

How to model a soccer ball

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Step 1

Low Polygon



- Start up Modeler

- Click the ball tap and make a ball
(**shift+o**)

 - any size

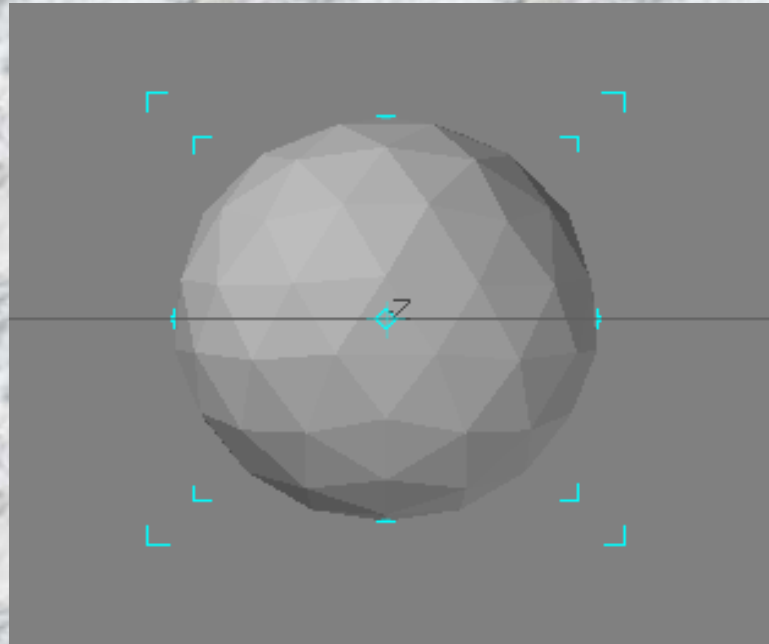
- To make it even click on the (**n**) key
to open the numeric panel

