

Introduction

Create a 3D model of a snowman using Blender!

What you will make



What you will need

Hardware

- A desktop or laptop computer capable of running the Blender software

Software

- [Blender](#) (v2.73 or higher)

License

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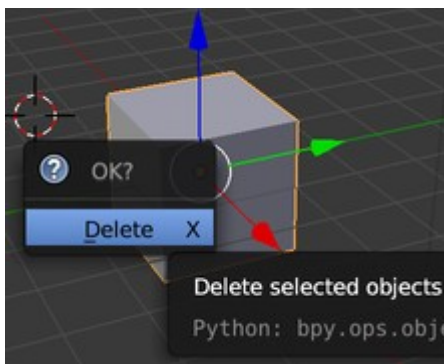
Step 1: Snowman's bottom

✔ Activity Checklist

- Open Blender.
- For this tutorial we won't be needing the splash screen, so click to the right and the splash screen will disappear.

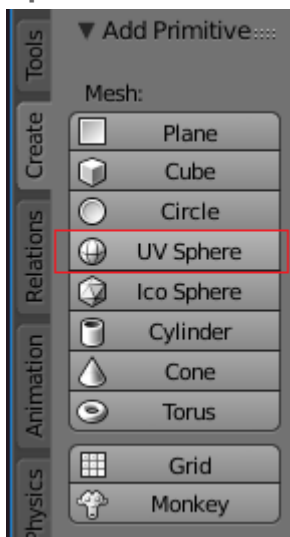
To create a snowman, we won't be needing a cube. Instead we need to add a ball or sphere.

- Remove the cube by selecting the cube, pressing x, and then pressing Enter.



Now we need to add a sphere.

- On the left-hand panel, go to the **Toolbox**. Select the **Create** tab, then select **UV Sphere**.



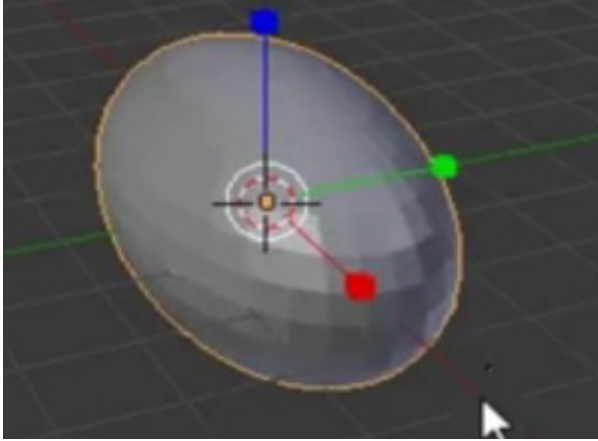
By adding the UV Sphere, we have created a nice round bottom for the snowman.

- To see what it looks like, press F12 (or if you're working on a Mac, FN + F12) to render your image.
The snowman's bottom looks a bit too small, so let's resize the UV sphere.
- Press ESC to exit the render view.

- Make sure the UV sphere is selected, then use the blue, green, and red handles to resize it. For this we need to use the cube ends (the resize tool) instead of the arrow ends (the move tool).

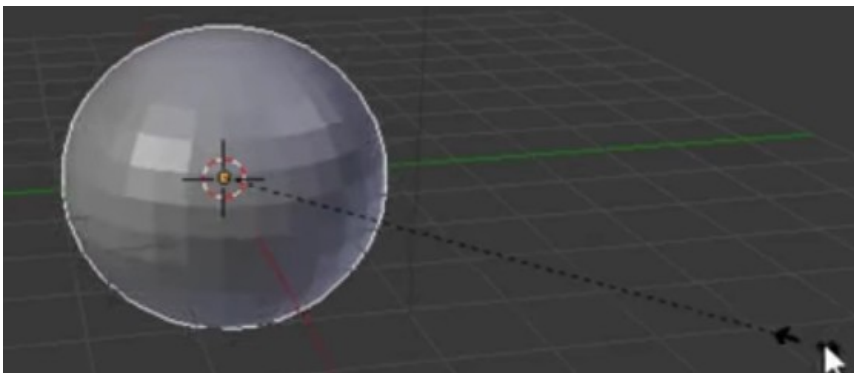


You'll probably notice that it's hard to get the proper shape using the handles. It might end up looking like a giant egg. For example:



However, there is another way to do this.

