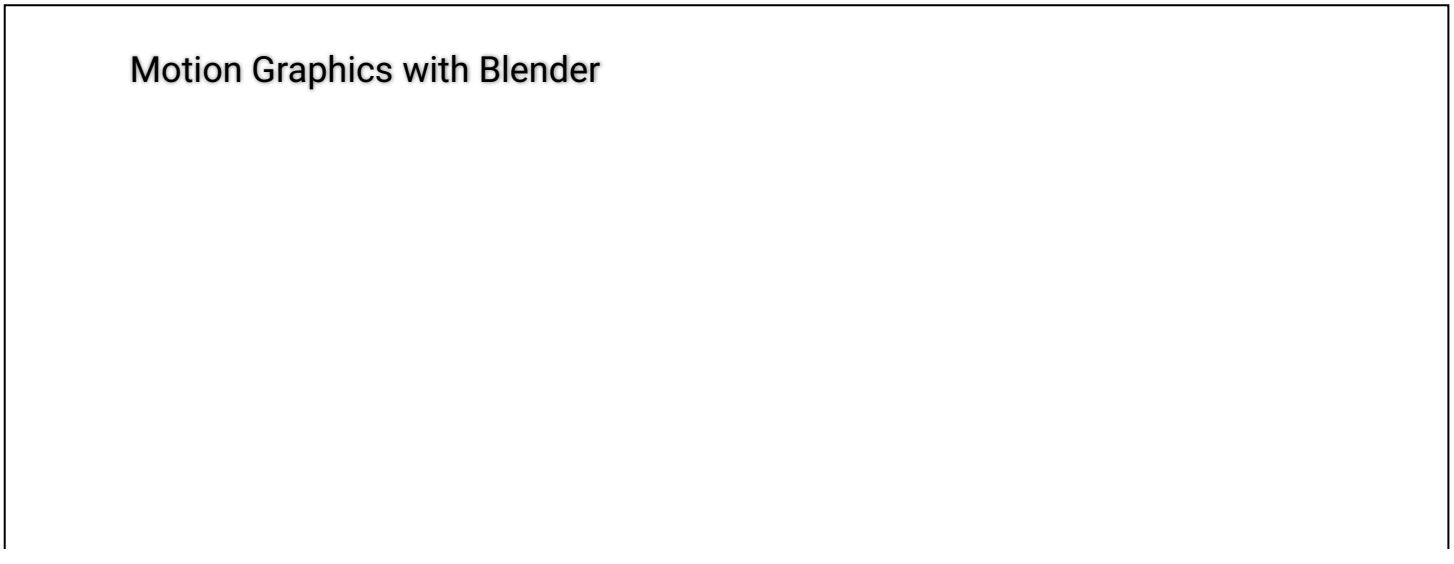
Creating Motion Graphic Elements in Blender Without Shapekeys or Addons: Part 1

by Karan Shah 18 Mar 2016

Difficulty: Beginner Length: Medium Languages: English

Blender Motion Graphics

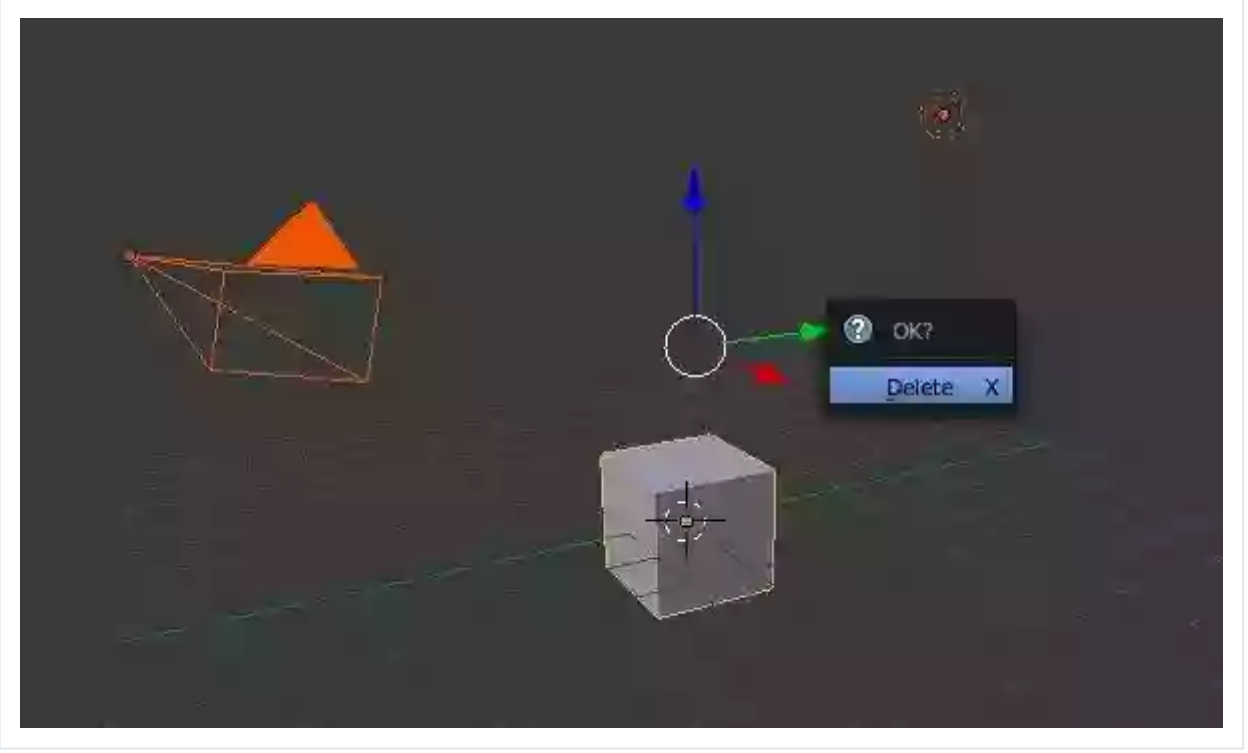
What You'll Create



Circle Pops

Step 1

In a new file, Press **A** on the keyboard to select all default objects and then press **Del** to delete them.



Delete default objects

Step 2

With the mouse pointer in the 3D view, press **1** in the numpad to get into front view and **5** to toggle off the perspective view. Make

sure you are in **Ortho** view.

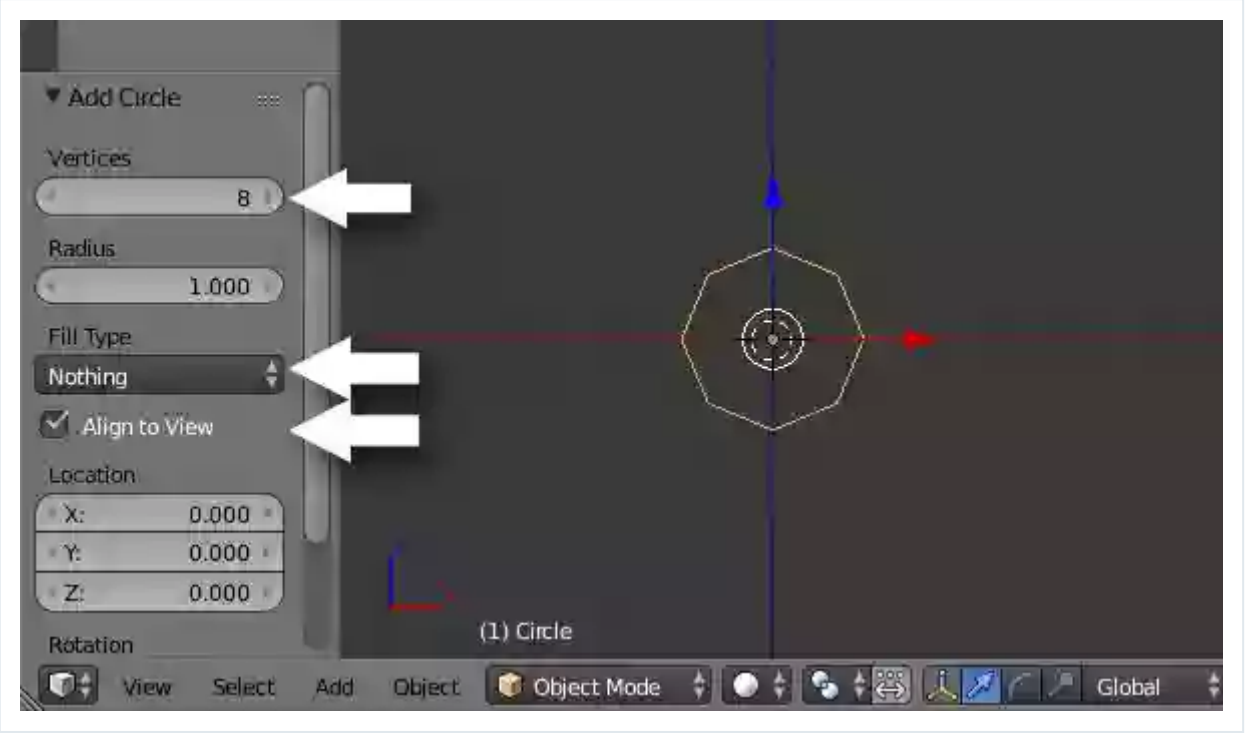
Press **Shift-A** and add **Mesh** > **Circle**.

Add a circle

Step 3

In the **Tool Options** panel, which is located at the bottom of the tool shelf—press **T** to toggle on if it is not there—reduce the **Vertices** count to **8**. This will make the pop less dense.

In the **Fill Type** select **Nothing**. Check **Align to View** so that the circle is not facing upwards.

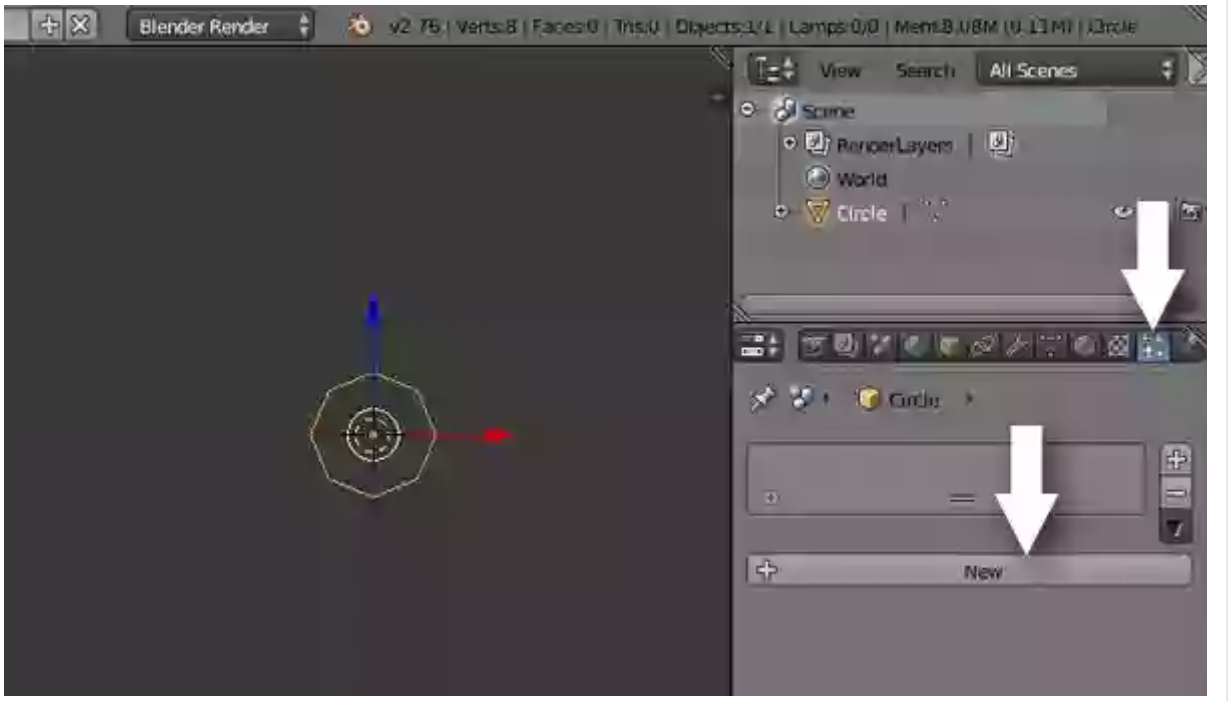


Reduce vertices

Step 4

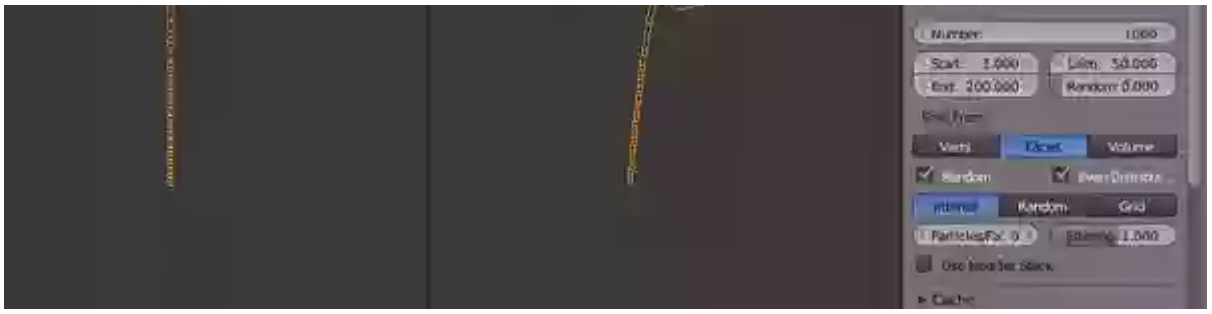
Click on the particles button in the properties window. Click **New**

button to add one.



Add new particle settings

Press **Alt-A** to preview the animation or click on the play button, you will see that the particles just pours out from the centre. This is the default set up.