 - set “Type” to Tesselation

 - set segments to 3

 - radius X,Y,Z to 400mm

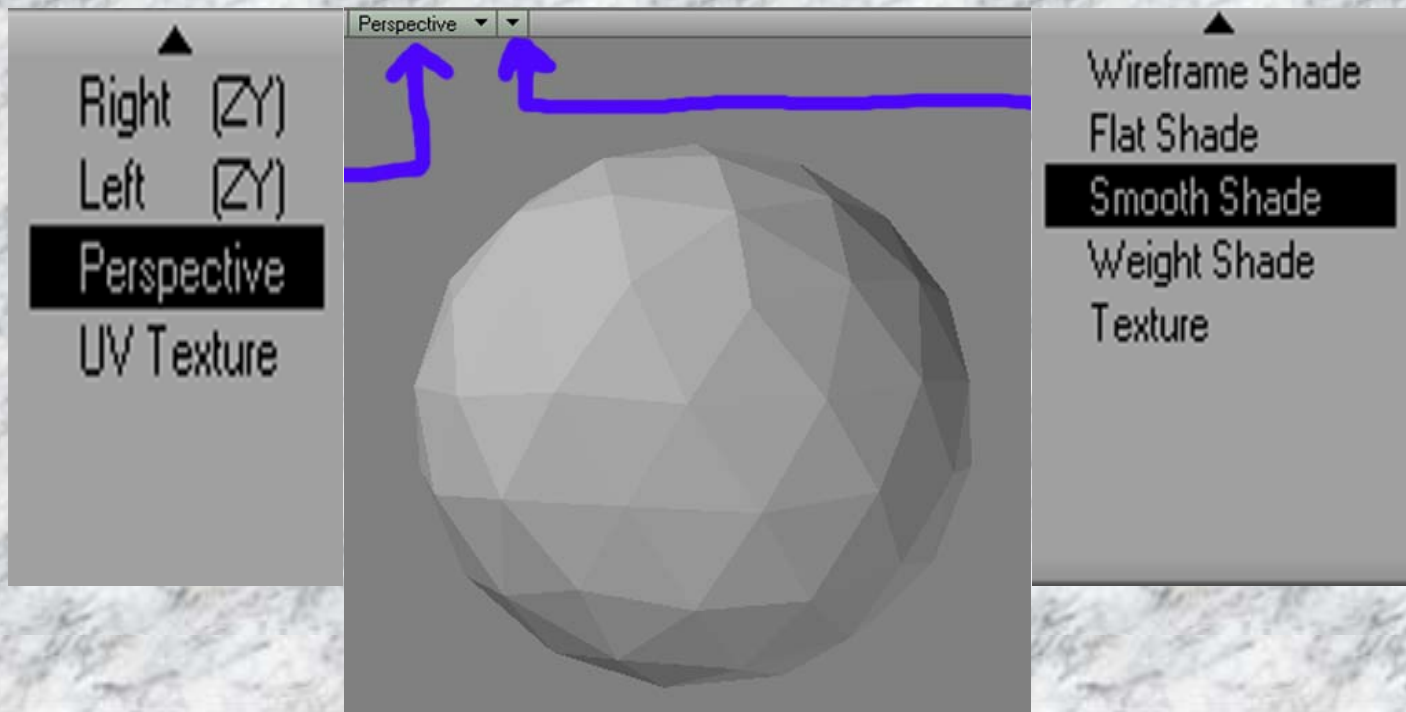
This is what we get



Step 2

This ball is composed of triangles, we must unify the triangles to create the patches on the ball

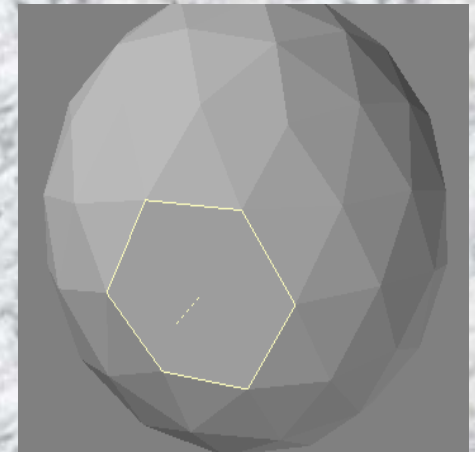
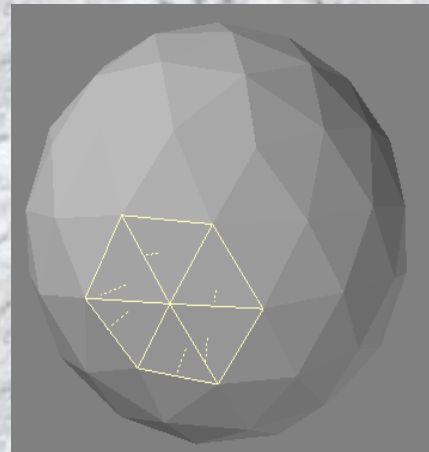
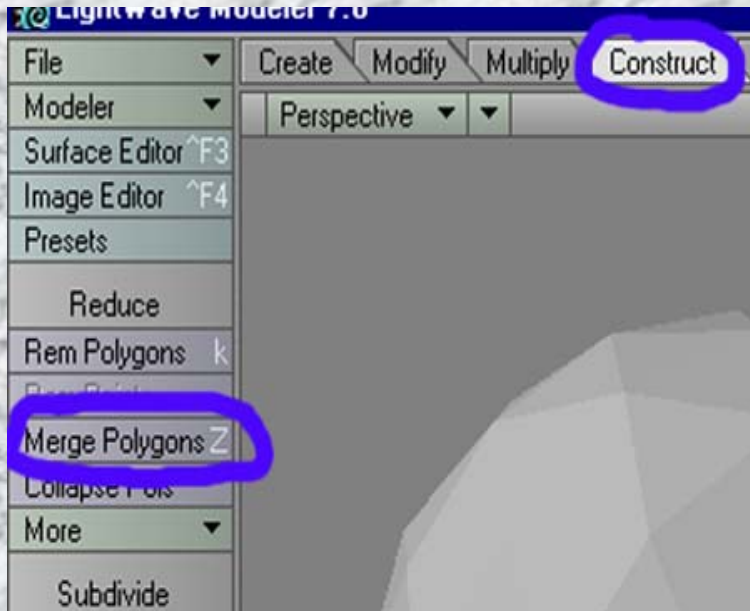
- Turn on one view port EX: Perspective View
- Along side is an arrow pointing down
 - Click on it and select “Smooth Shading”