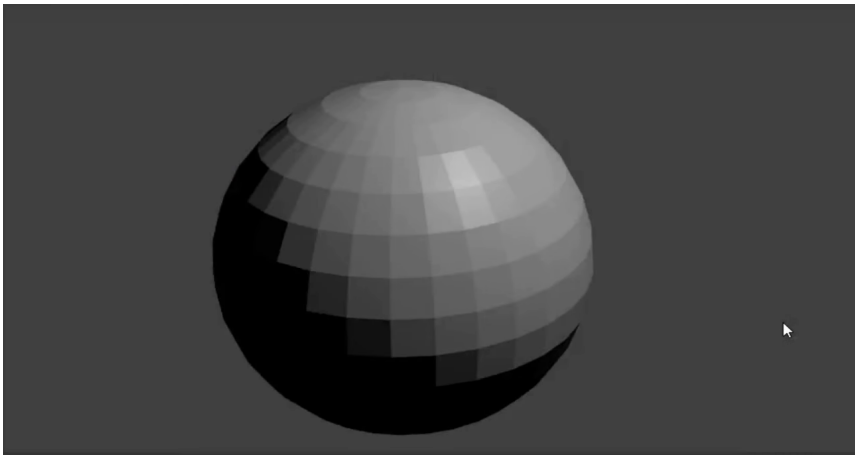
- First, remove the UV sphere and add another one.
- Make sure your mouse is in the 3D view and the new UV sphere is selected. Press `s` — now you can uniformly resize the UV sphere by just dragging your mouse.



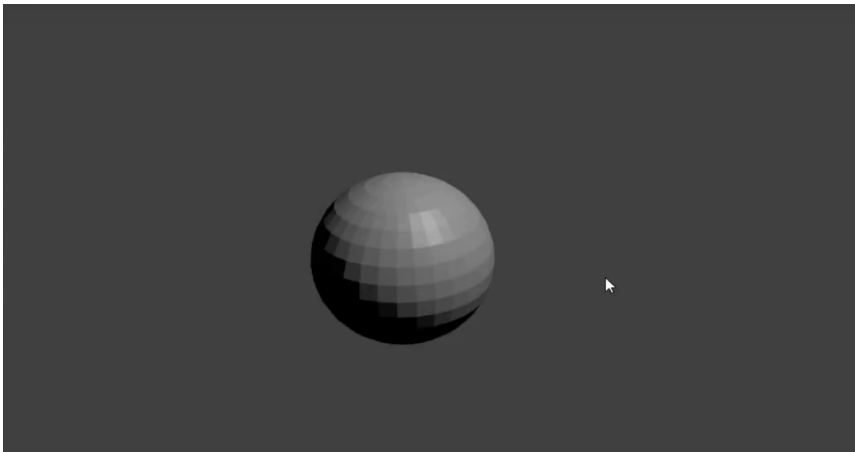
When it's as big as you want it to be, just left click to confirm the size.

You can check the size of the UV sphere by rendering it.

- Press `F12` or `FN + F12` if you're working on a Mac. Check the size of the UV sphere, then press `ESC` to exit the render view.




If the sphere looks too big, resize it again by pressing `s` and then dragging the mouse. Render to see if the size is appropriate. For example:

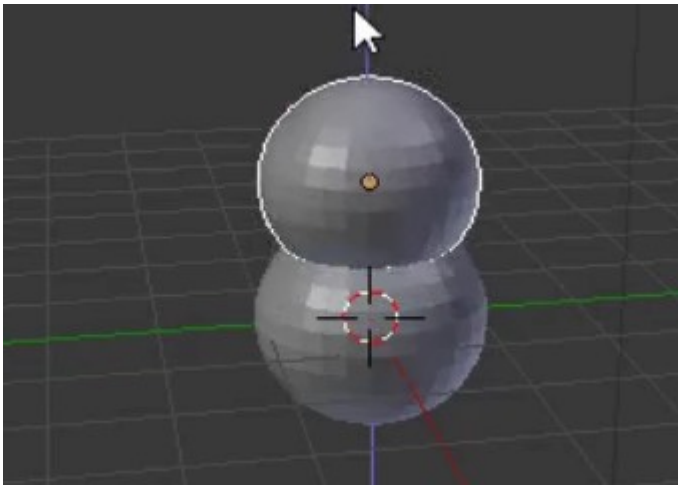


Step 2: Snowman's head

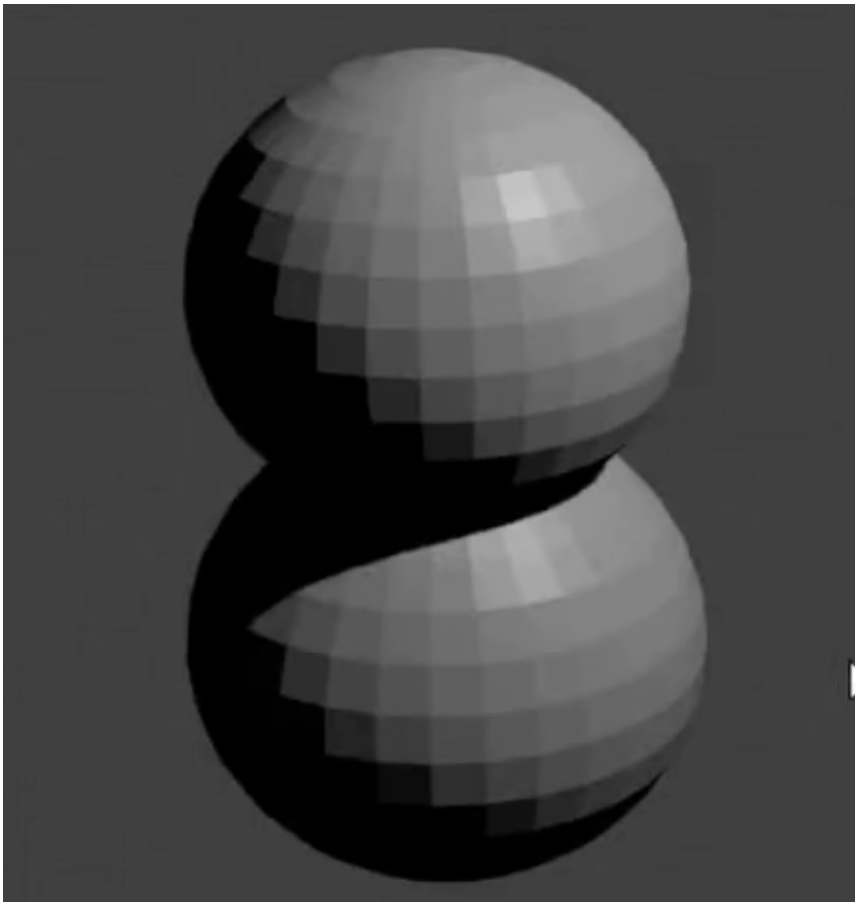
Now we need a head for the snowman.

✔ Activity Checklist

- Add another UV sphere.
If it looks like no new sphere has appeared, don't worry — you might not be able to see it, because it was added inside the snowman's bottom. We need to drag it out.
- Select the arrow ends (move tool) from the bottom menu.

- Drag the UV sphere out using the blue handle (z-axis), and place it on top of the other sphere to make the head.