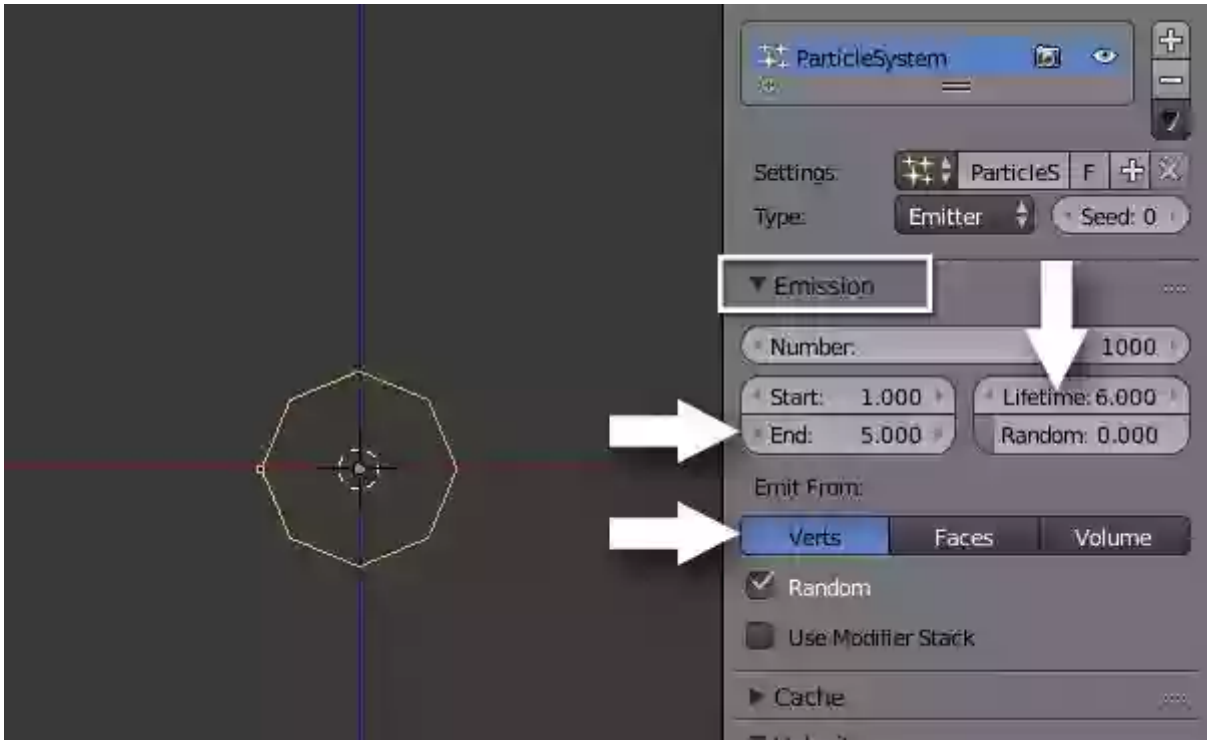


Animation playback

Step 5

With the circle selected, and in the **Emission** panel of the **Particle** properties,

- Set the **End** frame to **5**. This is the frame number to stop emitting the particles. In this case, particles will be emitted from frame 1 to 5.
- Decrease **Lifetime** to **6**. This shows that the particles will last for 6 frames. In this case, this value will also determine how far the particles will go.
- Set **Emit From** to **Verts**, so that the particles are emitted from the vertices of the object.



Particle Settings

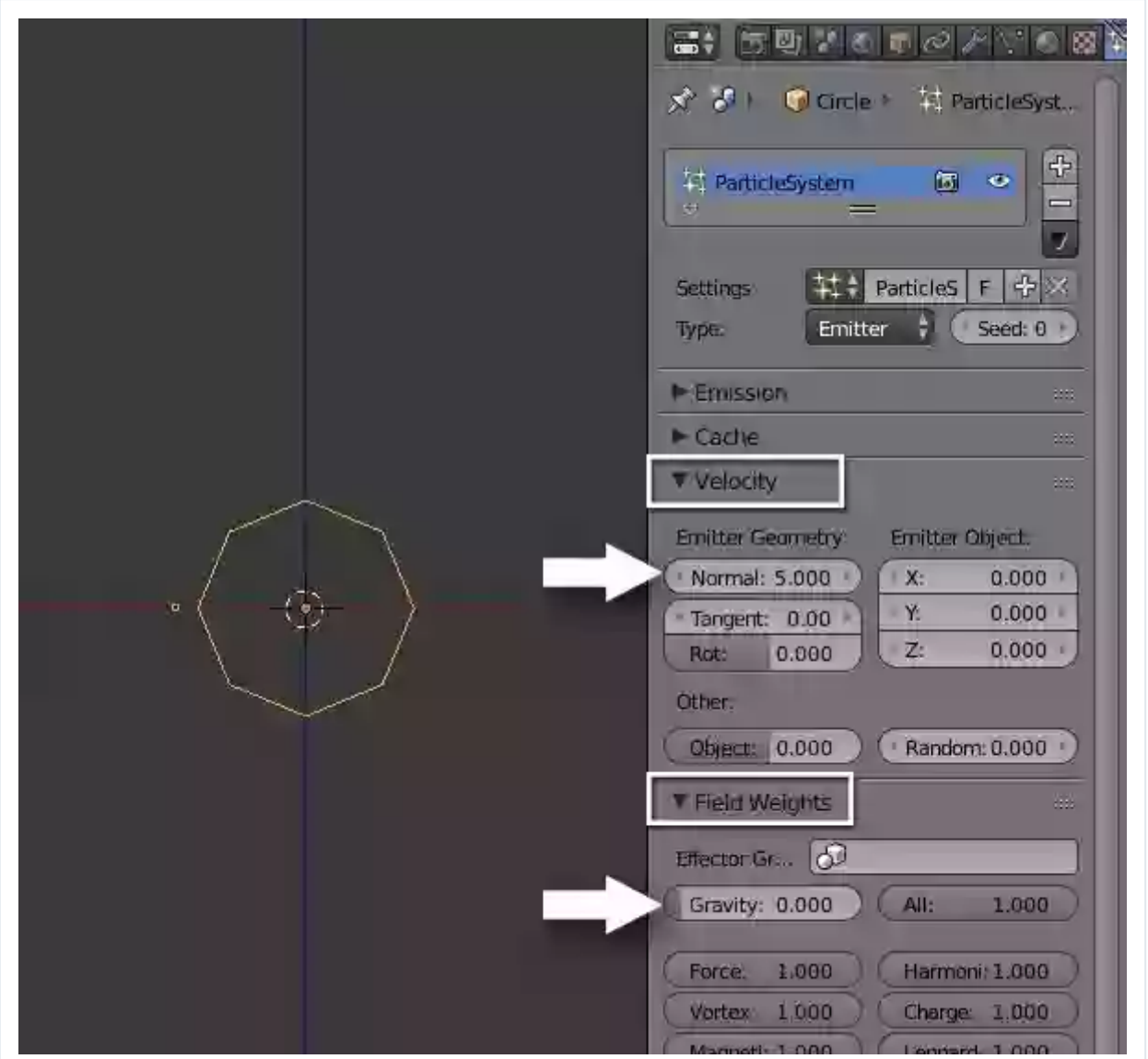
Press **Shift-Left Arrow** to go to first frame. Press **Alt-A** to play the animation.

Animation preview

Step 6

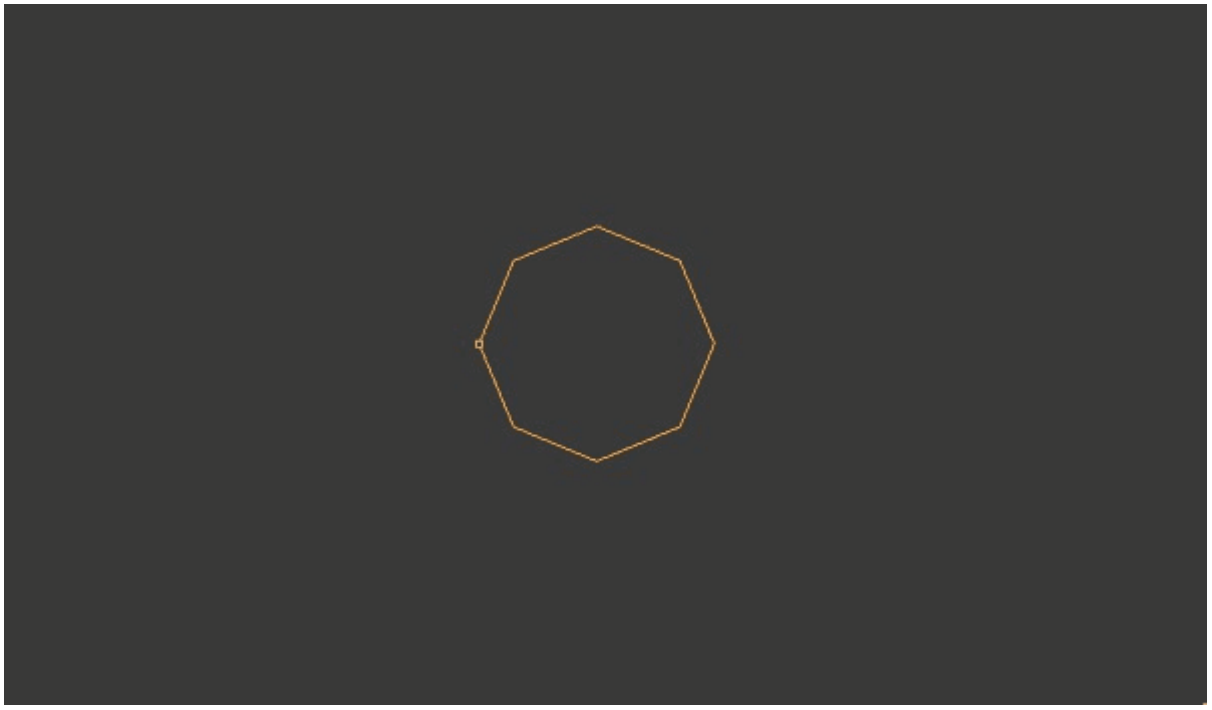
In the **Velocity** Panel, Set **Normal** to **5**. This sets the speed of the particles.

In the **Field Weights** panel, reduce the value of **Gravity** to **0**. This will prevent the particles from falling.



Particle settings

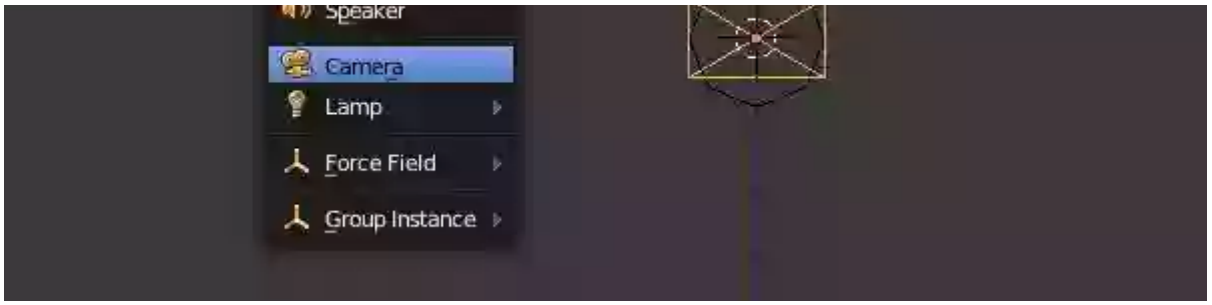
Press **Shift-Left Arrow** to go back to first frame. Press **Alt-A** and preview the animation.



Animation preview

Step 7

Press **Shift-A** and add a **Camera**.



Add a camera

Move the camera away and place it at a distance form the circle.
Use the manipulators to move it.

Press **0** in the numpad to get into camera view.

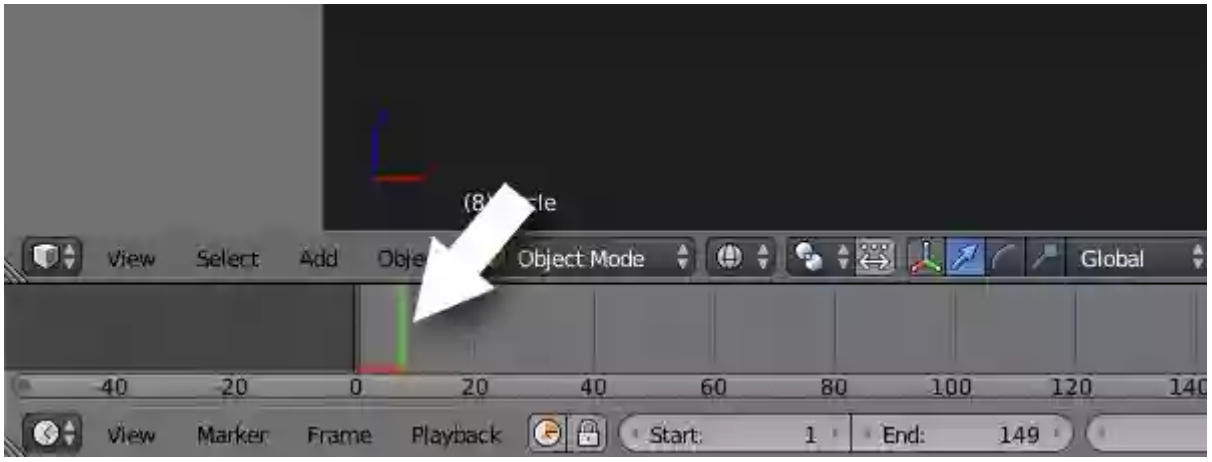
Place the camera

Assigning a Material

Step 1

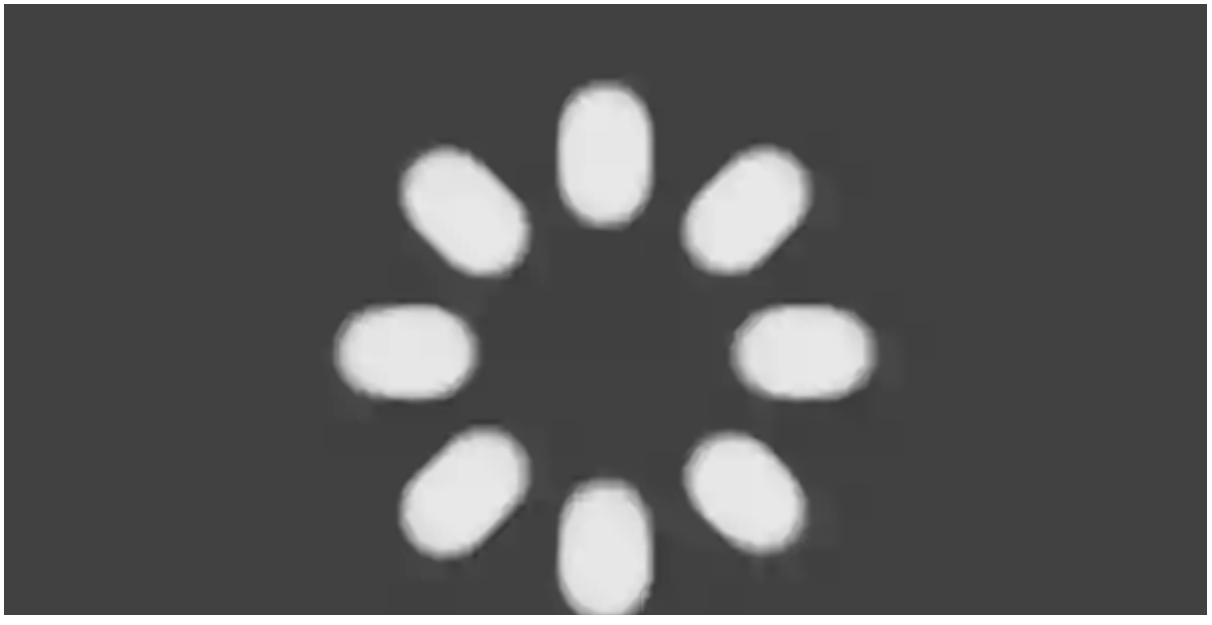
If you render any frame of the animation with particles, you will see that they appear as white halos. This is because a **Halo** material is assigned to the particles by default.

Drag the green line in the timeline window with the left mouse button to go to any frame in between.