Step 3

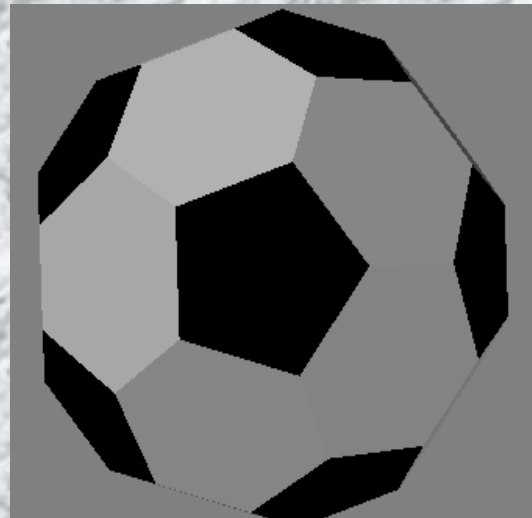
Make sure polygons are highlighted before continuing

- Select the triangles to make the pentagon patch
- After you selected the polygons that are needed, we need to merge them together by choosing the “construct” tab and selecting merge polygons (**shift+z**)



Step 4

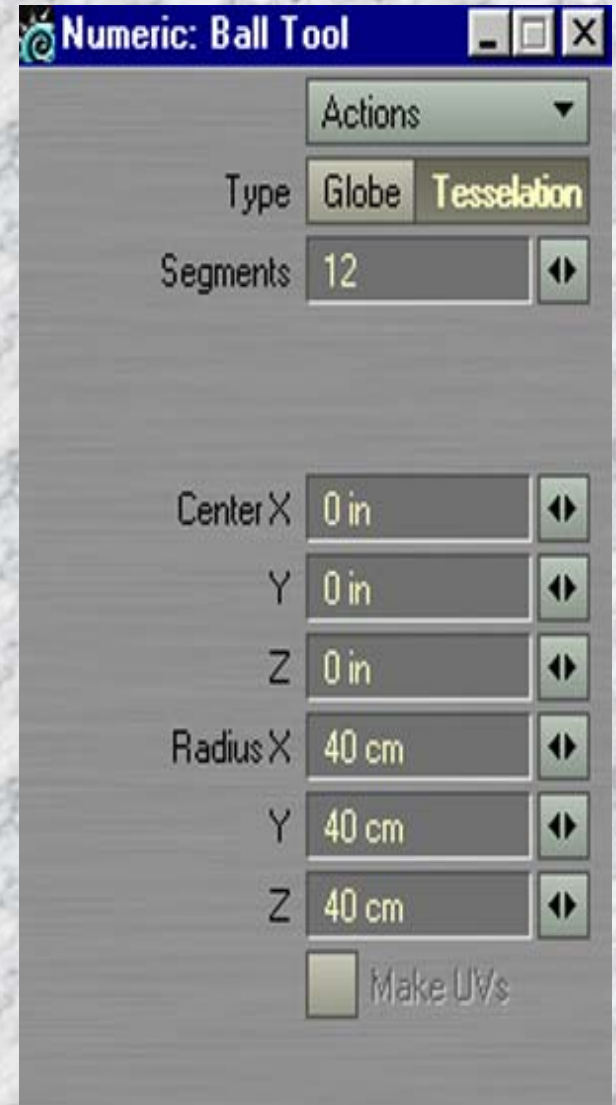
- After you unify the triangles, create a new surface
 - select black as the color
-
- continue the process until we have 12 pentagons in black and the rest of the pentagons in white
- To finish the ball just unify the rest of the pentagons