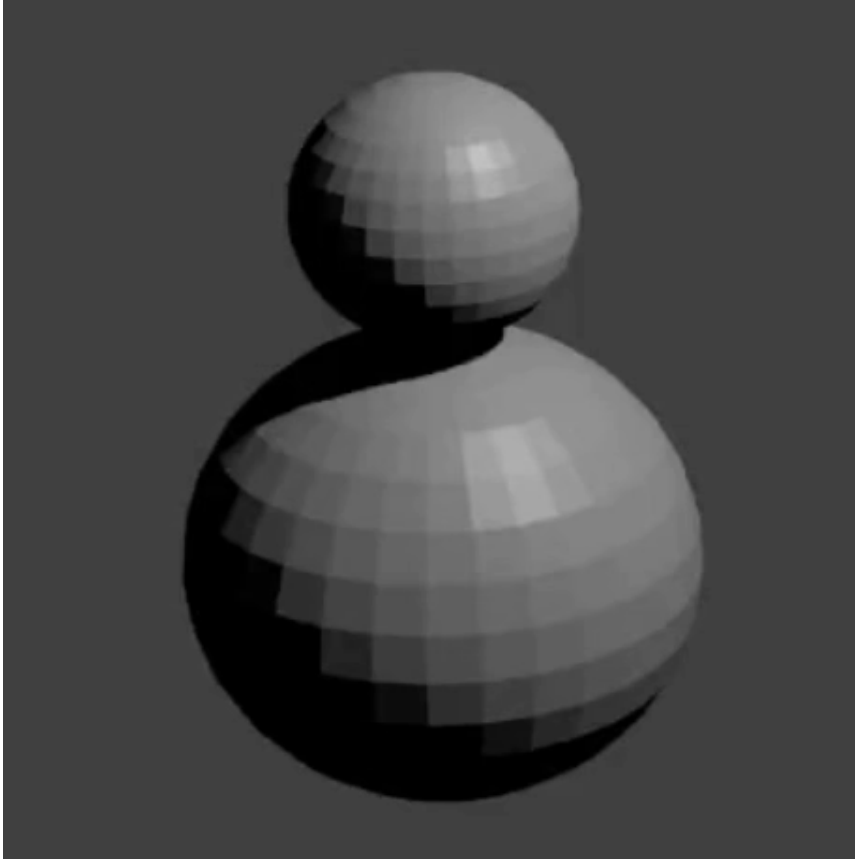
- Now render your image to see what it looks like. For example:



The head may look a bit big, so let's shrink it down.

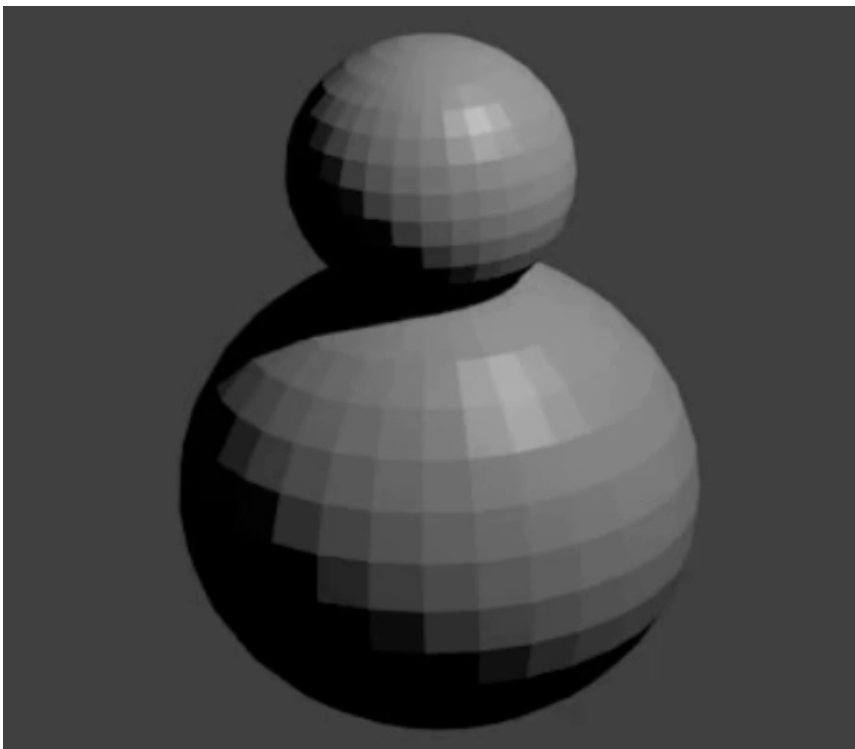
- Press `ESC` to get out of the render view.
- Select the head UV sphere, then press `s` to resize the object. Drag and move the mouse towards the centre of the object to make it smaller.

- Render again to see what the image looks like. For example:



If the head is too small or large, resize it to make it look right.