Skip few frames

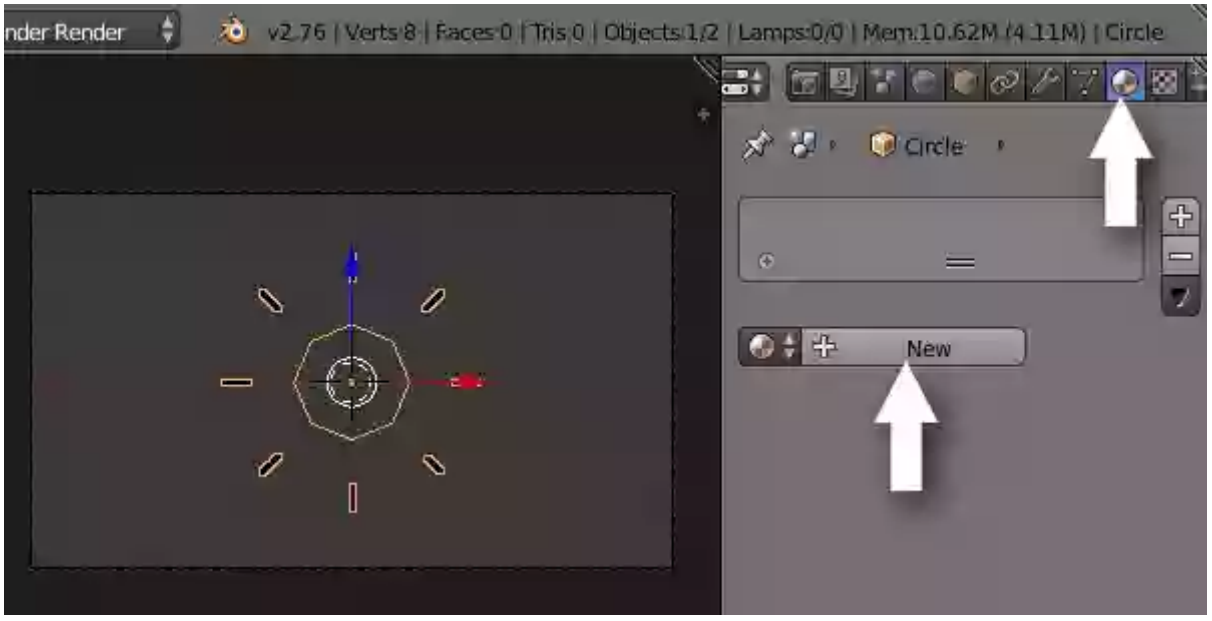
Press **F12** to render a frame.



Render an image

Step 2

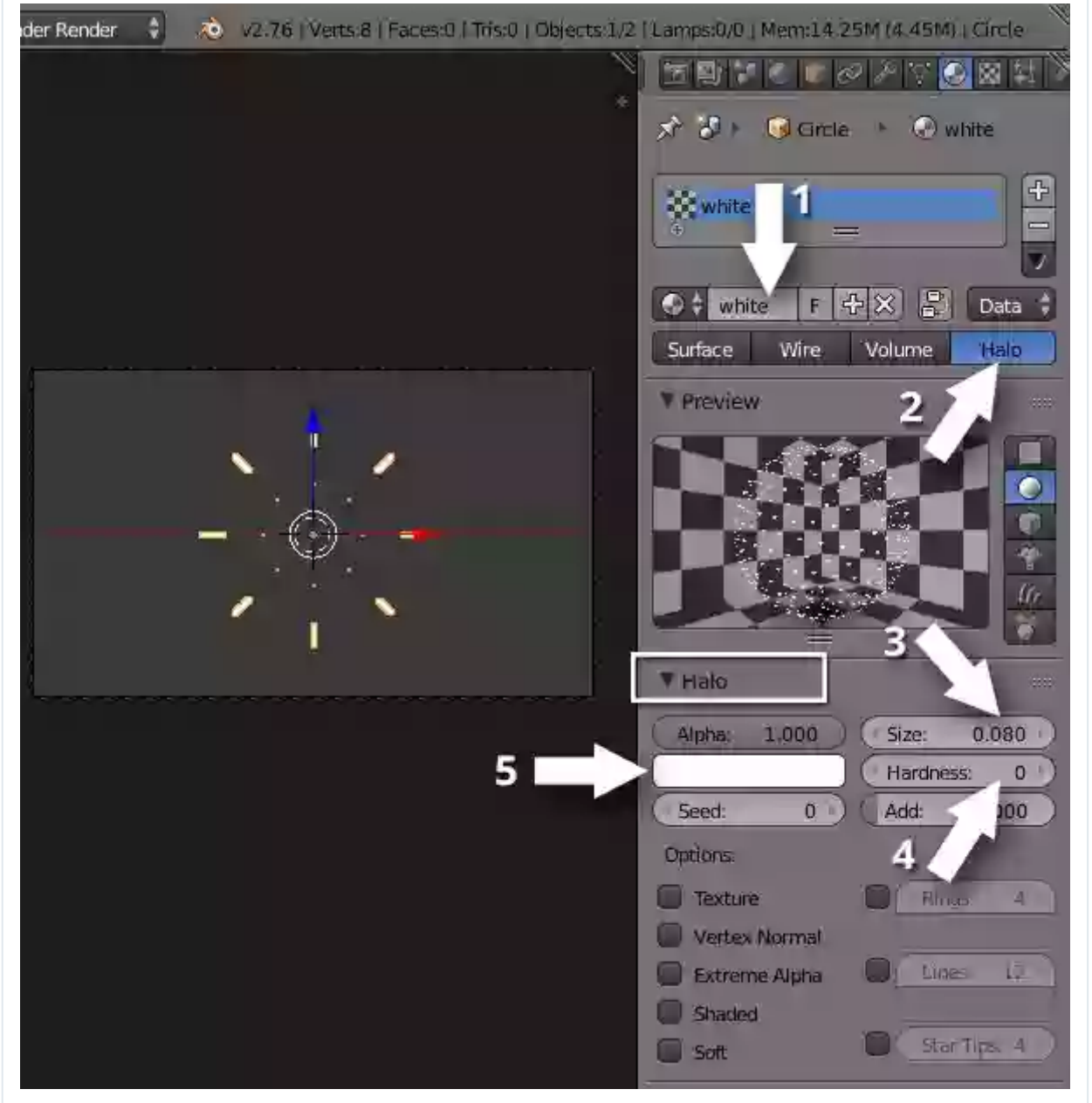
Next assign a new material to the particles. Click on the **Material** button in the properties panel. Press the **New** button.



Add new material

A new material will be assigned to the object—as well as particles—and the setting options will appear.

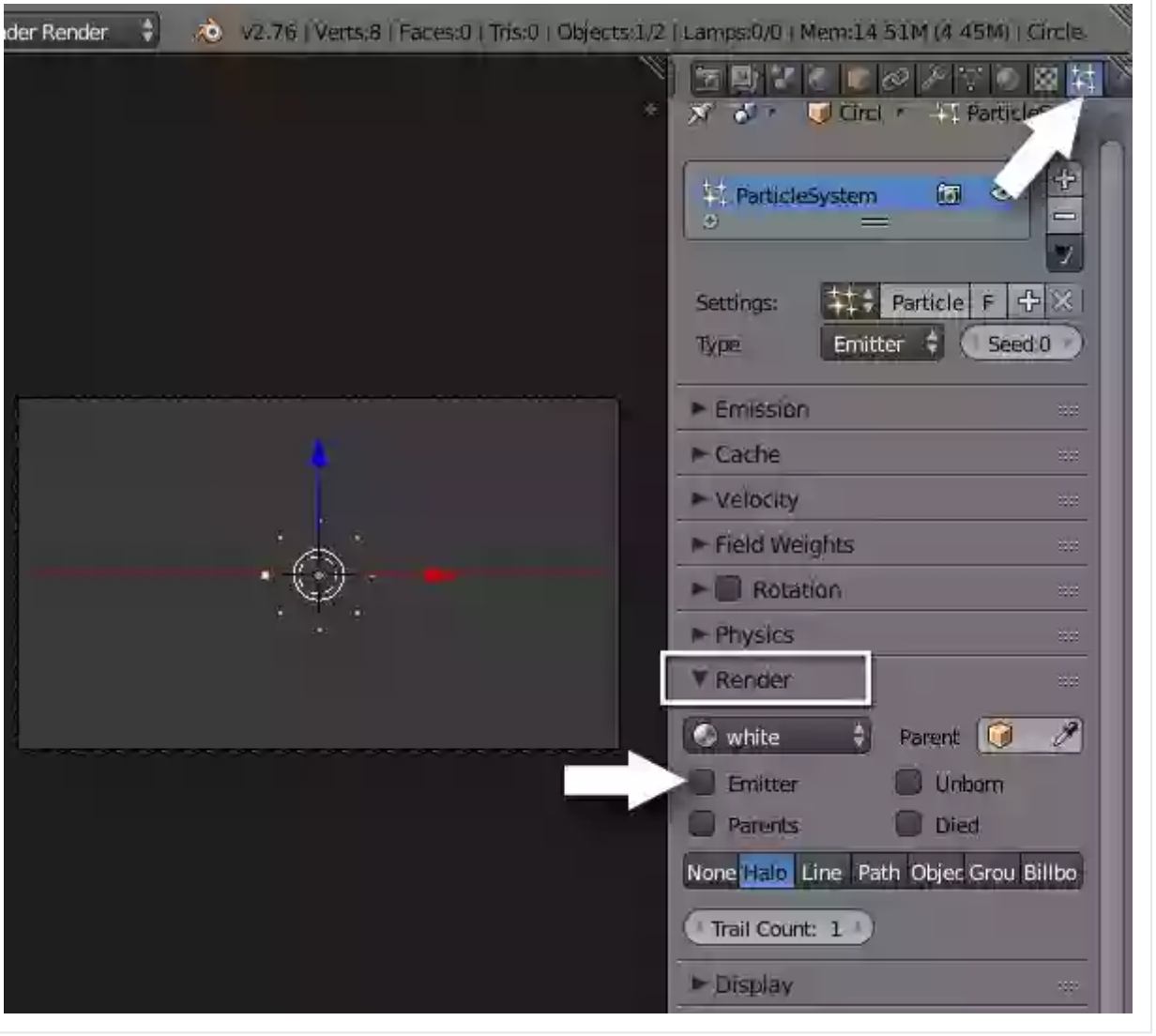
- Rename the material **white**—or anything you want
- Set the material type to **Halo**
- In the **Halo** panel, reduce the **Size** to **0.08.** This determines the thickness of the halo
- **Reduce the Hardness** to **0.** This will make the halo sharp and hard
- Click on the Colour block and choose a colour. I chose white



Material settings

Step 3

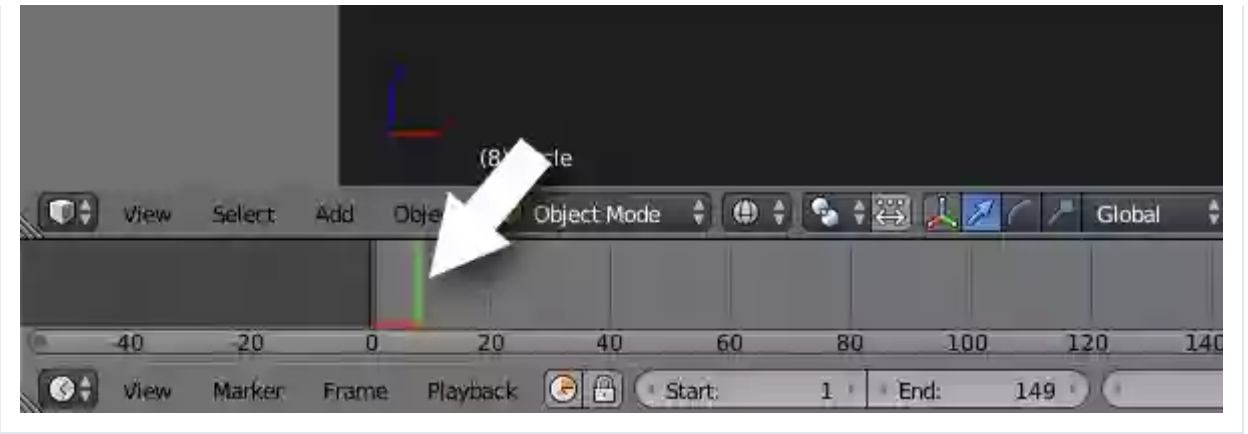
Click on the particles setting button in the properties window. In the **Render** panel, uncheck **Emitter**. This will prevent the emitter particle from rendering.



Particle settings

Step 4

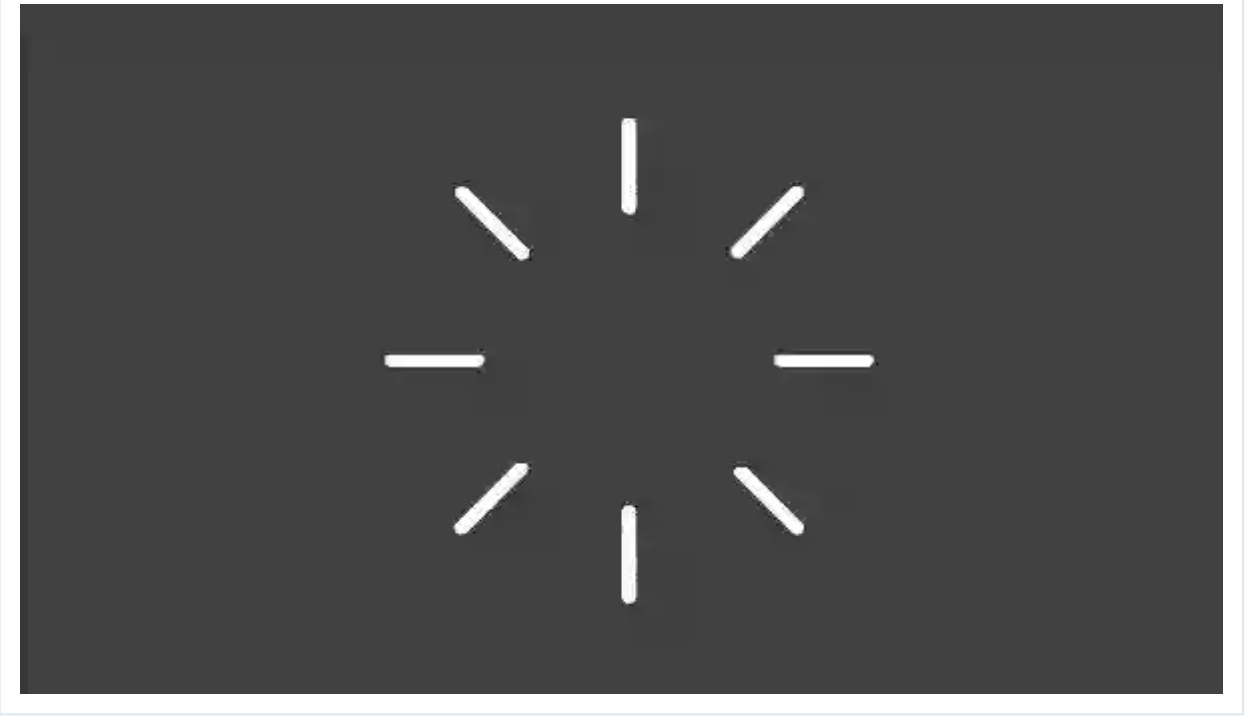
Drag with secondary mouse button on the timeline towards right to advance few frames.