Step 5

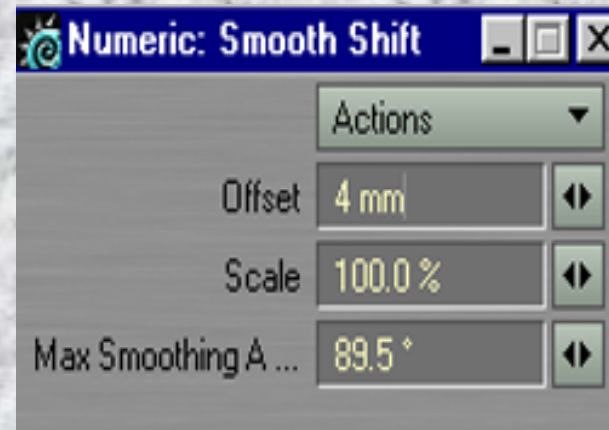
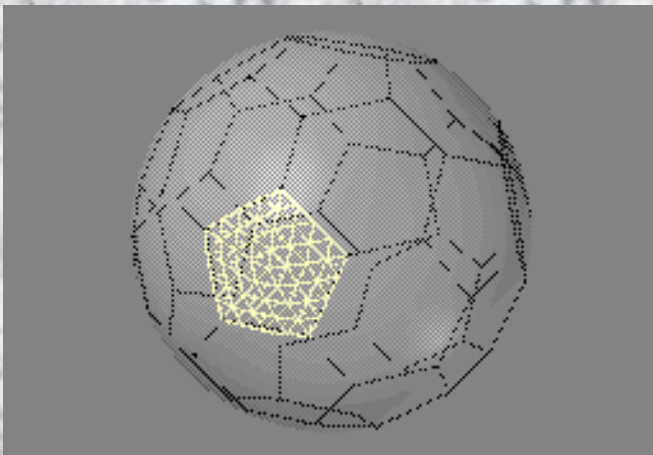
High Polygon

- Restart the same way
 - Select ball (**shift+o**)
 - Click tessellation
 - 12 segments
- Set low poly in background and high poly in foreground



Step 6

- Set transparency as 50% by opening the surface editor and turning it down (**control+F3**)
- Use the low polygon as reference and select the triangles in the pentagons
- With the triangles selected, apply “Smooth Shift” (**shift+f**), then press “n” to bring up the numeric box and apply an offset of 4 mm



- Next we must apply the merge command (m), selecting “FIXED” tab as range and insert a 3.5 mm distance

- Repeat this process on the rest of the polygons

1. Select polygons

2. Assign surface

3. Smooth shift of 4 mm (**shift+f**) (**n**)

4. Merge points 3.5 mm (**m**)

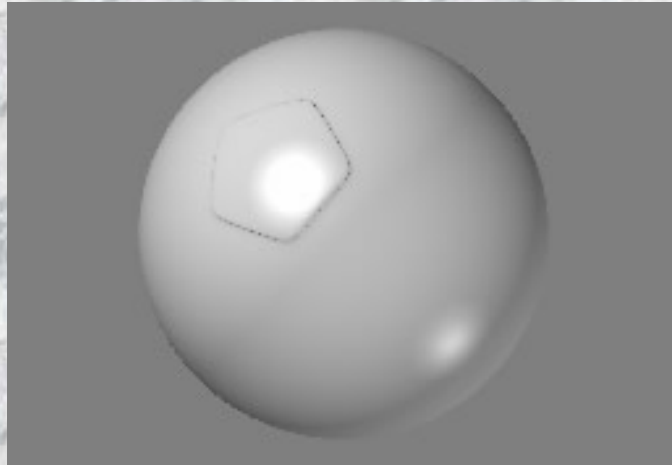
5. Smooth shift of 4 mm (**shift+f**) (**n**)

6. Merge points 3.5 mm (**m**)



Step 7

We can see some results by clicking on the **TAB** key to transform the polygons in a subpatched view



Once all of the patches have been transformed you will get this

Reminder

Hot Keys

Ball (**Shift+o**)

Numeric Panel (**n**)

Merge Polygons (**Shift+z**)

Merge points (**m**)

Surface Editor (**control+F3**)

Smooth Shift (**Shift+f**)

Thank you

