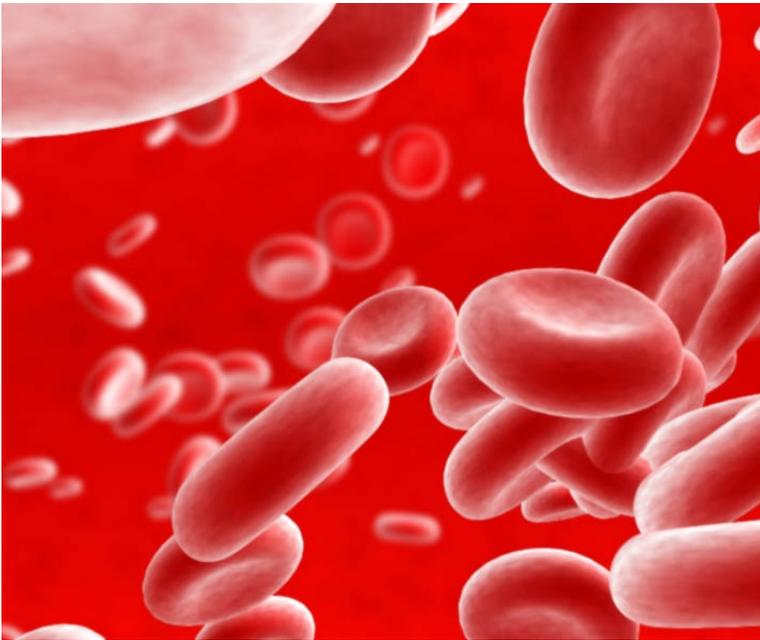


Blender Blood Cells



Learn to create a bloodcell look with blenders standard texture tools. This is a conversion to blender of a popular Lightwave tutorial

1. Add a cube into the scene. **SpaceBar->Add->Mesh->Cube**.

2. Press the subsurf button available in the mesh edit screen **F9** Increase Subdiv to 2. Now select the top row of vertices using box select **b-key** and extrude up **e-key** and then scale in a little **s-key**. Repeat the extrude but move all the vertices down a little to create the top of the blood cell. See Fig 1 for an example.

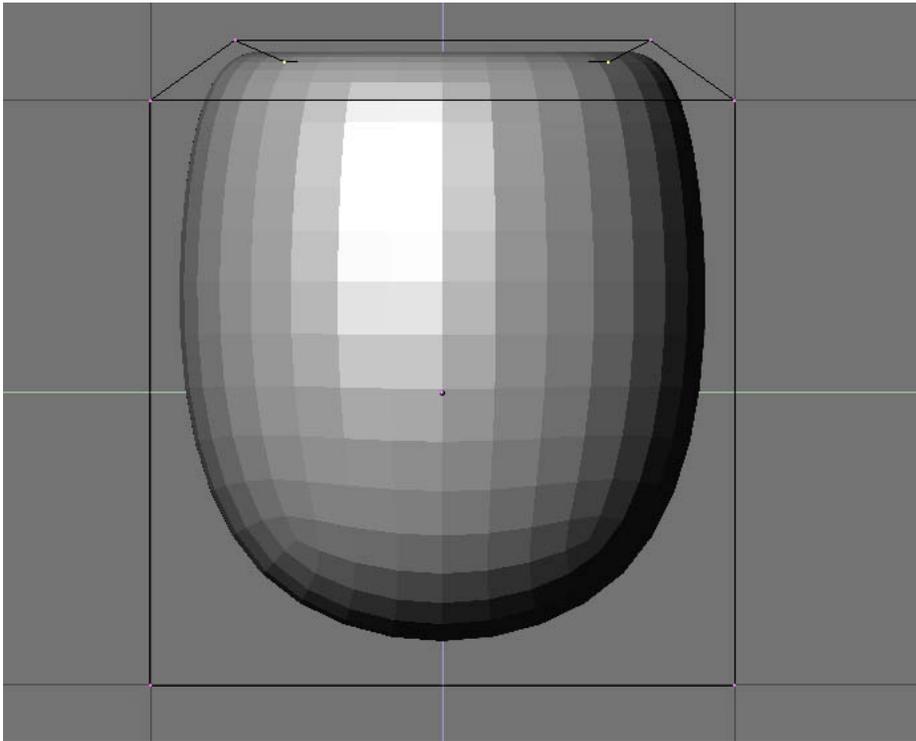


Fig 1. The start of the blood cell.

3. Repeat for the bottom of the blood cell. Then tweak the corners in top view to make it a little more round. Continue tweaking till you find a shape that suits. It doesn't have to be perfectly symmetrical because after all you are modelling an organic thing. Select all vertices **a-key** and then set to smooth in the mesh edit but so you have a nice smooth cell.