Go to a frame of the animation

Press **F12** to render a frame. The Circle pop is ready.

Press **Esc** to go back to **3D view**.



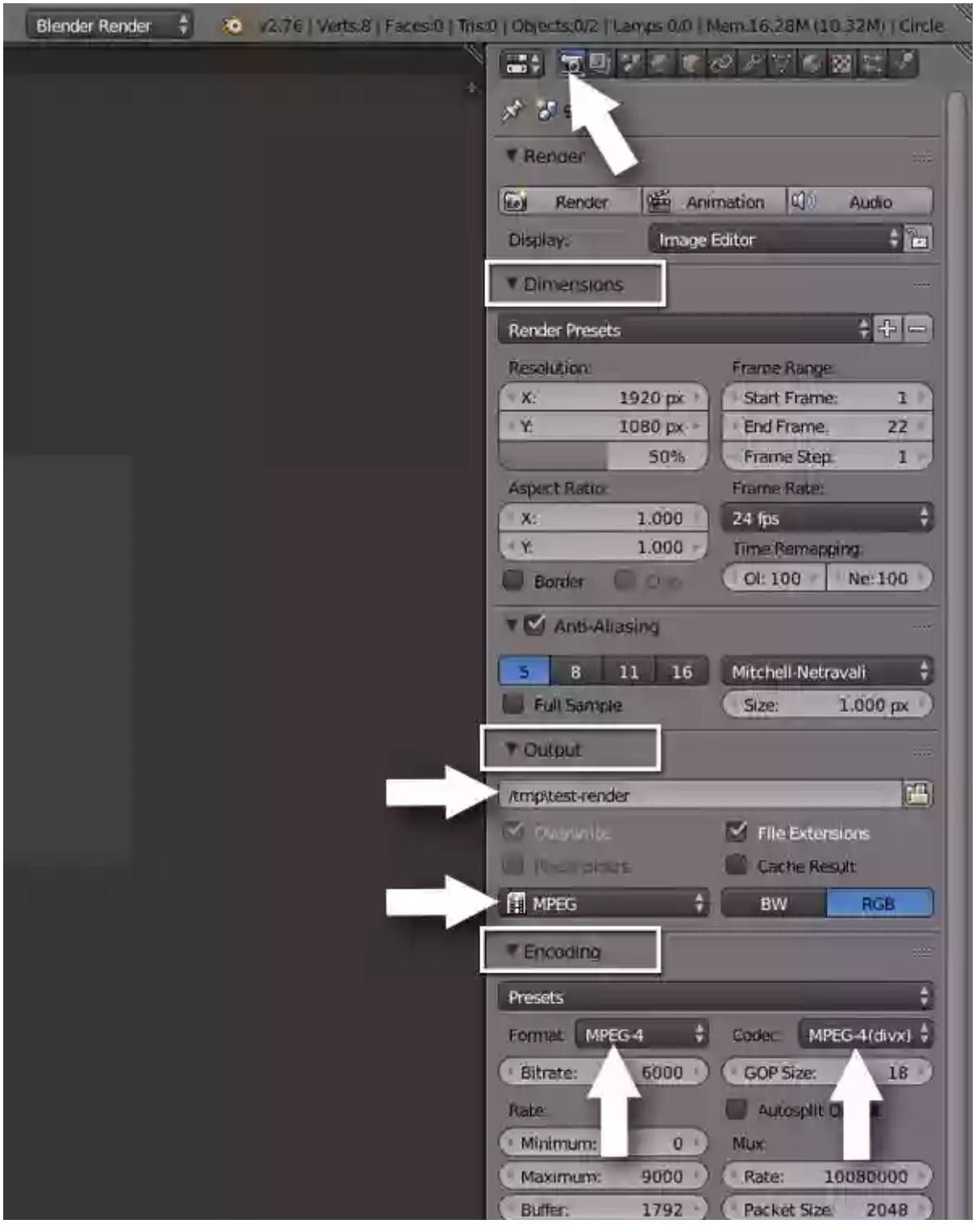
Render a frame

Rendering the Animation

Step 1

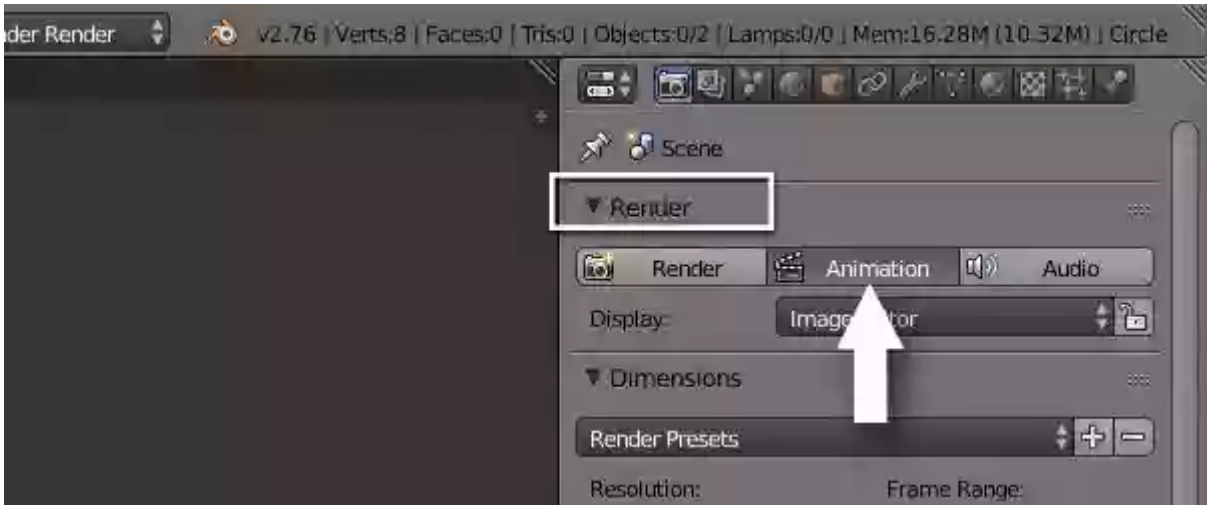
Click on the **Camera** button in the **Properties** window.

- In the **Dimensions** panel, you can set the resolution of the final video
- In the **Output** panel, set the directory and file name to save the animation
- In the **Encoding** panel, choose **MPEG-4** for **Format** and select **MPEG-4(divx)** for **Codec**



Render settings

In the **Render** panel, Click on the **Animation** button to render the animation.



Rendering animation

Explore for the file and play.

Animation playback

Duplicating the Object and Assigning Different Material

Step 1

In case you're not in object mode, Press **Tab** on the keyboard to exit the edit mode.

Secondary-click on the circle and then press **Shift-D** to duplicate it.

Move the mouse away and **secondary-click** to confirm the position. The new object will be sharing the same particle system and material.

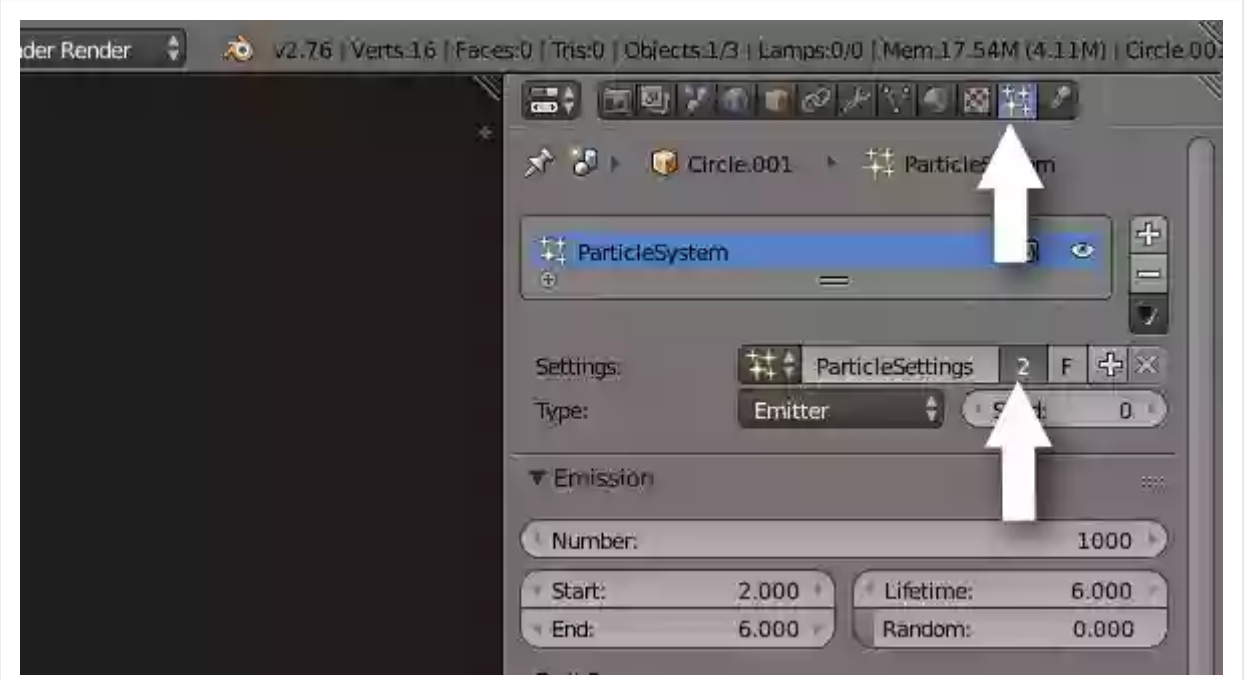
Duplicate the object

Step 2

Press **A** on the keyboard to deselect all objects. **Right click** on the new object to select it. In the **Properties** window, click on the

Particles button to bring the particles options.

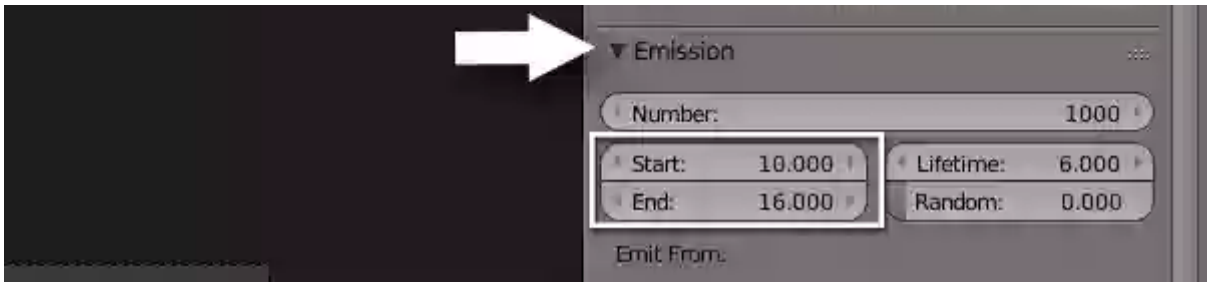
Click on the **+** button or the button which has number (**2**) on it, and it will copy the shared particles properties to a new one, for the new object.



Particle settings

Step 3

Rename the new particle settings. I named it **Second**. I changed the **Start** frame number to **10** and **End** frame to **16**, as I want to to start after the first one has finished.



Rename the particle setup

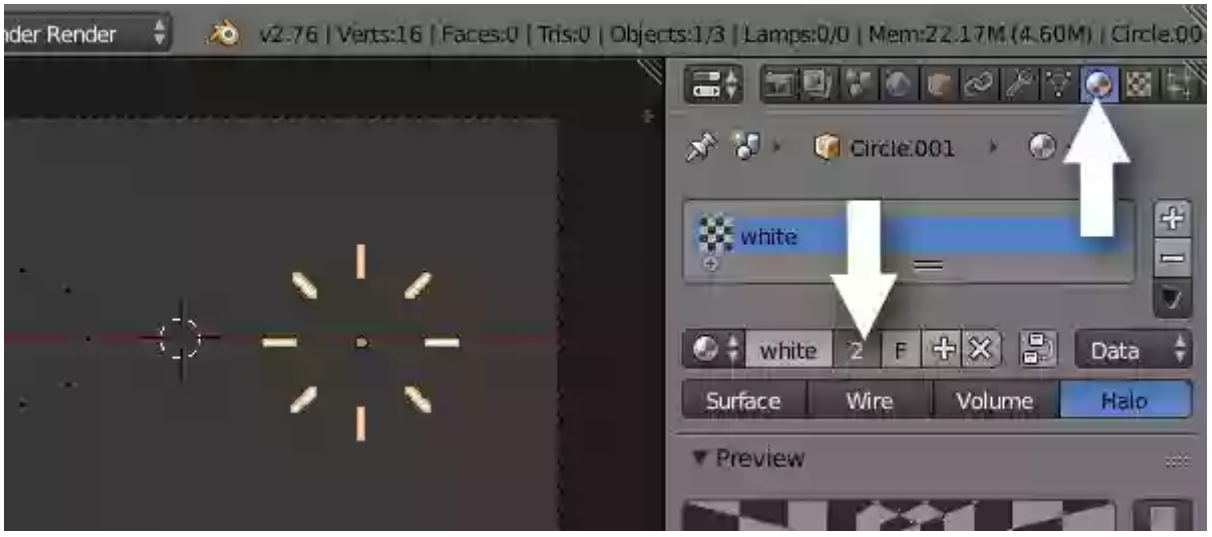
Press **Shift-Left Arrow** to go to first frame. Press **Alt-A** to play the animation. Press **Esc** to stop.

Animation preview

Step 4

Give the new object and particles its new material and color. With the new object selected, click on the **Material** button in the properties window.

