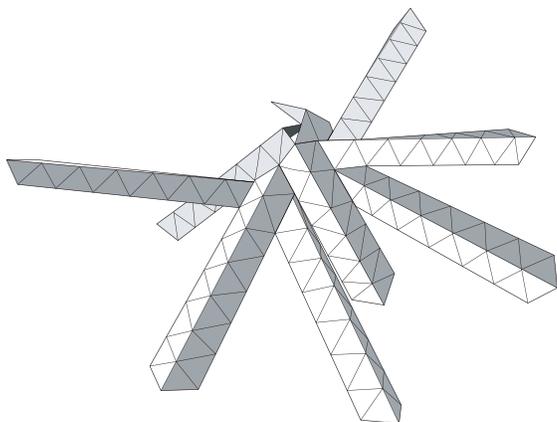


HOW TO BUILD YOUR OWN POLYHEDRAL ANNULAR MODEL OF THE HYPERBOLIC PLANE

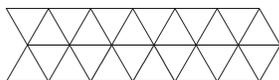
Your finished polyhedral annular model will look something like this:



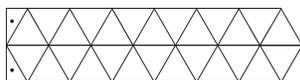
DIRECTIONS:

To build this model, you will need one photocopy of the "primary" master sheet and one photocopy of the "secondary" master sheet. Use colored paper if you like.

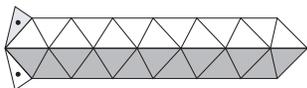
Cut your two photocopied sheets along the dotted lines to yield nine total strips. The three primary strips will look like this:



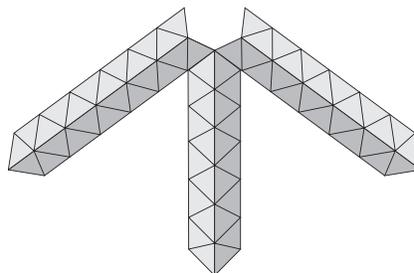
The six secondary strips will look like this:



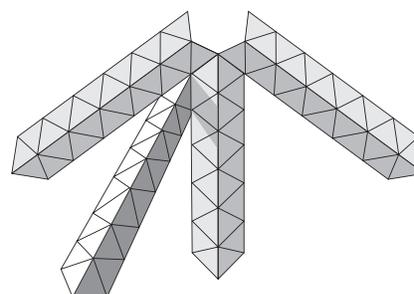
Fold all nine strips in half, lengthwise, along the printed line. (The printed sides should form "mountains," not "valleys.") On each of the secondary strips, fold the two dotted, half-size triangles "up," towards the "peak" of the printed side. Your folded strips will look like this:



Align the three primary pieces in the manner shown below. One triangle from each of the outer strips should perfectly overlap with one triangle of the central strip. Tape overlapping triangles together:

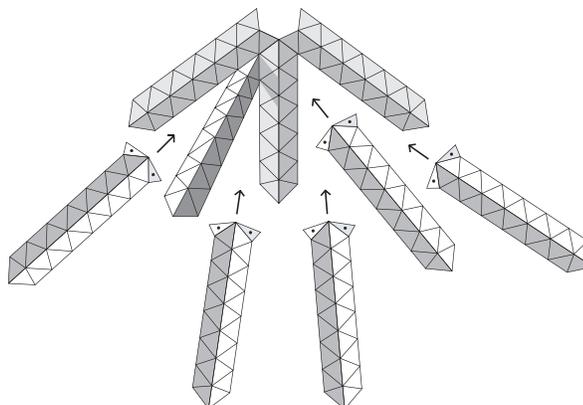


Insert one of the secondary strips into one of the V-like spaces between the three primary strips. The dotted flaps should tuck underneath the primary structure:

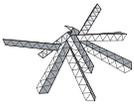


Tape the dotted flaps to the underside of the primary structure. You may also want to tape the tops of the strips together to reinforce the joints.