- The head might not be stuck onto the snowman's bottom in the right position. Move the head onto the bottom using the handles. Check what it looks like by rendering the image. For example:

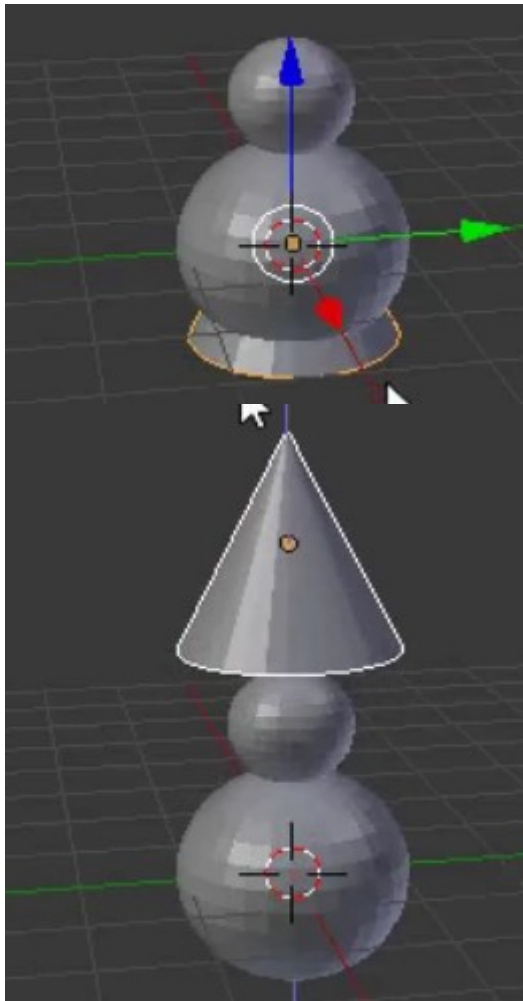


Step 3: Snowman's nose

Usually a snowman's nose is made of a carrot — we'll use a cone for it.

✔ Activity Checklist

- G to the Toolbox and select **Cone** from the **Create** tab.
- The cone will probably be added inside the bottom again, so use the blue move handle to move it up.

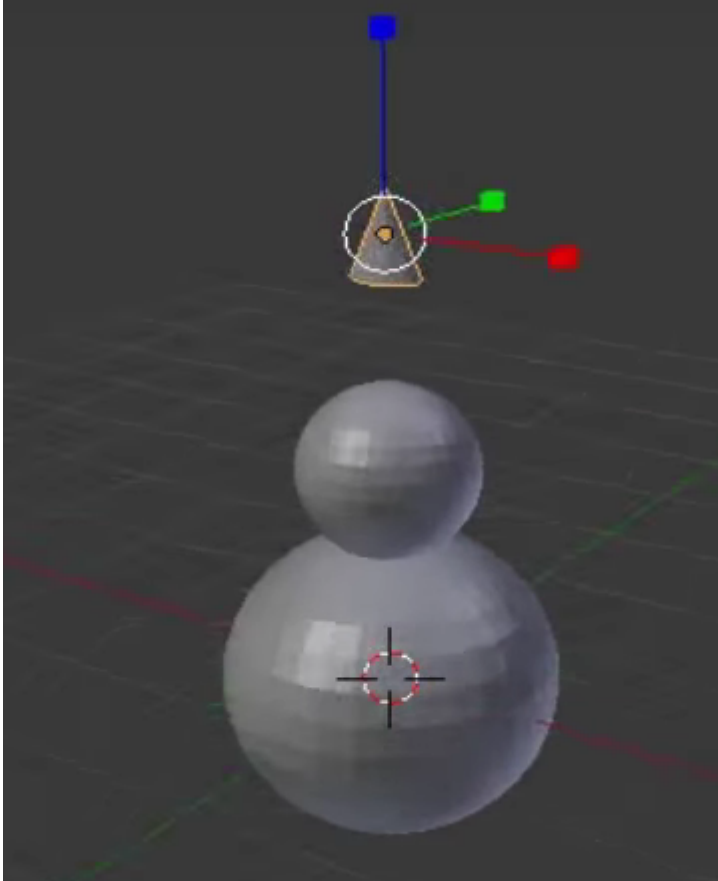


The cone might look too big to be the nose, so you need to resize it.

- Resize the cone either using the shortcut key **s** or the cube end handles, which might be a bit handier for this purpose.