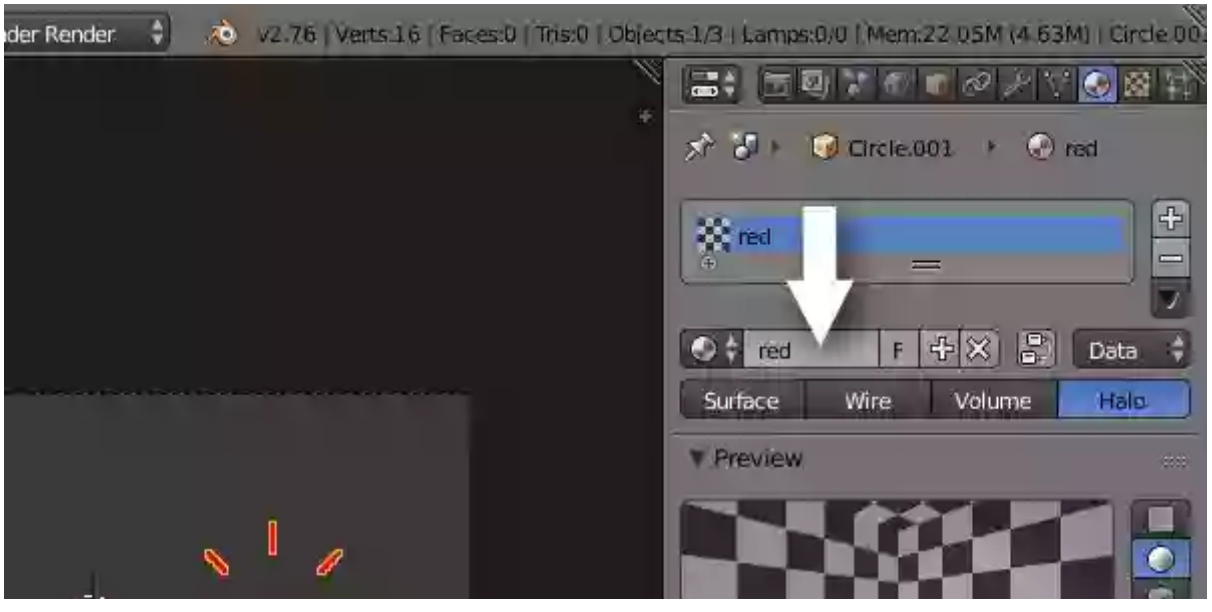
Again, click on the number button to make it a copy of the material for this object.

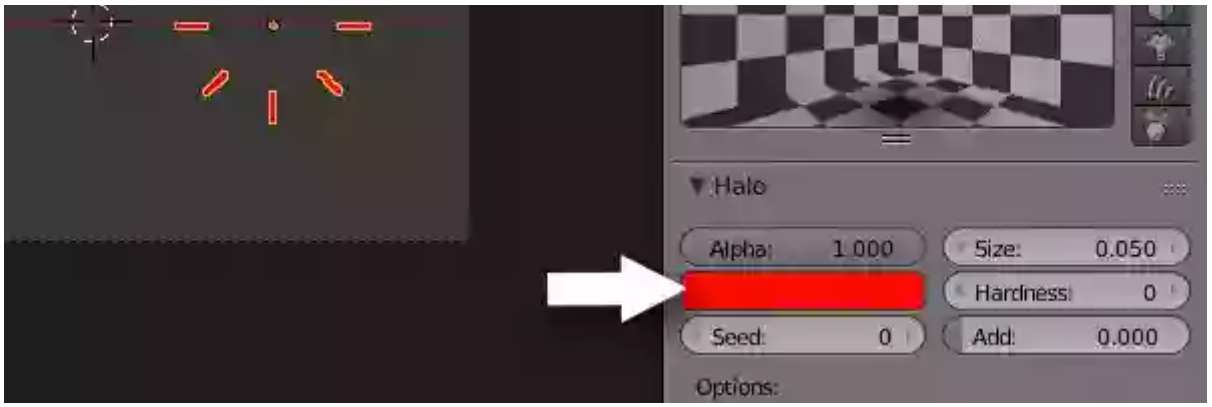


Material settings

Step 5

Rename the material. I named it **Red**. In the **Halo** panel, click on the colour bar and set a new colour.





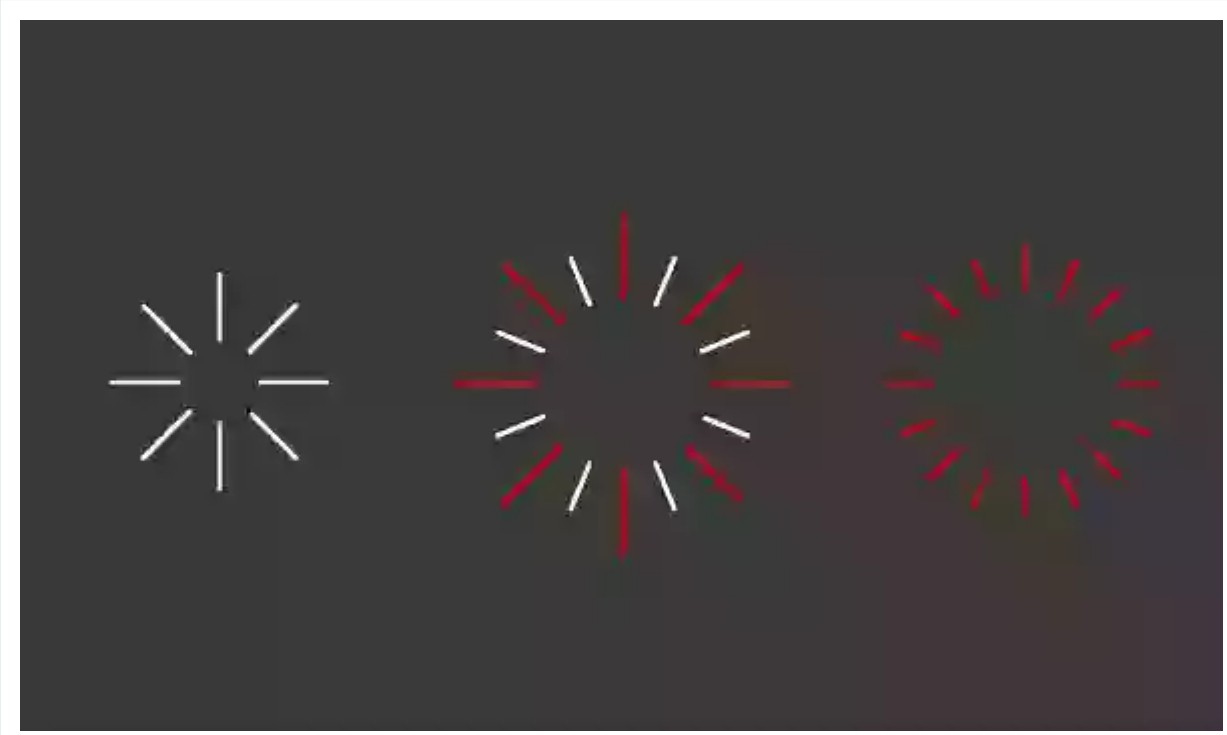
Color settings

Press **Alt-A** to play the animation

Animation playback

Step 6

You can create variations by playing with the settings—**Normal** and **Lifetime**—of the particles. Also try using a circle with higher number of vertices.



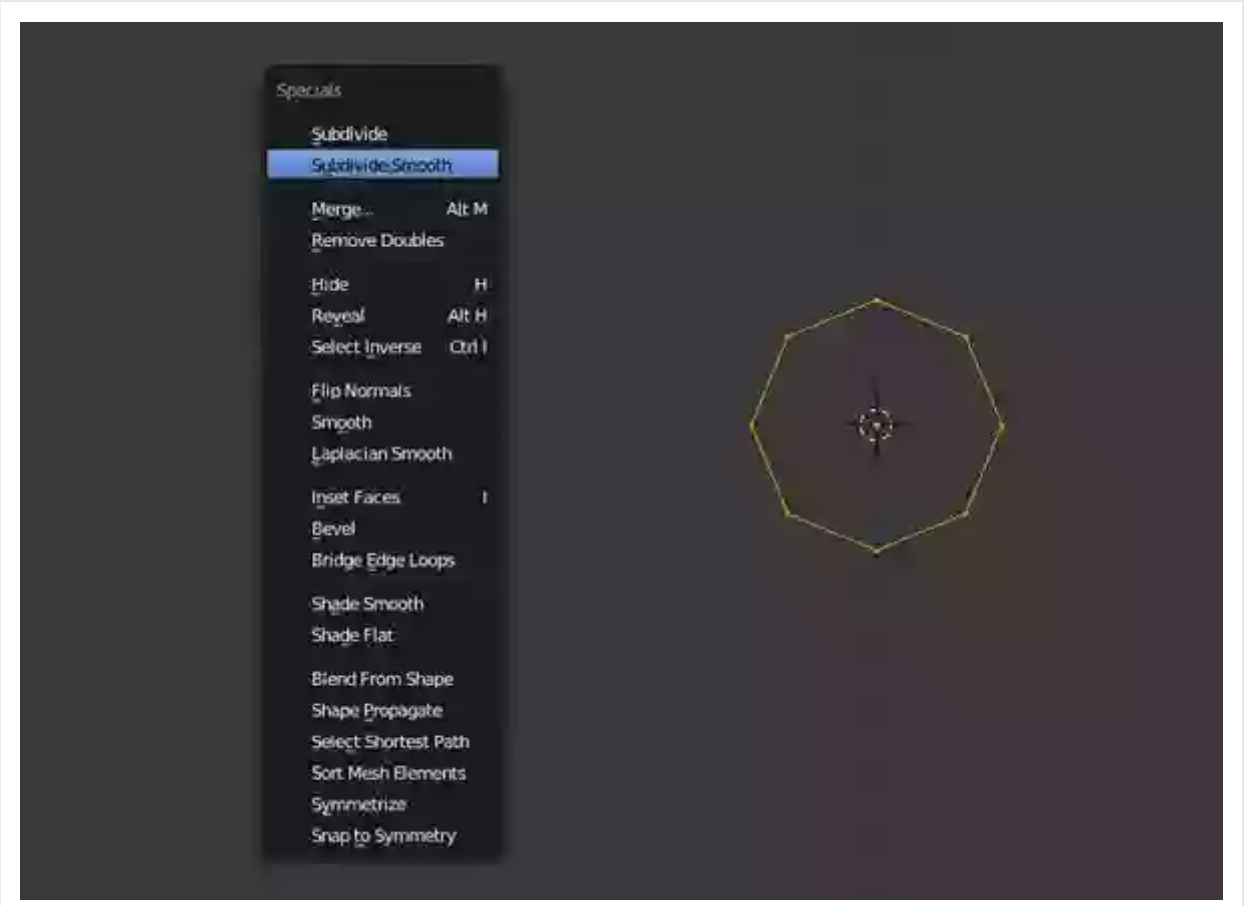
Variations of circle pop

Creating Two Colour Circle Pop

Step 1

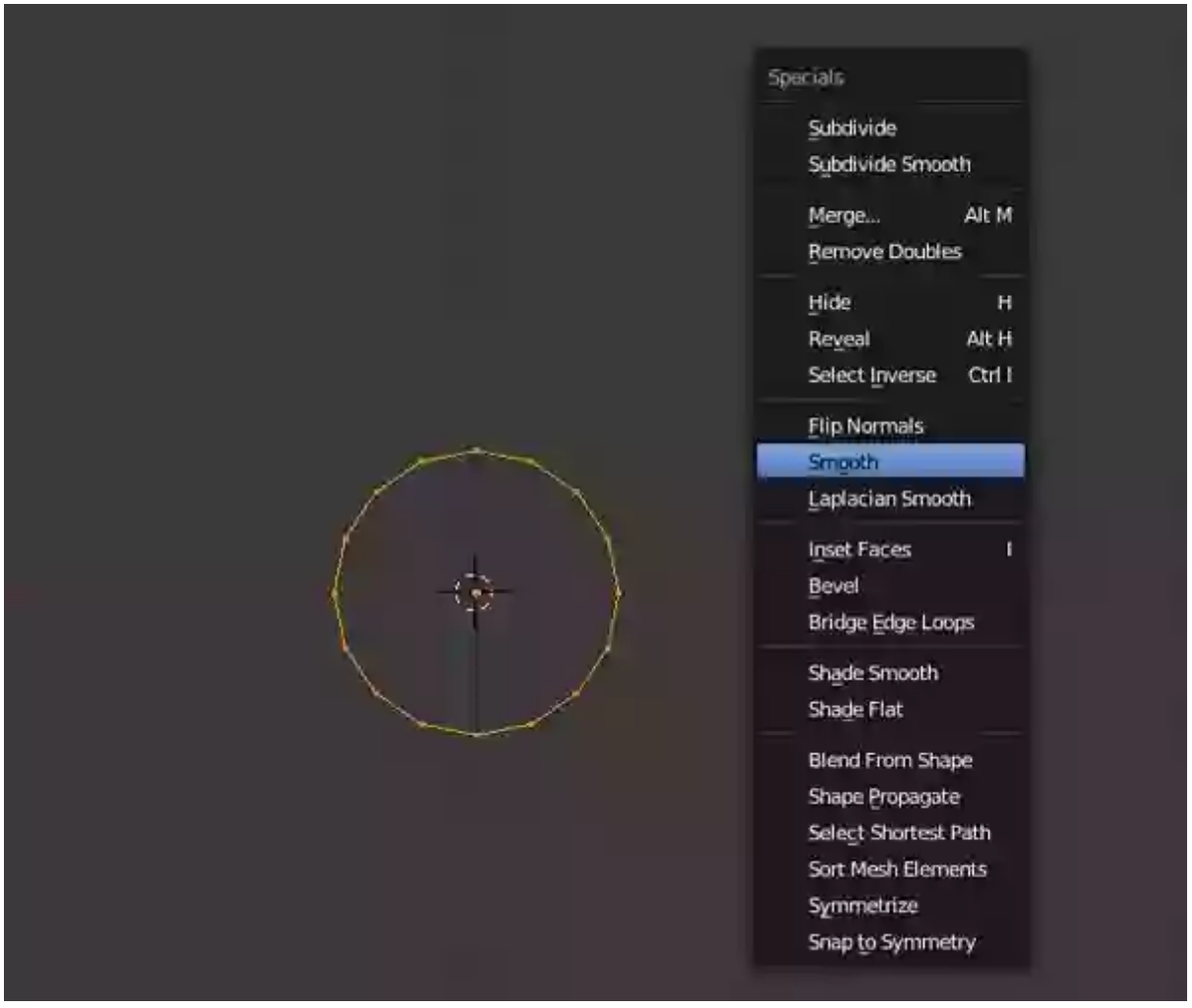
I'll increase the number of vertices to make room for two-colour circle pop.

- **Secondary-click** on the object you created, and press **Tab** to enter edit mode.
- Press **A** to select all vertices.
- Press **W** to bring the Specials menu and select **Subdivide Smooth**. This will double the vertices of the mesh.



Subdividing the mesh

Press **W** again and select **Smooth** to ease the shape.



