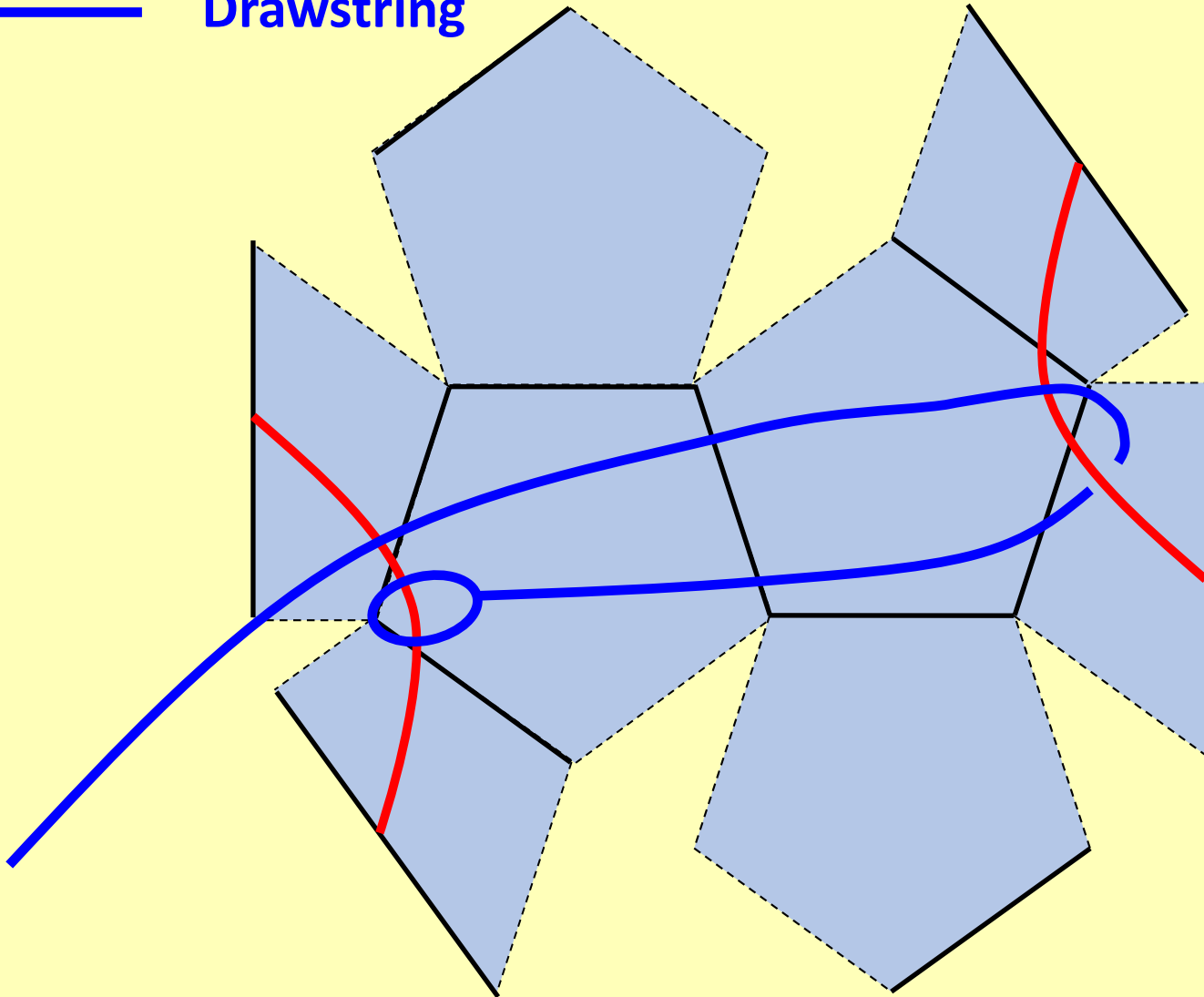




 **Internal loop**



 **Internal loop**  
 **Drawstring**



# Archimedean Solids

*cuboctahedron*



*great rhombicosidodecahedron*



*great rhombicuboctahedron*



*icosidodecahedron*



*truncated cube*



*truncated dodecahedron*



*truncated icosahedron*



*small rhombicosidodecahedron*



