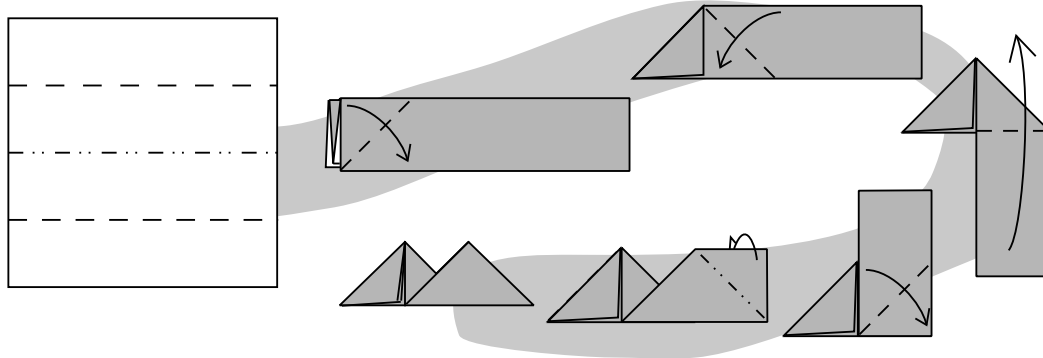


Handout: The PHiZZ Unit

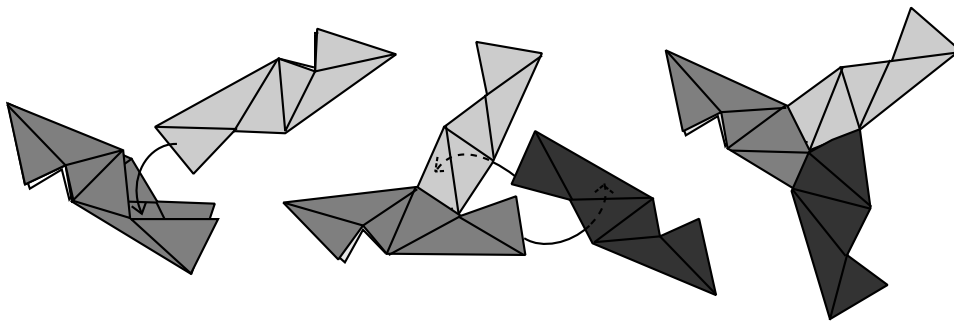
This modular origami unit (created by Tom Hull in 1993) can make a large number of different polyhedra. The name stands for **P**entagon **H**exagon **Zig-Zag** unit. It is especially good for making large objects, since the locking mechanism is so strong.

Making a Unit: The first step is to fold the square into a 1/4 zig-zag.



When making these units, it's important to make all your units **exactly** the same. It's possible to do the second step backwards and thus make a unit that's a *mirror image* and won't fit into the others. Beware!

Locking them together: In these pictures, we're looking at the unit "from above." The first one has been "opened" a little so that the other unit can be slid inside.



Be sure insert one unit **in-between** layers of paper of the other. Also, make sure the flap of the "insert-ee" unit hooks over a crease of the "insert-ed" unit. That forms the lock.

Assignment: Make **30 units** and put them together to form a **dodecahedron** (shown to the right), which has all pentagon faces. **Also** use only 3 colors (10 sheets of each color) and try to have no two units of the same color touching.