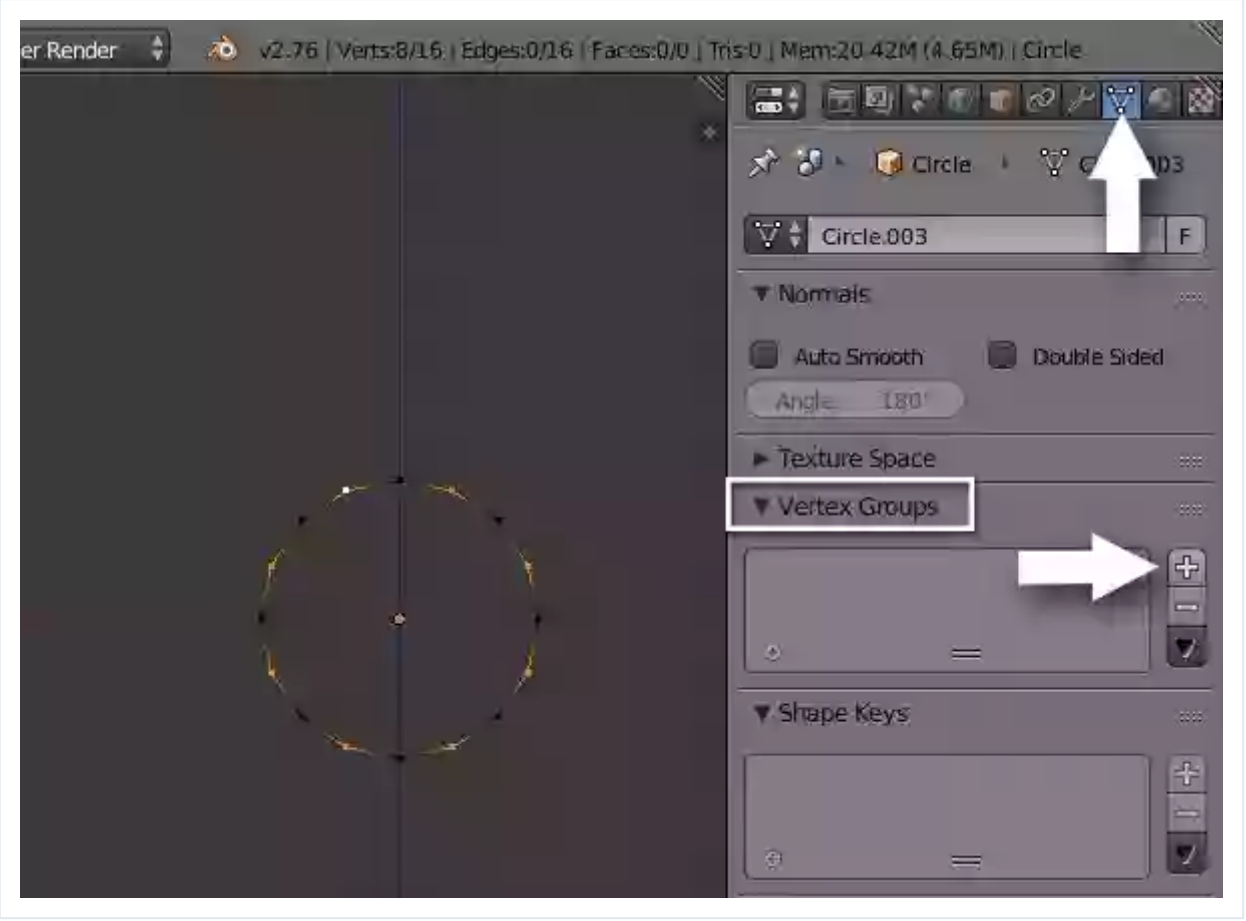
Making the mesh smooth

Step 2

Select alternate vertices.

- **Secondary-click** on any one vertex to select it.
- Hold the **Shift** button and then **secondary-click** again for multiple selection.
- Click on the **Object Data** button in the properties window.

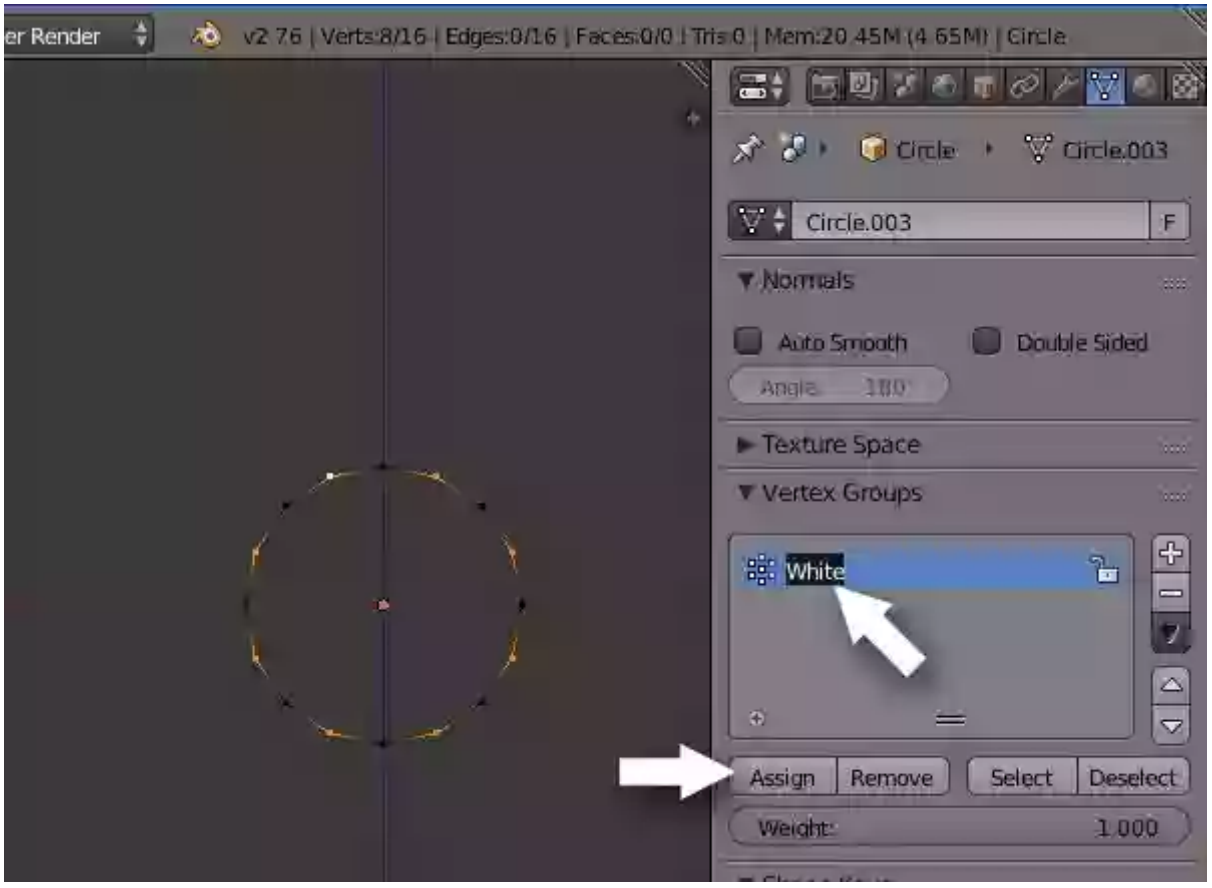
- Click on the **Object Data** button in the properties window.
- In the **Vertex Groups** panel, click the **+** button to add a new vertex group.



Select alternate vertices and create new vertex group

Double click on the name and rename this group. I named it **White** as for me these will be the ones with white material.

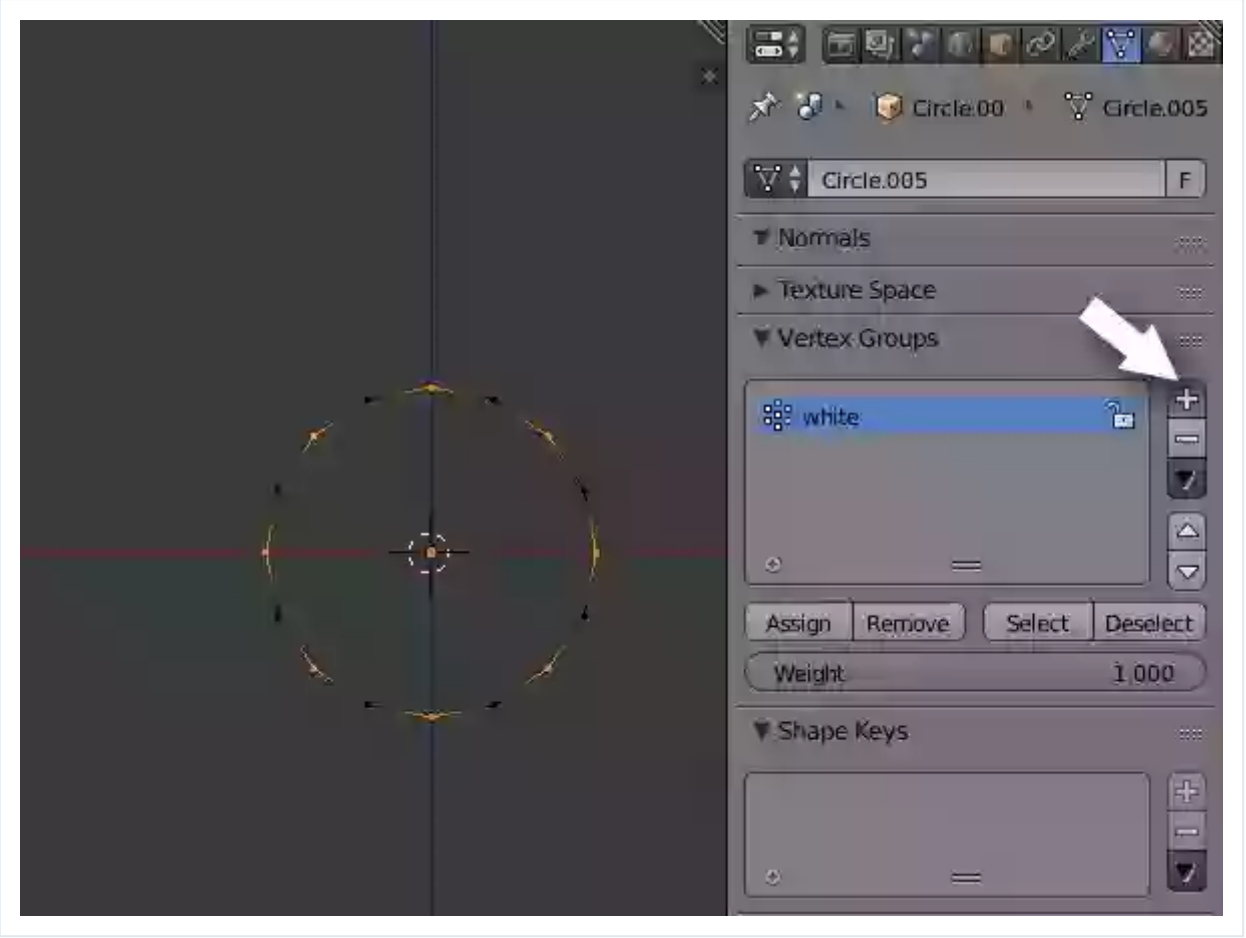
Click on **Assign** button. This will assign the selected vertices to the group named **White**. Ensure the **Weight** is **1**.



Assign the vertex group

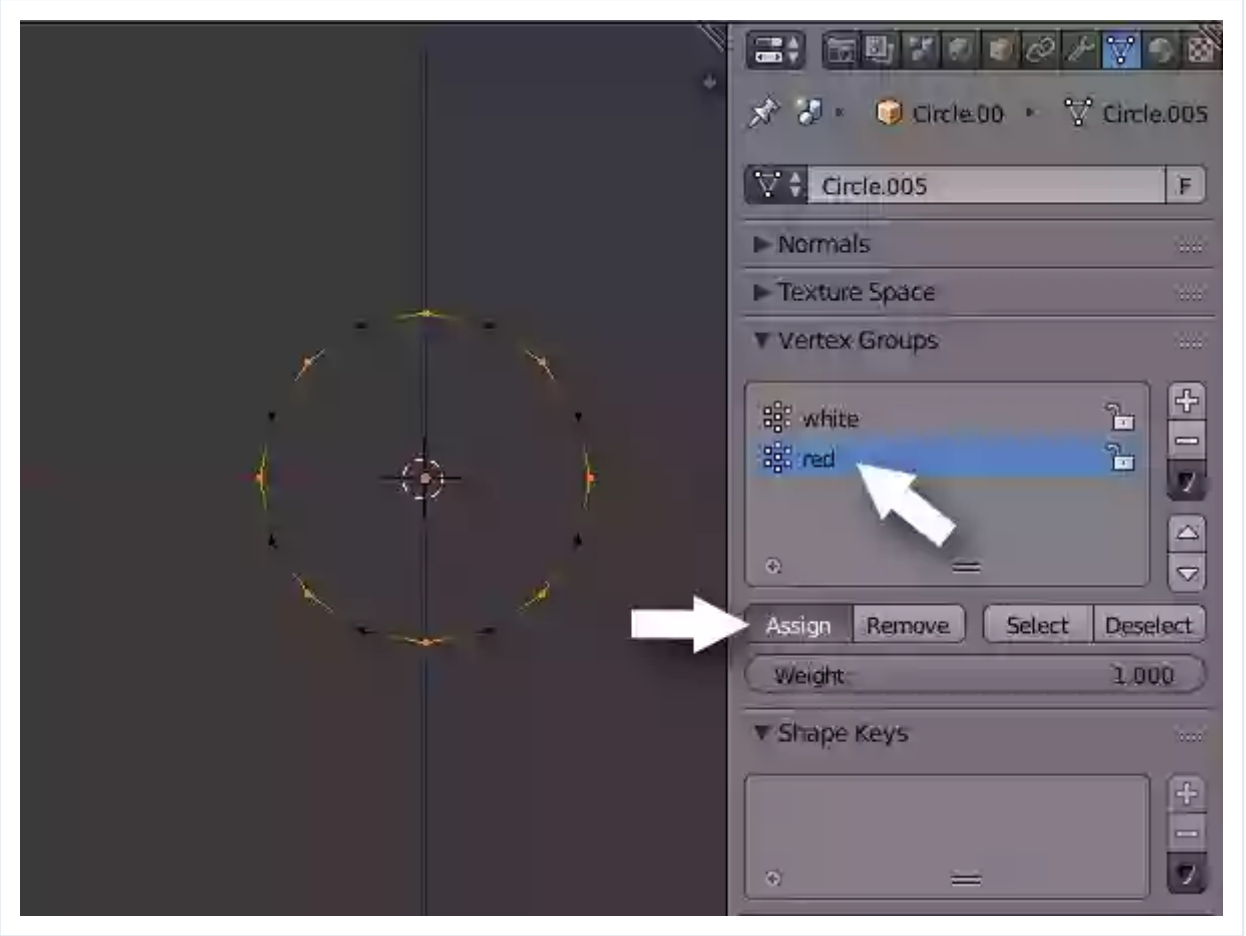
Step 3

Press **Ctrl-I** to inverse the selection. Click on the **+** button in the **Vertex Groups** panel to add a new group.



Inverse selection

Rename it **red** and then click **Assign**. You now have two vertex groups. These will be assigned different particle settings with different materials.