*small rhombicuboctahedron*



*snub cube*



*snub dodecahedron*



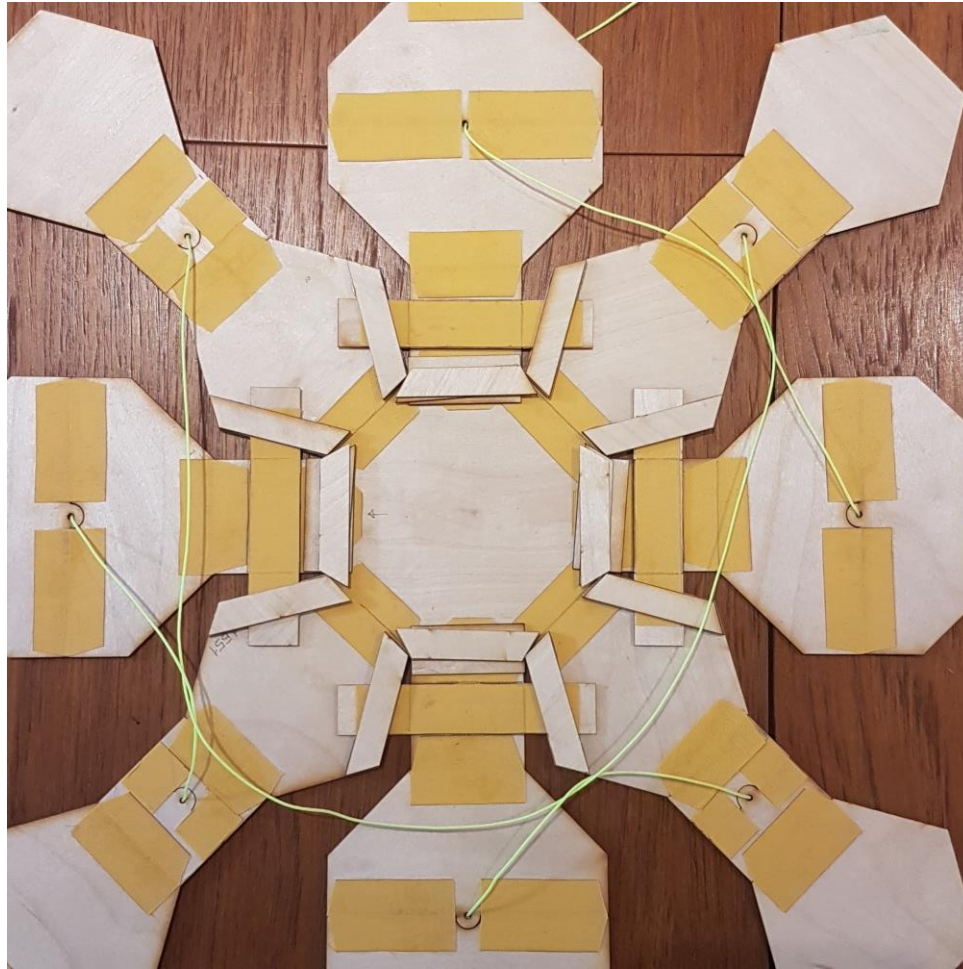
*truncated tetrahedron*



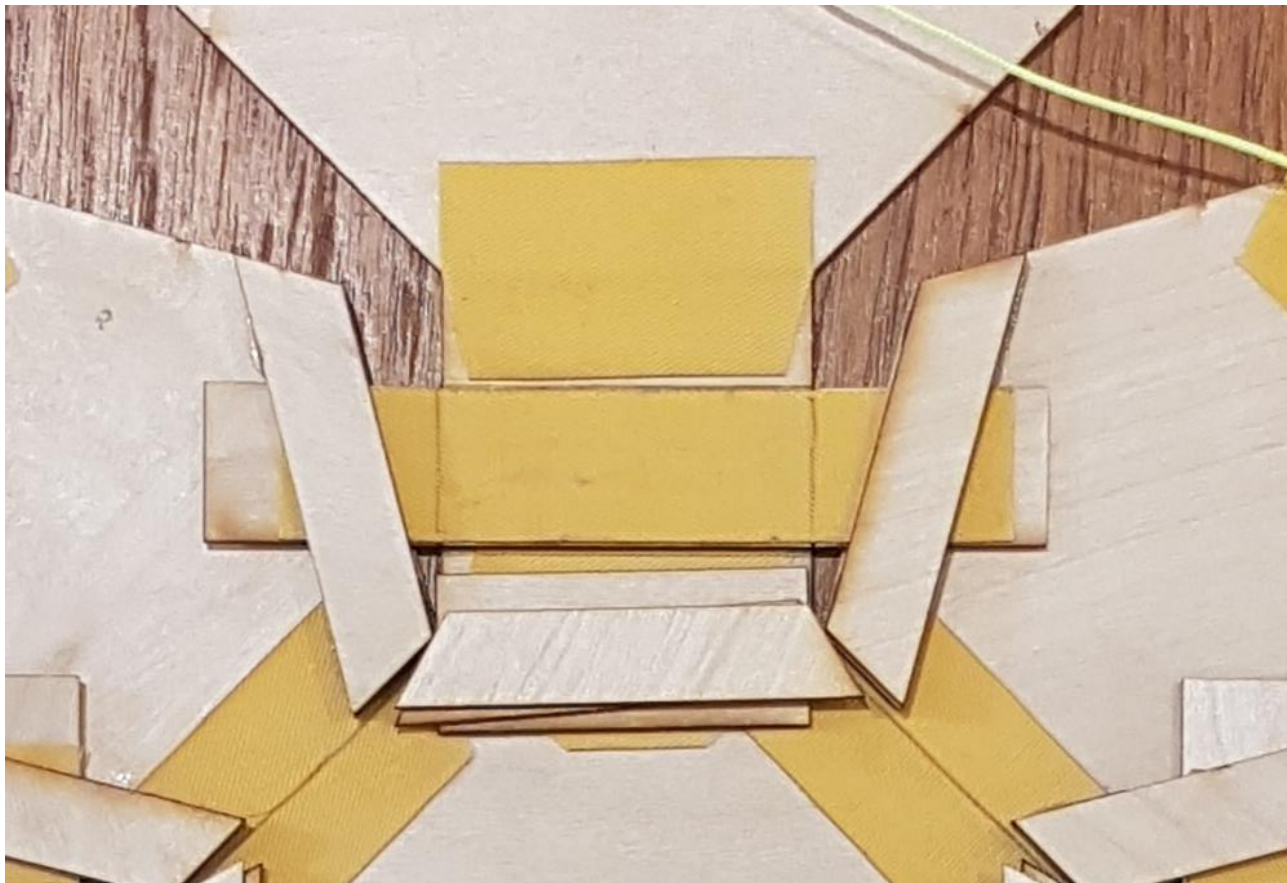
*truncated octahedron*



# GREAT RHOMBICUBOCTAHEDRON



# GREAT RHOMBICUBOCTAHEDRON



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