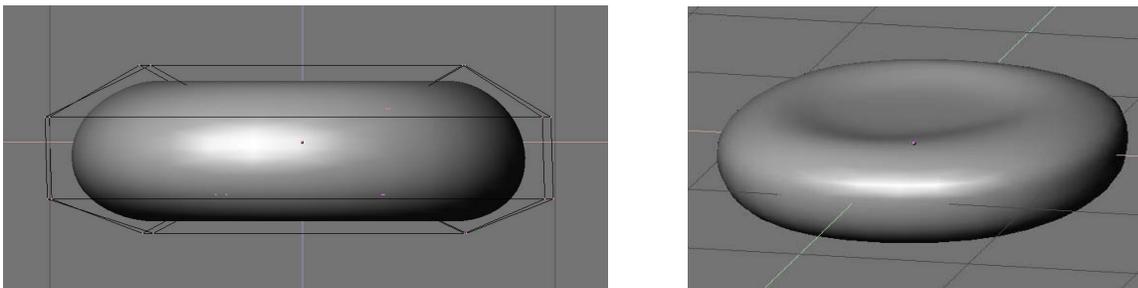


Fig 2. Finished Blood Cell. Just tweak vertices until you find something you like.

4. Add a new material for the cell. There will be two textures added. One is to give the glowing effect and the other is to give a little bit of texture to the bloodcell. The first texture is a Blend texture with sphere selected. The second is a cloud texture.

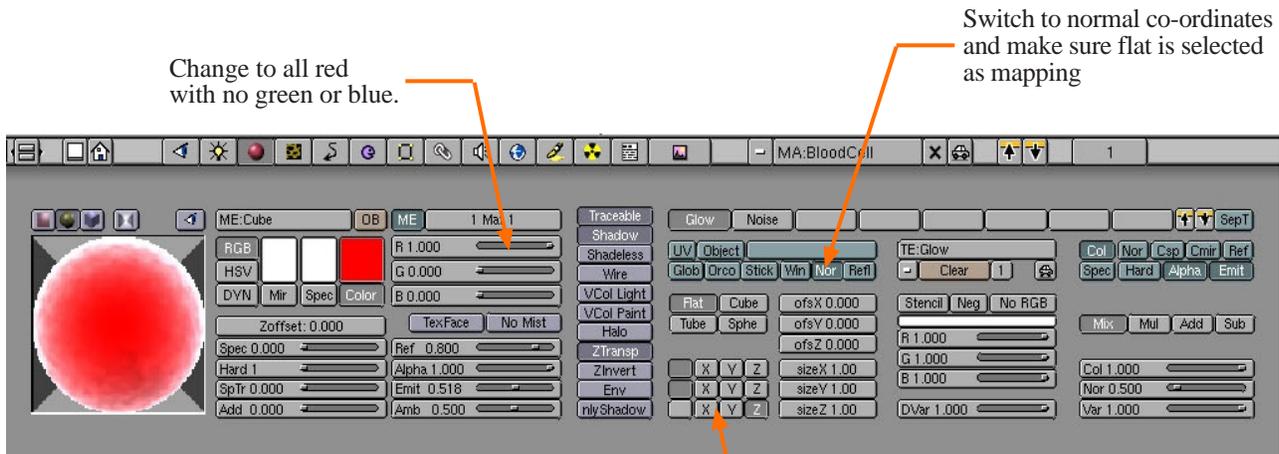


Fig 3. The main texture window



Fig 4. The first texture which adds a glow effect

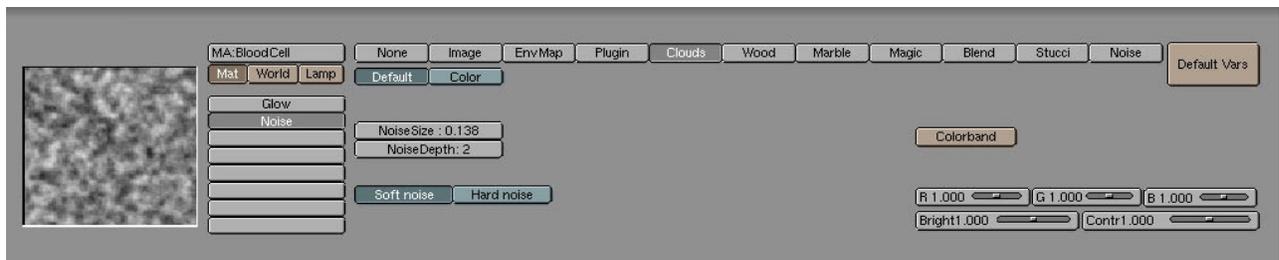


Fig 5. The second texture which breaks up the color

The second texture is just there to break up the color and add some variation to the bloodcell. See the included .blend file for the settings. Just play around with the RGB color or the cloud texture and also the amount it affects the rest (the col slider on the far right). You can also play with the modes and what channels the texture affects.

5. Add a world to the scene. Add a clouds texture to the world. There is no hard and fast rule here, just experiment until you have a background that looks alright. It has one cloud texture breaking up the flat red color. Aim for some kind of mottled red color.