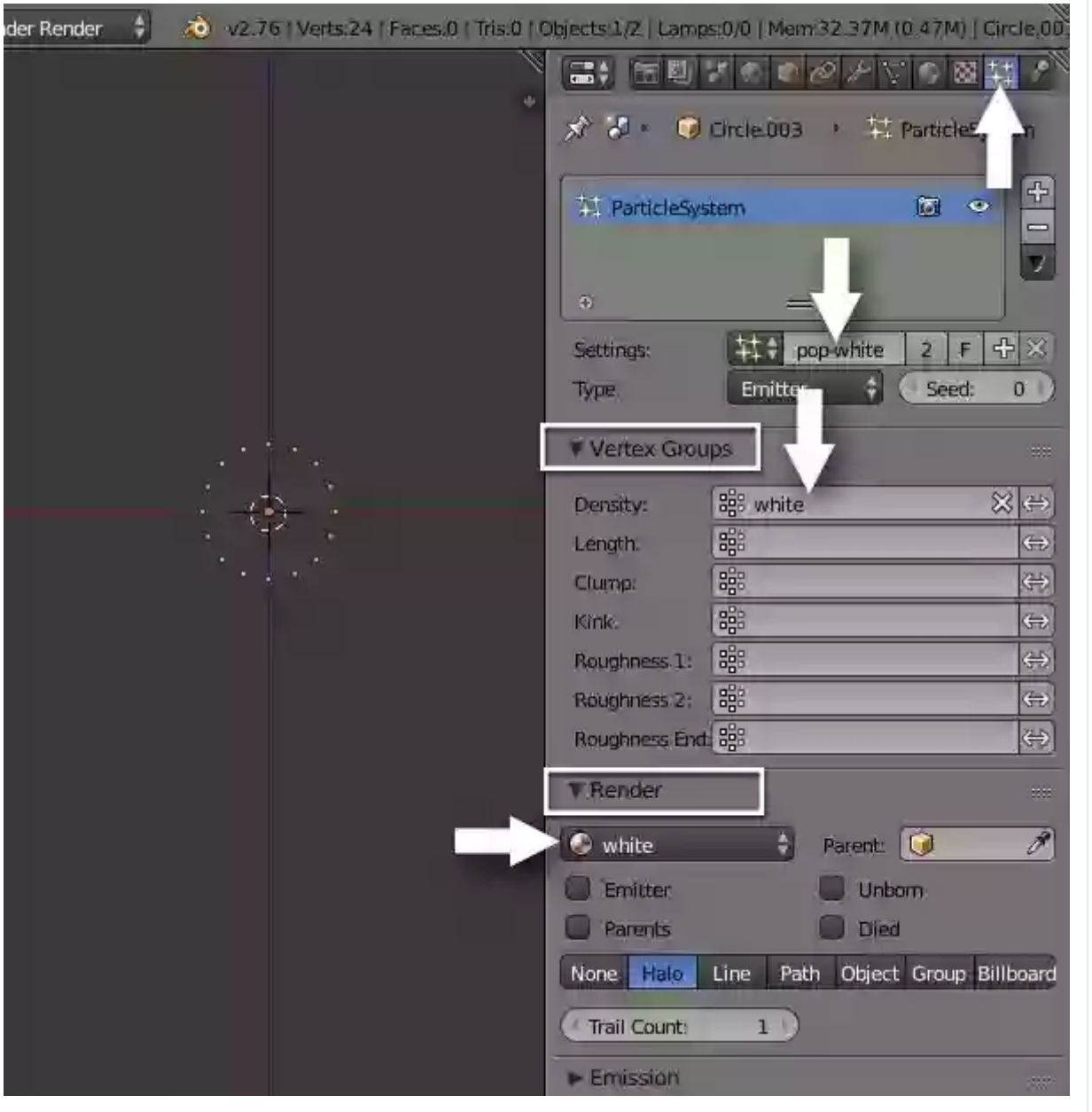
Assign selected vertices to new vertex group

Step 4

Click on the **Particle Setting** button in the properties window.

- Rename the **Settings** to anything you want. I named it **pop-white** as this will emit white particles
- In the **Vertex Groups**, select **white** vertex group you just created for the **Density**. By doing so, only the vertices belonging to the group named **white** will have the particle setting named **pop-white**
- In the **Render** Panel, Choose **White** as the material. This was

- In the **Render** Panel, choose **White** as the material. This was already created



Particle settings

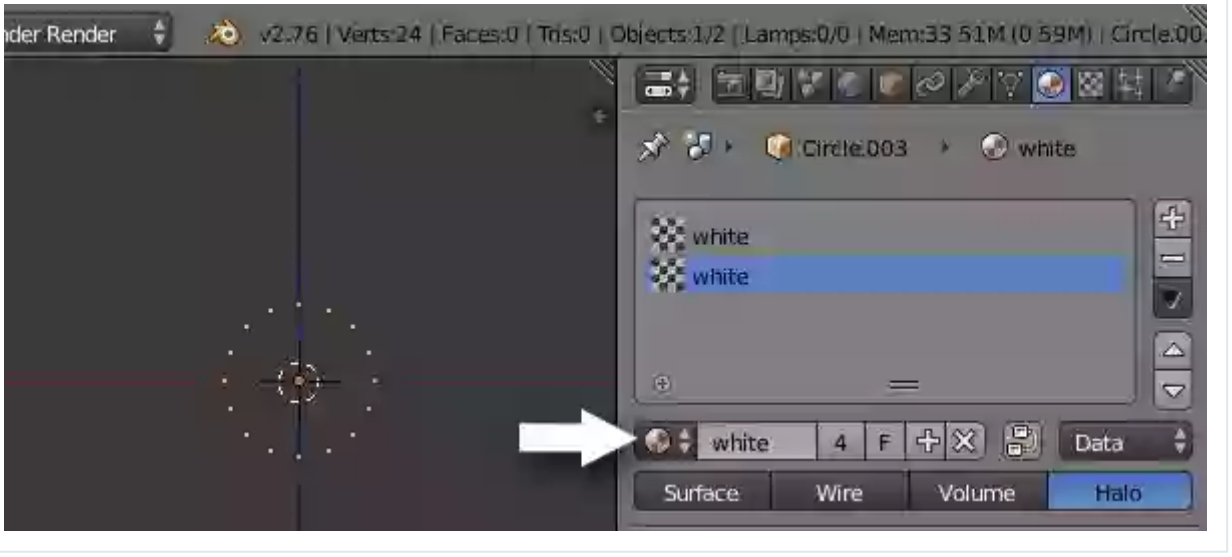
Step 5

Click on the **Materials** button in the properties window. Press the + button to add another material slot

+ button to add another material slot.

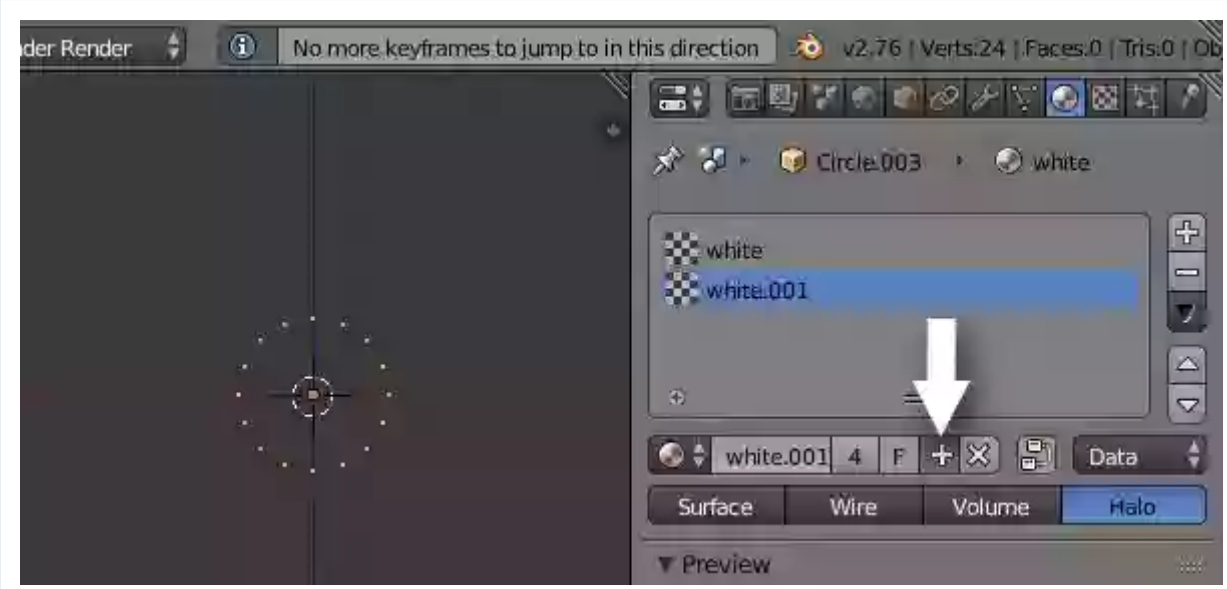
Adding new material

Click on the browse button and select the **white** material i.e. the previously created material.



Adding new material

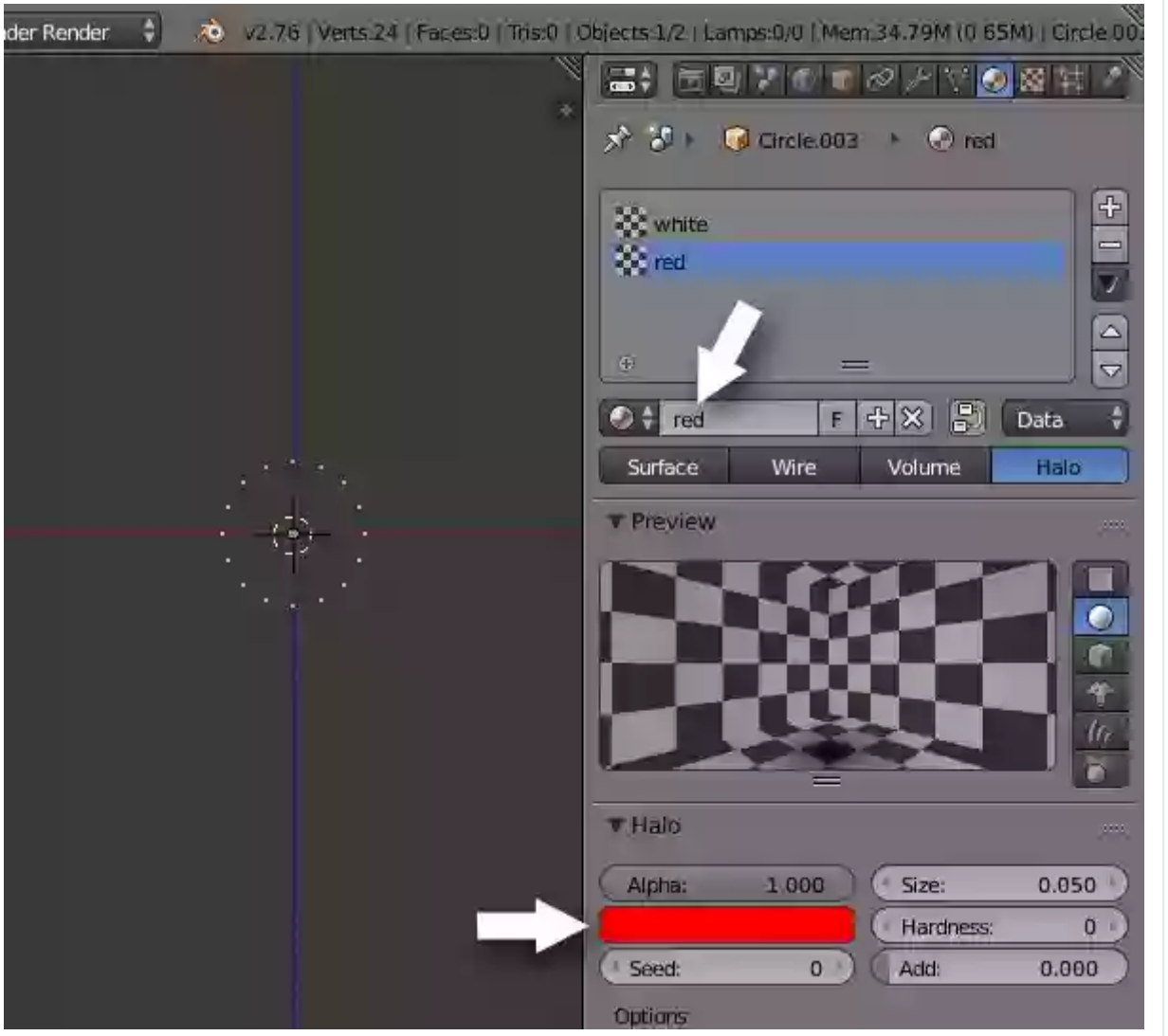
Click on the **+** button to make a copy of the material.



Making the material single user

Step 6

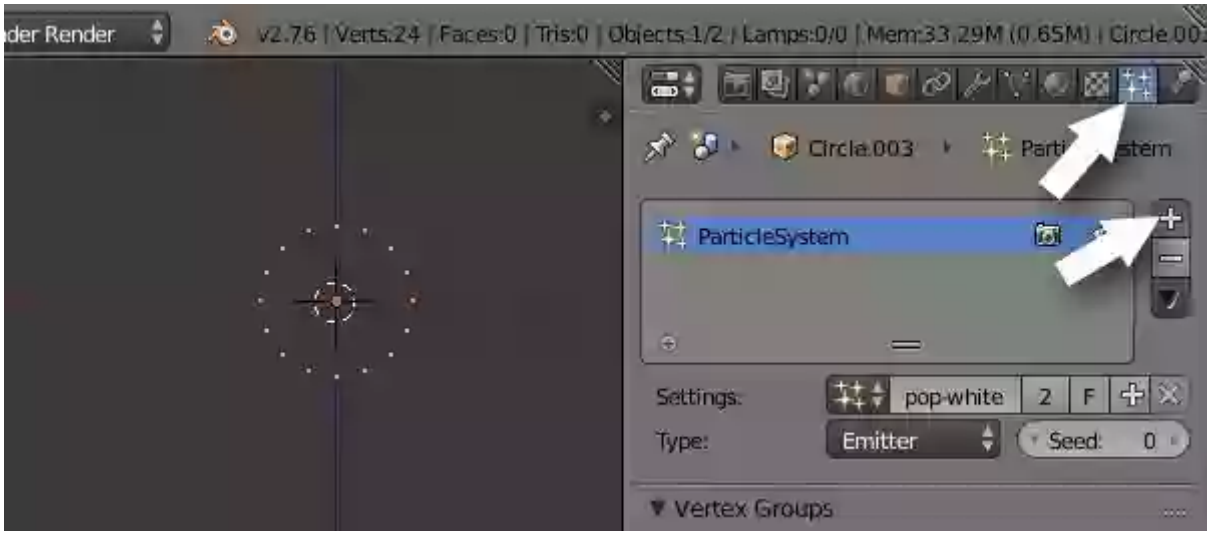
Click on the name to rename the material. I named it **red**. In the **Halo** panel, click on the colour bar and choose a colour.