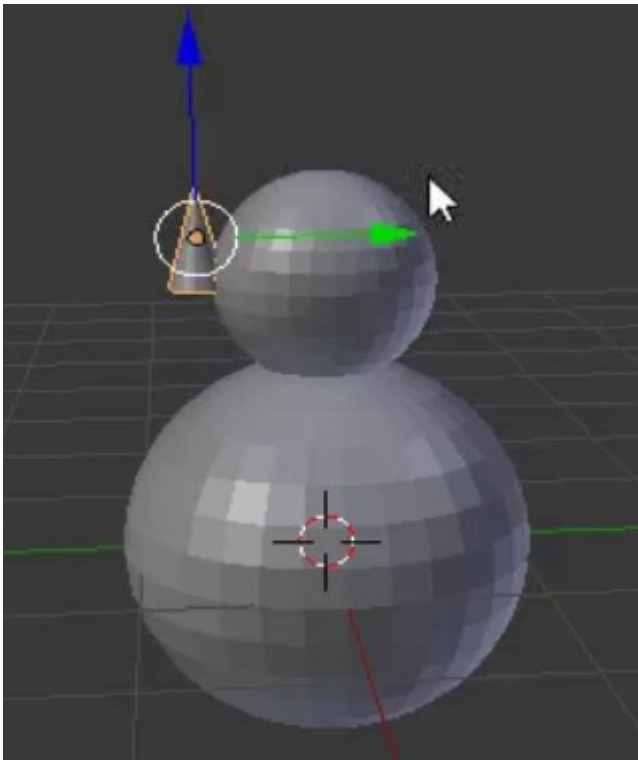
For example:



After you have resized the cone, use the move handles to shift it onto the side of the snowman's head, just where the nose should be:



For example:

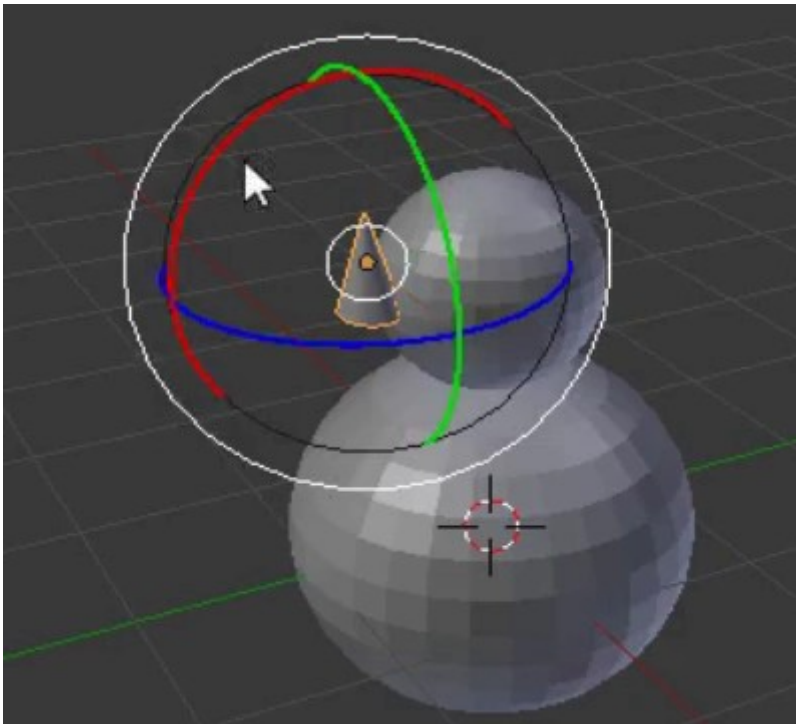


You need to rotate the nose to stick it properly onto the snowman's head. For this you will use the rotation tool.

