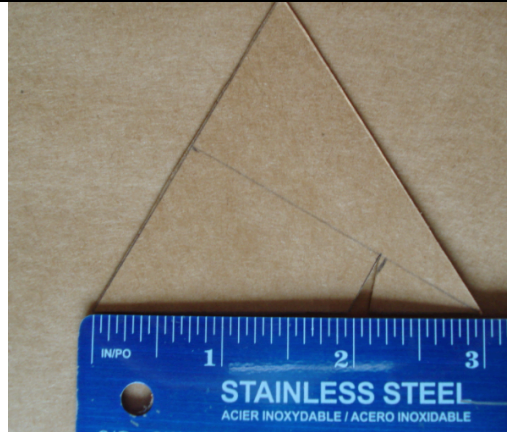


MODULAR POLYHEDRA

This project was designed by Quarky Science, quarkyscience.ca

1. Cut out 21 triangles:

- Use the pencil, ruler, and compass to draw a 3" equilateral triangle.
- Cut it out.
- Trace 20 copies of the triangle and cut them out.



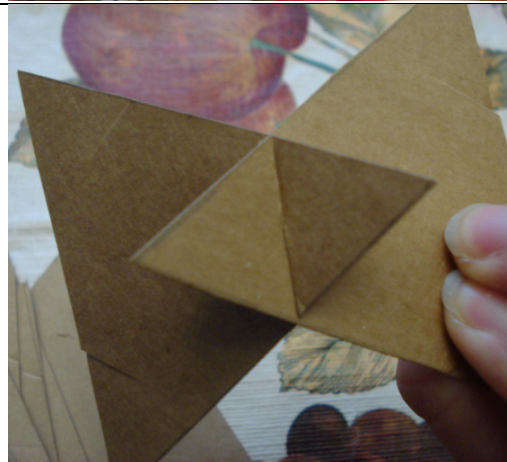
2. On each triangle, cut a slit on each side, 1" from the corner. Each slit should reach to the triangle's midline to help each piece lock together.

Once slits are **cut on all three sides** of all twenty triangles, you are ready for assembly.

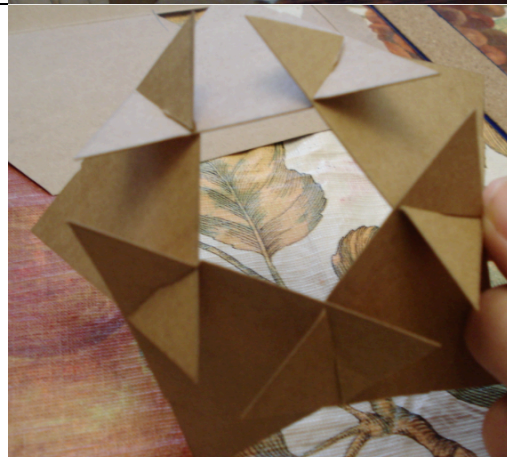


3. Assemble the icosahedron

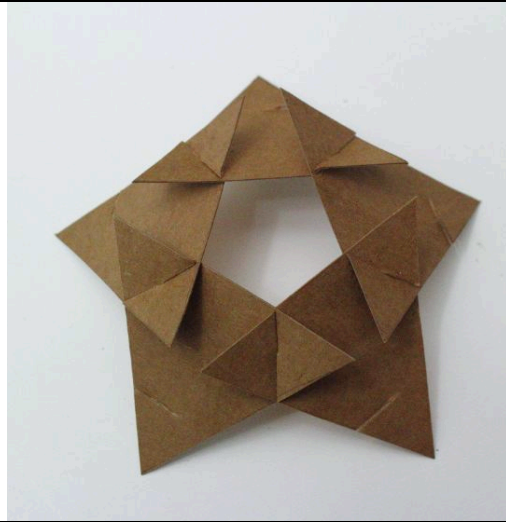
- Slide two triangles together into the cuts



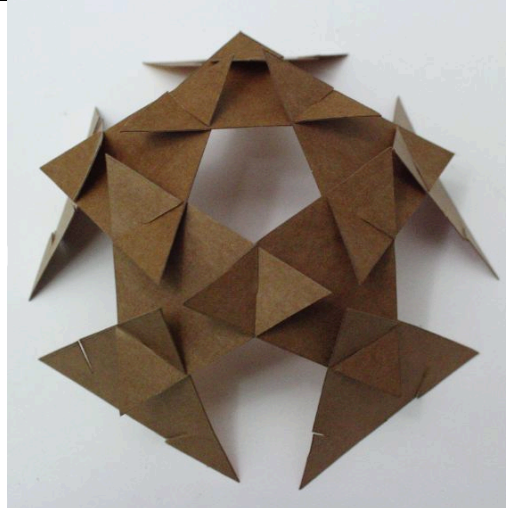
4. Add three more triangles to make a ring of five triangles.



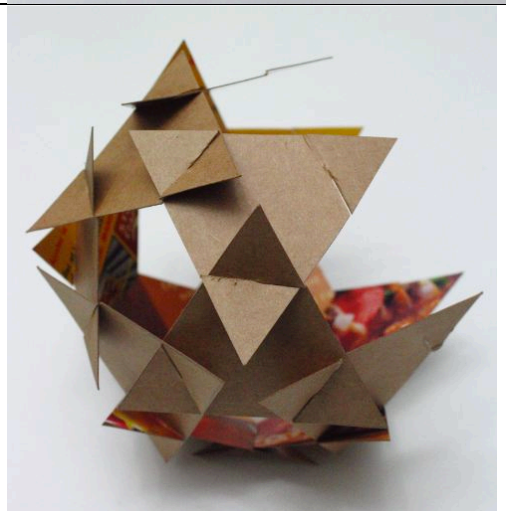
5. **Add another triangle to each of the free points on the ring.**



6. Then, **to create an alternating row, connect a new triangle to two of the triangles on the ring.** This should form a pentagon-shaped space between the triangles.

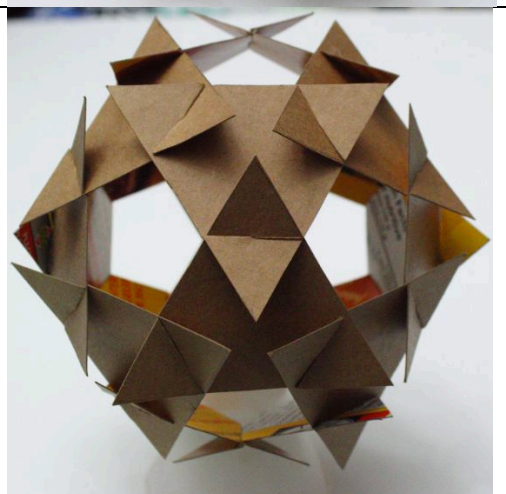


7. **Repeat step 4 with four more triangles, until the ring is complete.**



8. **Fit the last five triangles across the ends to complete the polyhedra.**

Tip: If you are having difficulty with pieces popping out while you are working, dab a little white glue on the seams as you go. Also, the larger you go the more rigid your source material needs to be.



Thank you to Quarky Science for this project.
<http://quarkyscience.ca/project-of-the-month/modular-polyhedra-sculpture/>