Renaming the new material

Step 7

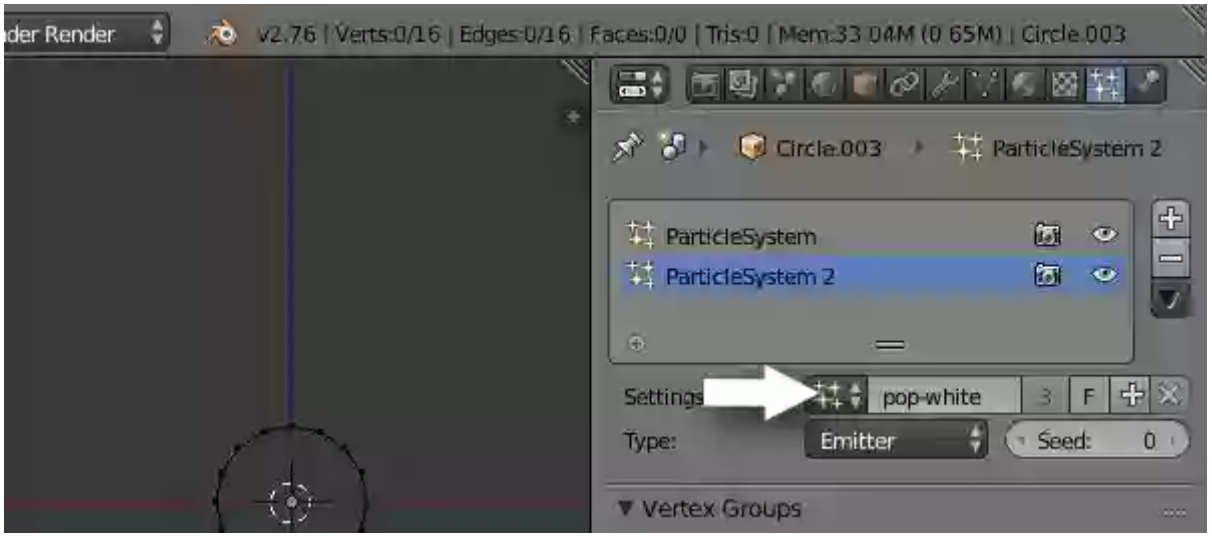
Go back to the **Particle** settings by clicking on the particles button in the properties window. Click on the **+** button to add another particle system.



Adding new particle setup

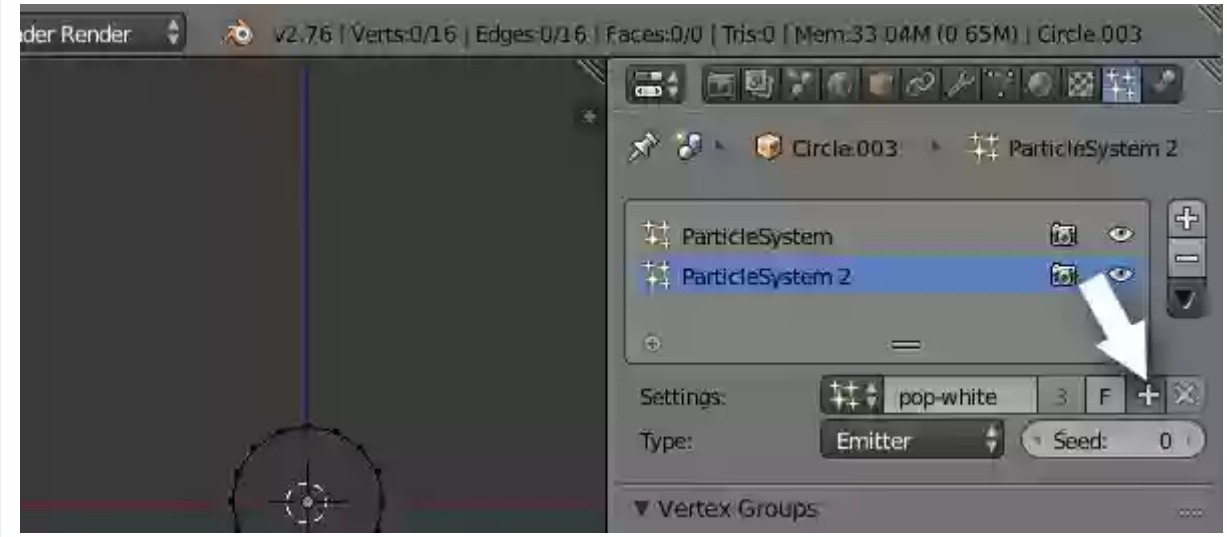
Step 8

Click on the browse button and select previously created particle settings—**pop-white**.



Particle settings

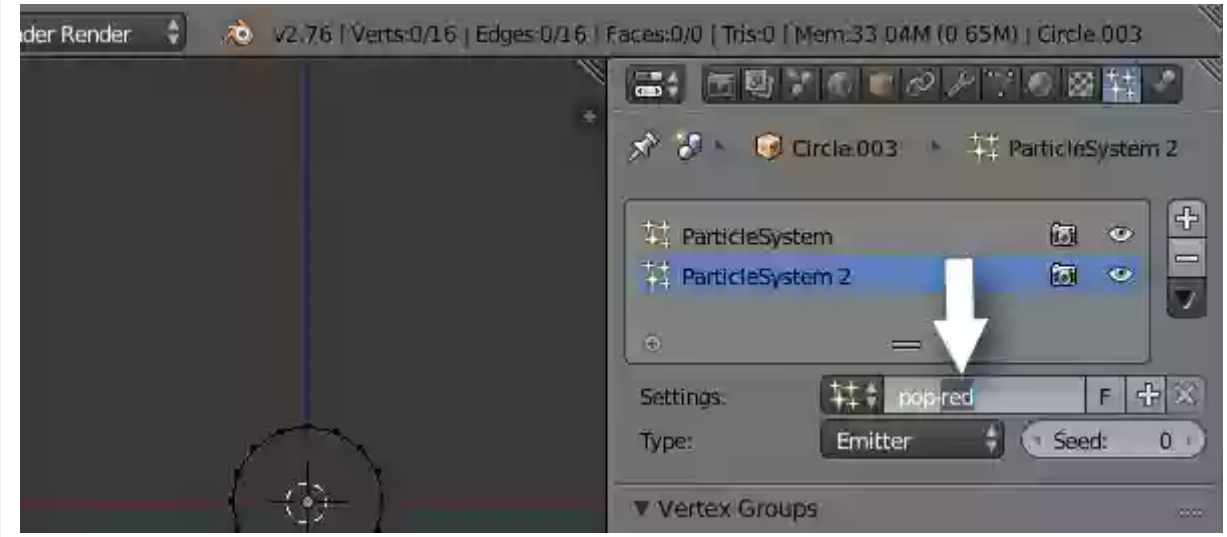
Press the **+** button to make a copy of it.



Particle settings

Left click and rename it to **pop-red** or whatever you want.

This new particle settings will have the same settings of the previously created one so you don't need to redo those again.

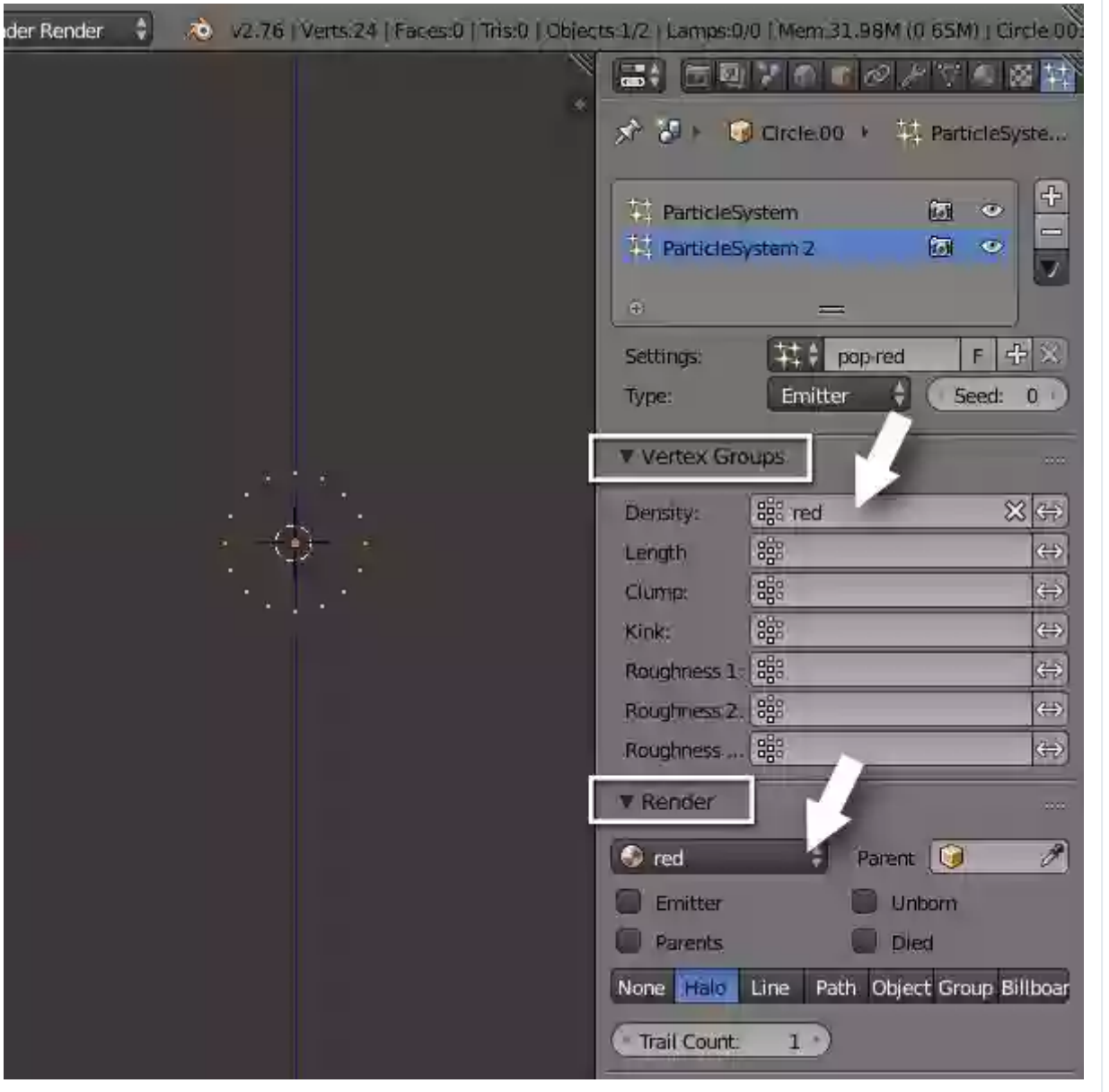


Renaming new particle settings

Step 9

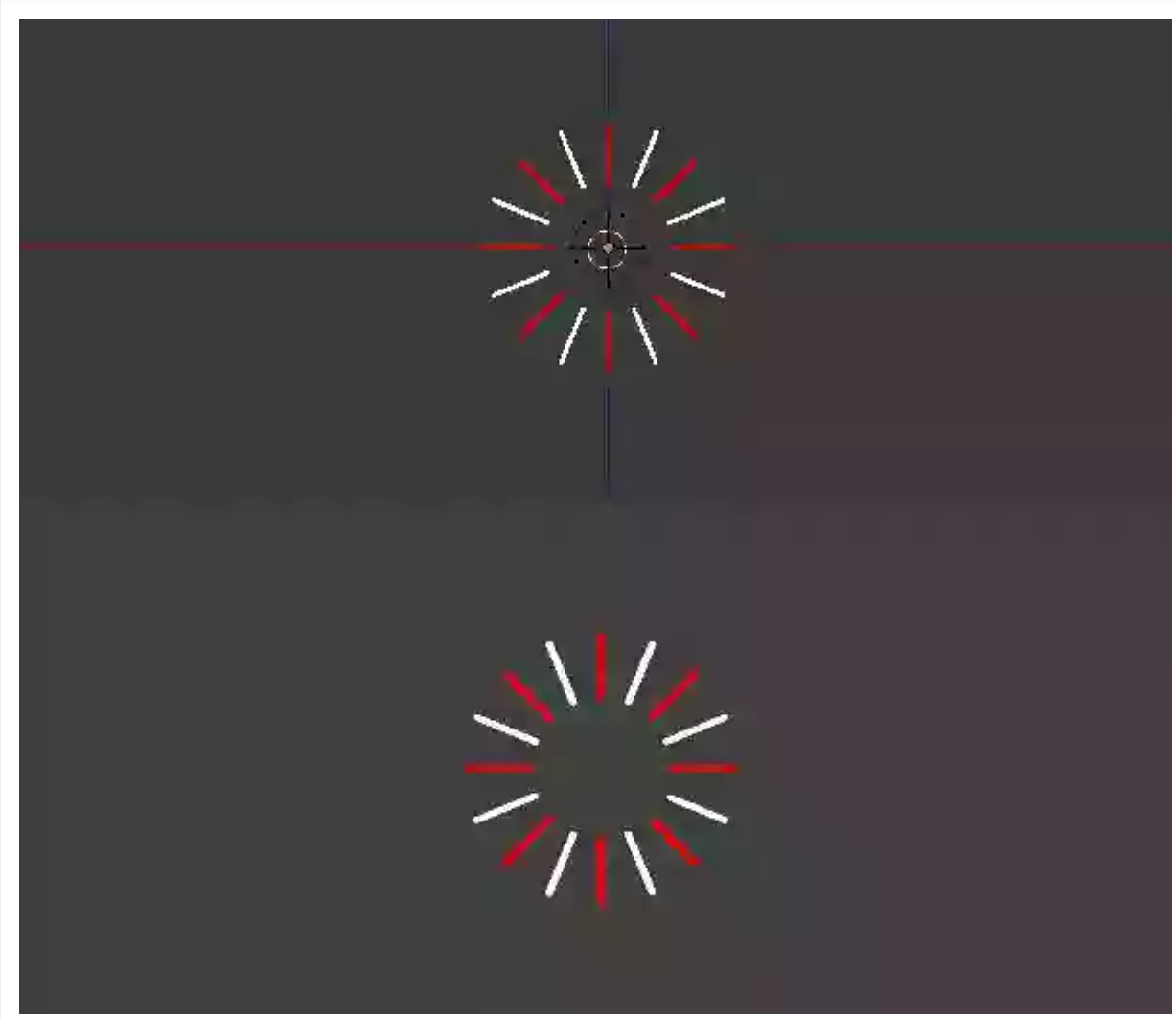
I want this particle settings to emit from the vertices which were grouped and named **Red**.

In the **Vertex Groups** panel, select **Red** for **Density**. Also in the **Render** panel, select the **Red** material you created for this particle settings.



Assigning vertex group to particle setup

Press **Alt-A** to play the animation. You will see that the circle have two particle system each with their own material.



Render preview

Karan Shah

Karan Shah is a 3D Artist and Animator from India. He is a BFA Graduate with specialization in sculpture. An inclination towards the digital medium made him a self taught computer artist. He is a currently freelancing..

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4 years ago

NIce work wonder how to make this with cycles.

Reply

psychorat ➚ antOons
4 years ago edited

You have to create an icosphere, assign an emission shader on it and move it out of view (or in different layer).
Then in the particle settings of the circle use "object" instead of halos and set the icosphere as the particle object.

Edit: If you still want to use particle halos with cycles, you need an object (like a cube) to act as a domain and use a "point density" node on that object, set the circle's particle system as the point density source. Set the radius, resolution as you like and space to "World space". Use this node to feed an emission shader and plug the emission shader to the Volume socket of the material output. While this works, doen't give exactly the same effect and you can't customize much

Reply

Leonardo Nascimento
4 years ago

I have to try it.
Trying it now.
Done.
View

Reply

Bobby Friend
4 years ago

A very good tutorial,and thanks for posting.

Reply

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