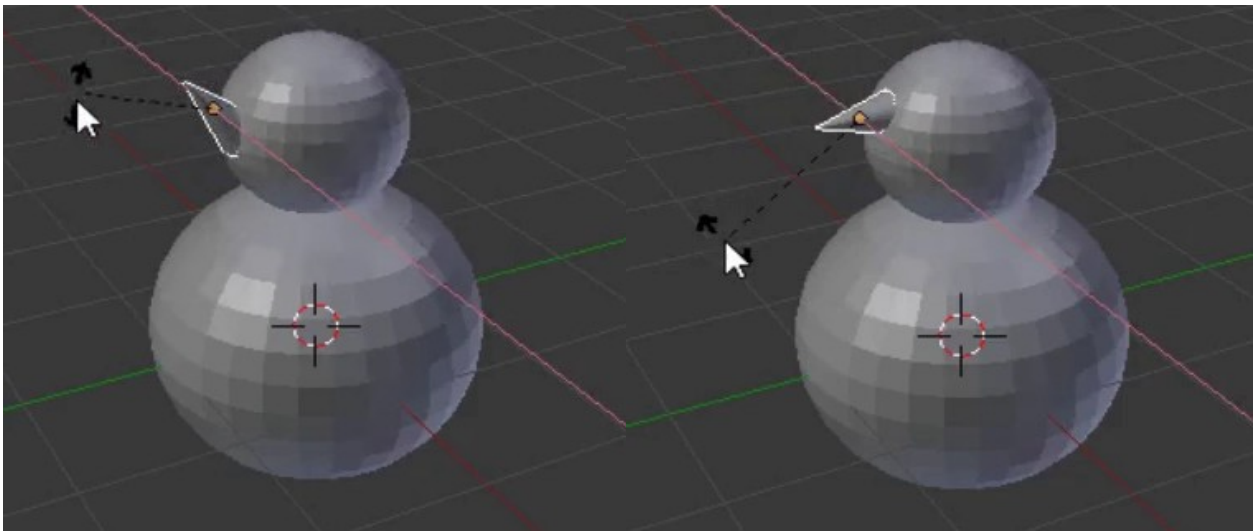
- Make sure the nose cone is selected, then select the rotation tool (the arc) from the lower menu.



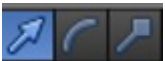
You'll see arcs or little curves that you can use to manipulate and shape the nose.



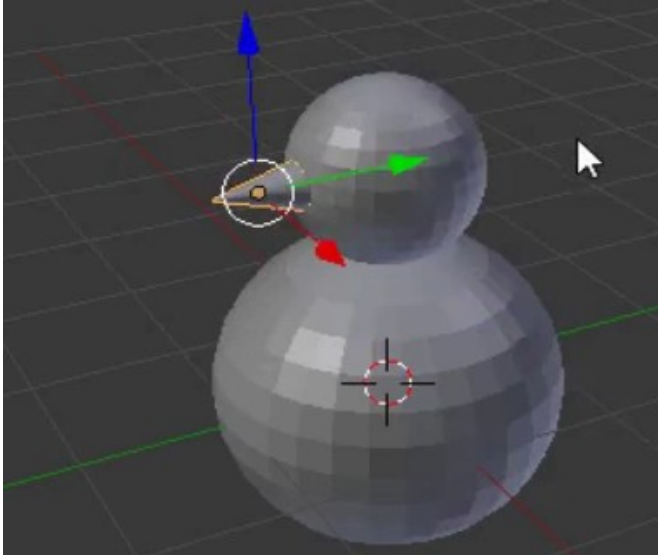
Use the curve (red, blue, or green) that will allow you to rotate the nose in the direction you want. For example:



- Switch back to the move tool.



- Position the nose properly using the blue, green, and red handles.



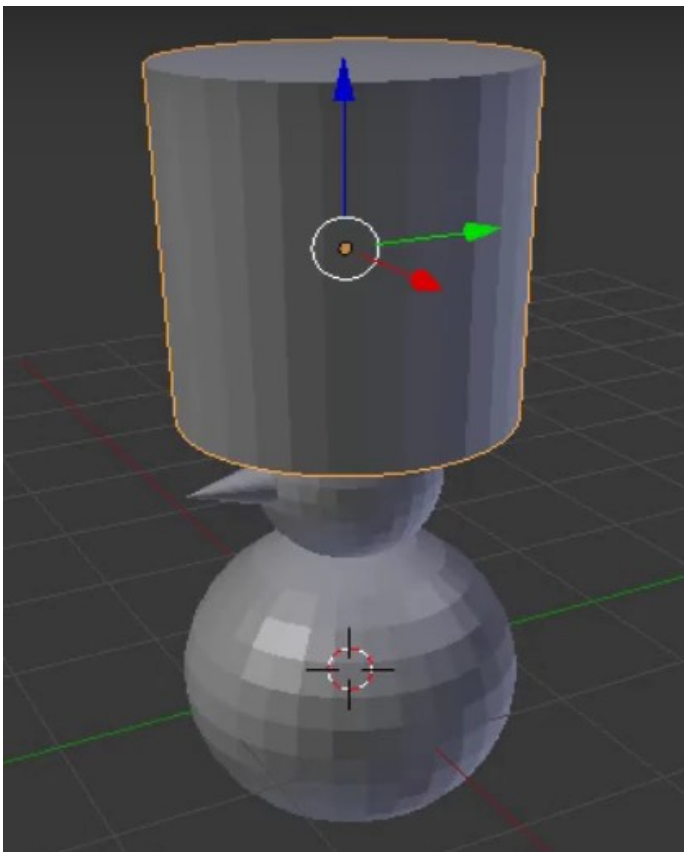
- Now render and check how the snowman looks. Is the nose positioned properly? Does your model resemble a snowman?