To complete your model, repeat the last step, taping the five remaining strips into the V-like spaces of the main structure:

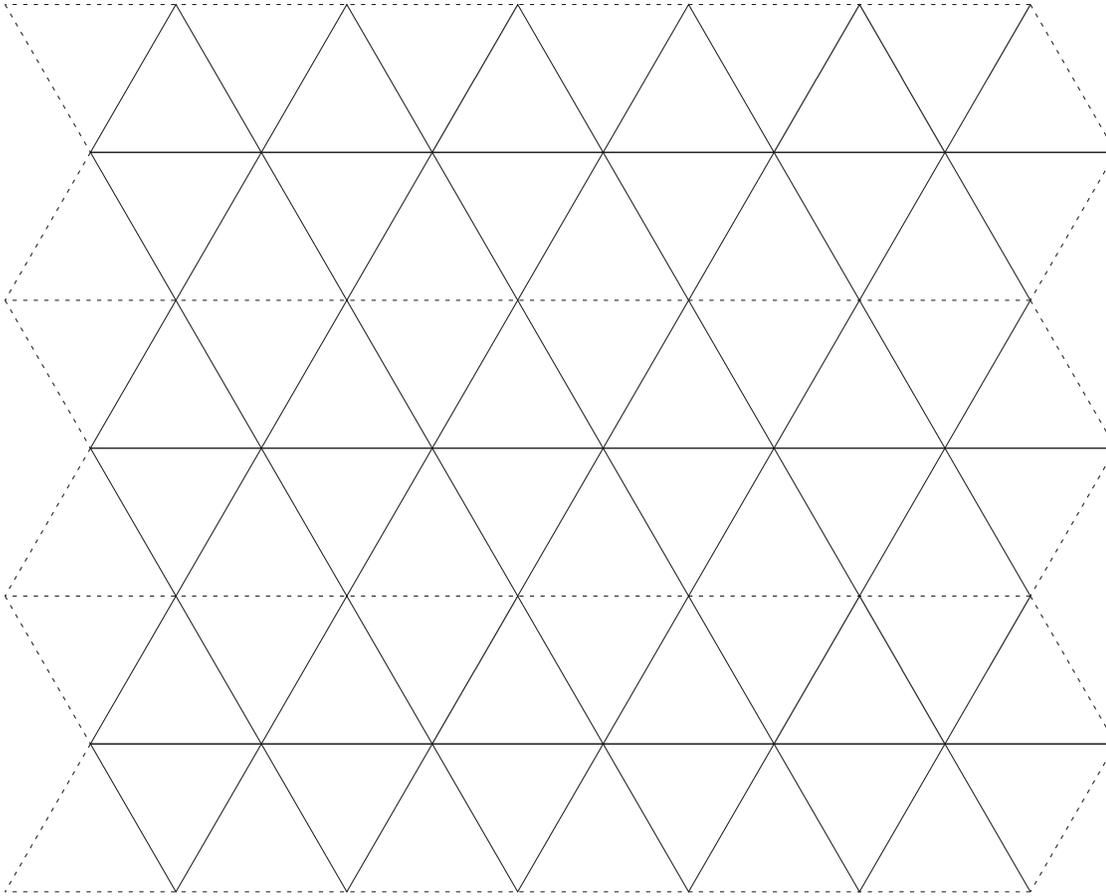


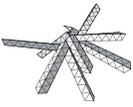
When you're done, you'll have a three-tiered construction: the beginnings of a polyhedral annular model of the hyperbolic plane. At this point, you can photocopy, cut out, and add as many secondary strips as you like, extending your model indefinitely. The more strips you add to your model, the more the hyperbolic structure will become apparent.



POLYHEDRAL ANNULAR MODEL – SHEET 1 of 2

YIELDS THREE PRIMARY PIECES. ONE COPY OF EACH SHEET WILL YIELD ONE MODEL.





POLYHEDRAL ANNULAR MODEL — SHEET 2 of 2

YIELDS SIX SECONDARY PIECES. ONE COPY OF EACH SHEET WILL YIELD ONE MODEL.

