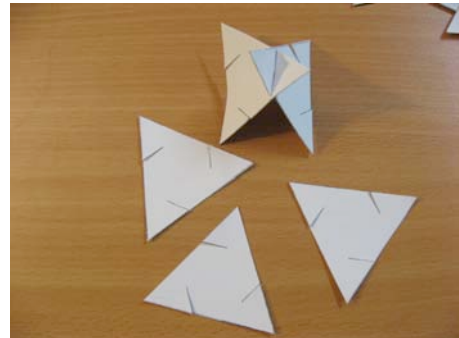


Make your own Truncated Icosahedron

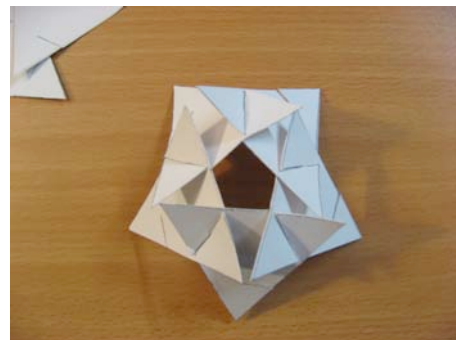
From the template, cut out 20 triangles, including the three slits in each triangle. Follow the black lines as closely as possible. The more exact you are, the easier the next stages will be.



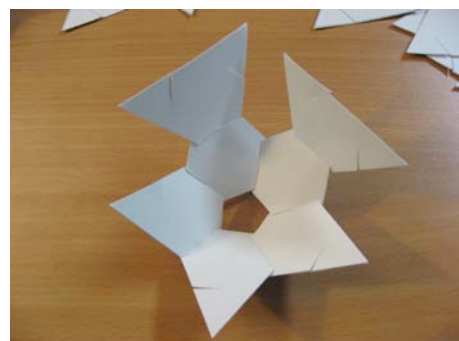
Think of constructing the shape as 4 bands or rows, each made of 5 triangles. For the 'base', slot 5 triangles together, one side each. Slot the triangles together so that the edges are aligned.



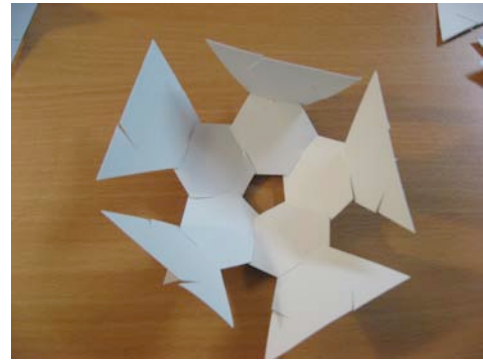
This creates a pentagon (five-sided shape) in the centre of the triangles. This is a good rule of thumb – always make sure the holes between the triangles are pentagons.



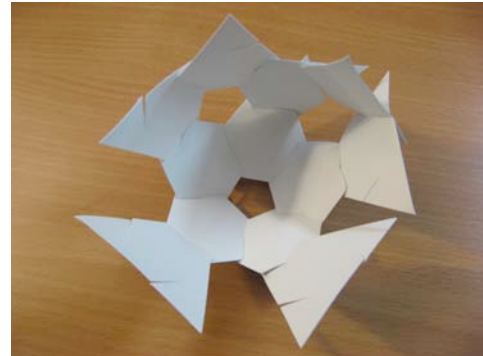
Flip the base back over and add the second band/row of 5 triangles, one for each upward point.



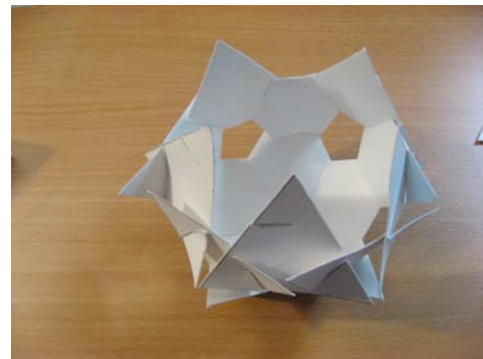
Make sure that your model looks like the photograph. Add the third band/row of 5 triangles. This time, each triangle will slot into two of the other triangles.



As you add this third row, the triangles should be pointing upwards and pentagons will appear as you join together the band/row beneath.



The final stage is to add the fourth band/row of 5 triangles. This is the most fiddly part. Each triangle slots once into the 5 triangle points already in the model. They then slot together, creating the final pentagon-shaped hole.



Congratulations! You have created an Archimedean solid – a polyhedron made from more than one polygon face type, in this case 12 pentagons and 20 hexagons. This design is also commonly used for footballs.