Step 4: Snowman's hat

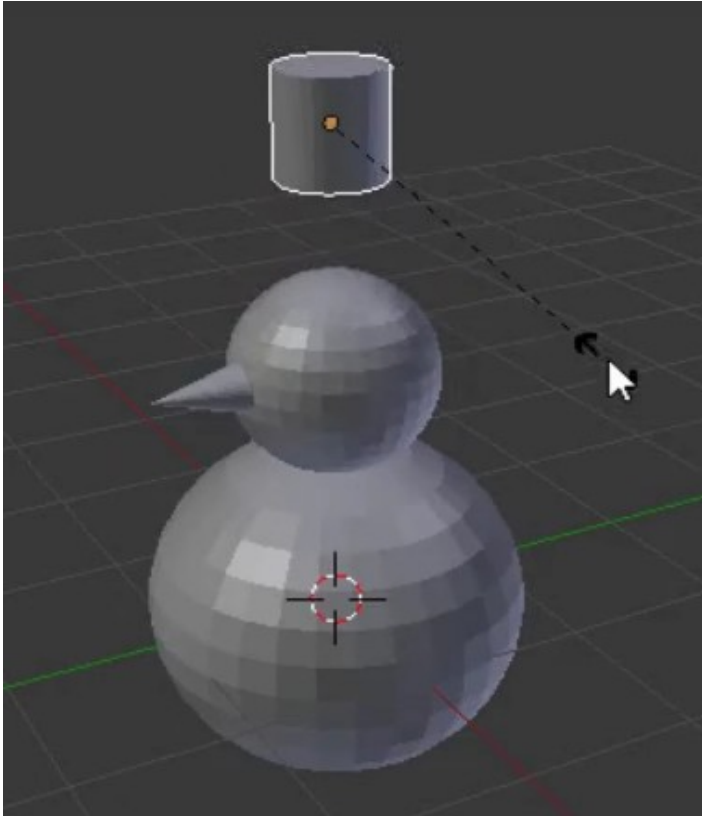
Now let's add a hat to the snowman. The hat will be made from a cylinder.

✔ Activity Checklist

- Add a **Cylinder** from the Toolbox's **Create** tab. The cylinder might be added inside the UV sphere, so once again use the blue handle to move it upwards.



- Resize the cylinder using the shortcut key s, moving the mouse towards the middle of the cylinder to make it smaller.



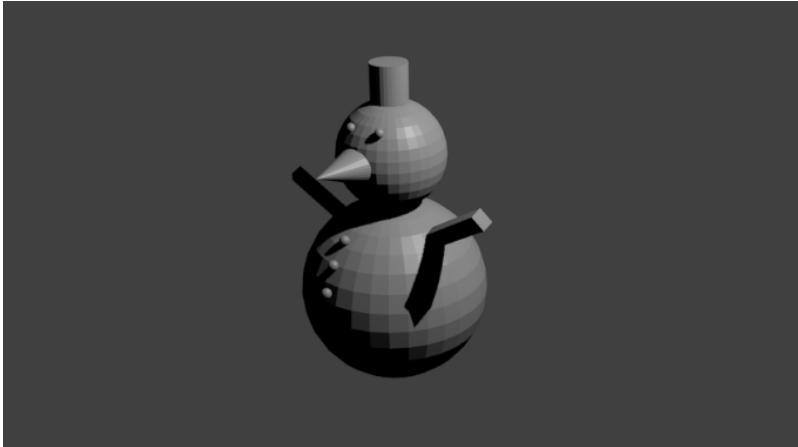
- Move the cylinder on top of the snowman's head using the blue, green, and red move handles.

- Render to see what the snowman looks like. For example:



Challenge: eyes, arms, and buttons

- Give the snowman some eyes, buttons, and arms.



- Perhaps you could add a scarf?