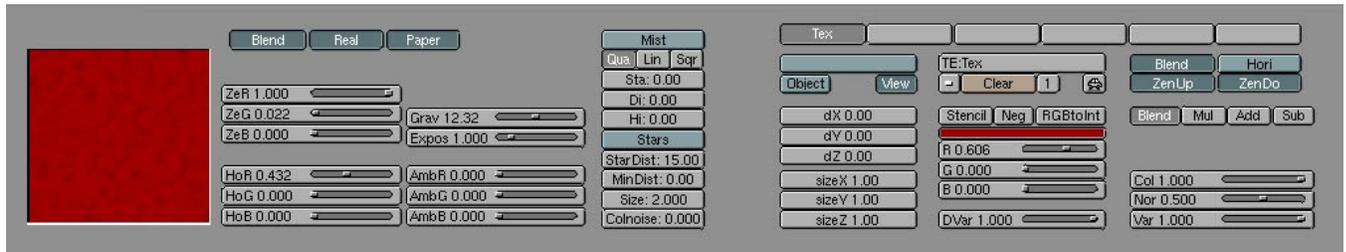


Fig 6. The world settings. This is just for a nice background.

6. Now to make lots of blood cells. You could place them all by hand and stuff around but a particle system can add a lot for not much effort. So add a standard four vertice plane in a side view.

7. Parent the bloodcell to the plane **ctrl-p**

8. Add the particle system to the plane. Select the plane, and go to the animation buttons **F7**. Choose the particle effect. Press dupliversts so that each particle is a bloodcell. See the box for particle settings.

Only 200 particles. Be careful it is not set too high otherwise the computer could crash!

Increase rand value so that cells are not linear

Add a force so that particles stream out. The direction can be anything that suits the scene

Press dupliversts button for lots of bloodcells

Fig 7. Particle Settings

10. Select the bloodcell and the plane and duplicate **alt-d** and send this new particle system to layer 2.... **m-key** and then select layer 2.

11. Add a light to the scene and put it on the 3rd layer. Also move the camera to the third layer

12. So there should be one bloodcell particle system on layer one, one on layer two and a light and camera on layer 3.

13. Adjust the position of the light, camera and particle systems until the composition looks good. Try to get a sense of depth in the scene which will be used later on to add a fake depth of field.

14. This next step is optional. Now to simulate a depth of field each layer will be rendered separately. So select layer one and three (hold shift while selecting) and turn off the world texture by deleting the link to the world. Render at your preferred size. Make sure OSA is turned on and at highest setting in render settings. Save as RGBA Targa. This setting includes an alpha channel which is needed for the composite image.

15. Render the second particle system by itself and also the world with no particle systems. So select layer 2 and 3 and render. Then turn on the world and render only layer 3. Save each file as RGBA Targa

16. Go into your image editing software of choice. (Usually gimp or photoshop). Open up the files and composite each one over the next. You want to use the alpha channel as a cutout or to specify opacity. So anything outside the image you have rendered is see through. See your image software for more information. See Fig 8.

17. So you should have three layers. A foreground, middle ground and a background. Take the middle ground image and blur it using a gaussian blur. Add a slight blur to the foreground image. Now flatten the image. Duplicate the image on another layer. Add a slight blur. Then set mode to screen and adjust opacity to suit. The last step just makes the image a bit brighter and nicer to look at.

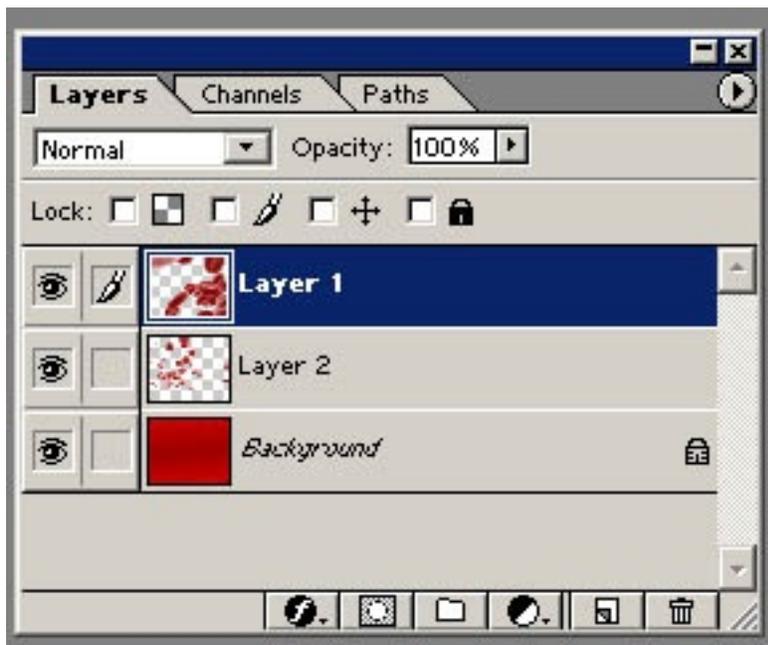


Fig 8. The Three Layers. Use the alpha channel to specify alpha so images can overlay