CAD Tutorial : Water Bottle

Design out the box

Time 20-30 mins approx

Level of difficulty ★★☆☆☆

By the end of this tutorial you will be able to…

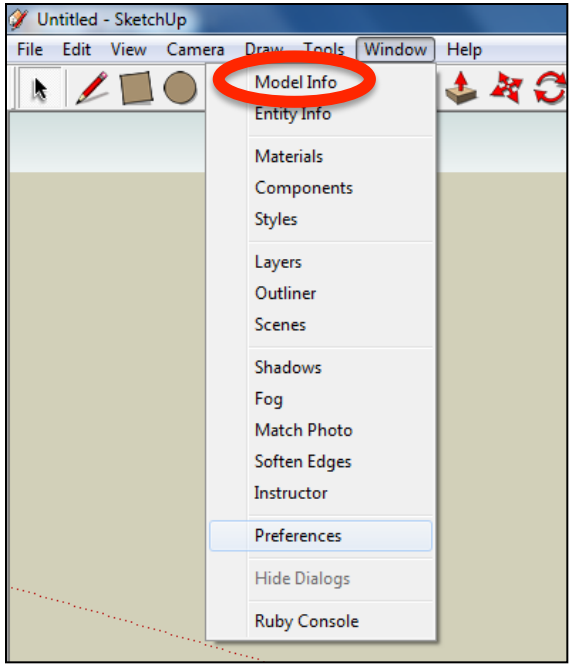
- Use the Follow Me tool to form a bottle shape
- Apply 3D Text to an object
- Colour and render an object
- Scale and resize models
- Make components

Skills to be used in this project…

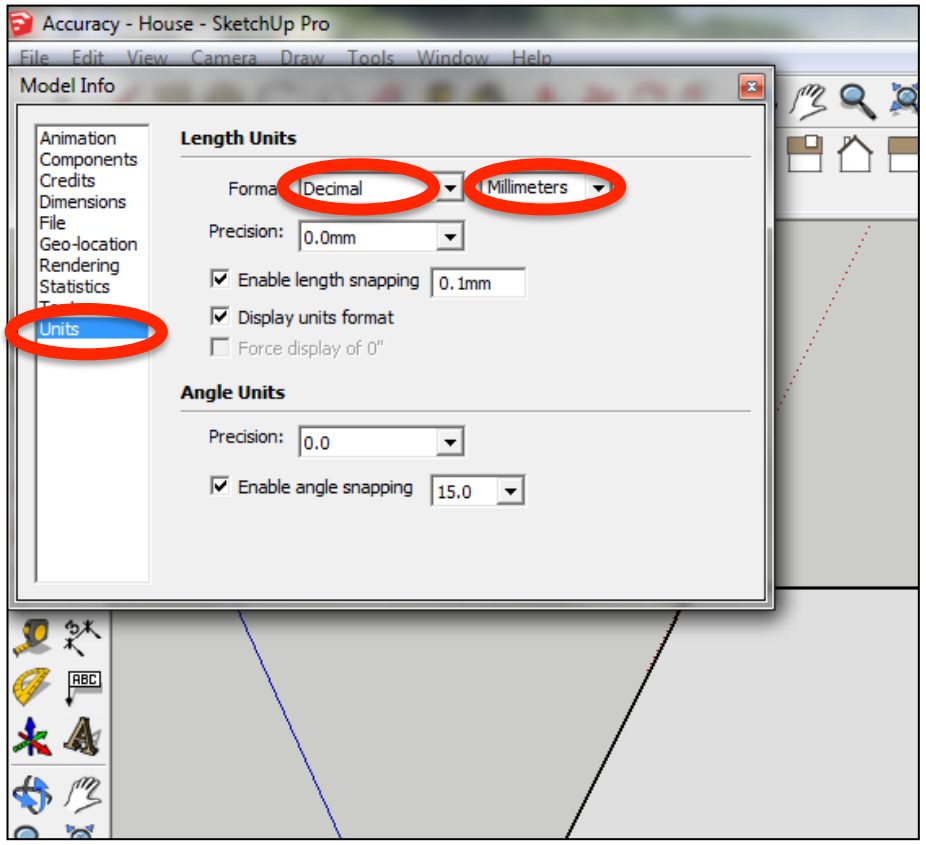
Basic Skills	New and Higher Skills
Zoom tool	Tape Measure tool (for construction points and resizing models)
Orbit tool	Access and use the Large Tool Set
Pan tool	Follow Me tool
Circle tool	Arc tool
Eraser tool	Scaling
Push/Pull tool	3D Text tool
	Paint Bucket tool
	Making Components

Basic skills are those required to do very basic drawings and are detailed as part of this presentation.

New and higher skills may be new to the novice and are the focus for learning in this presentation.



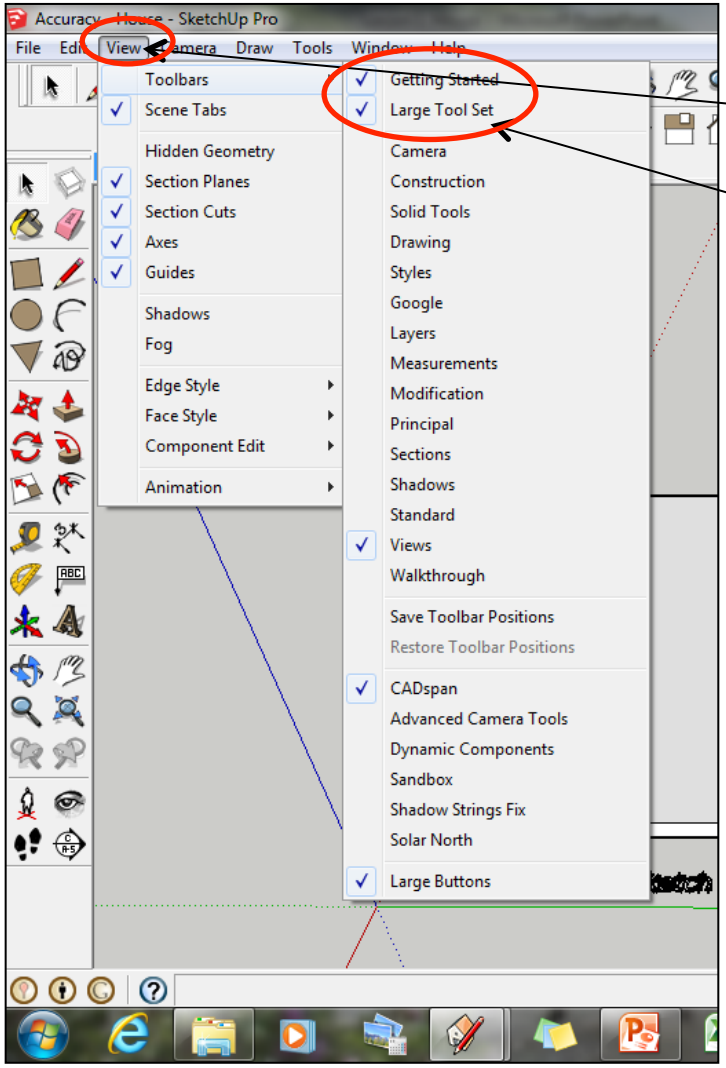
1. Open the sketch up drawing. Once you have opened SketchUp, go to **Window** and select **Model Info**



2. Select **Units** and choose **Decimal Millimetres**. We are using this template because we are doing a product design.

***Note**: It is often necessary to start a new file to use the new template. Go to **File** then **New**.*

3. Now select the **View** then **toolbars** and ensure **Getting Started** and **Large Tool Set** are ticked



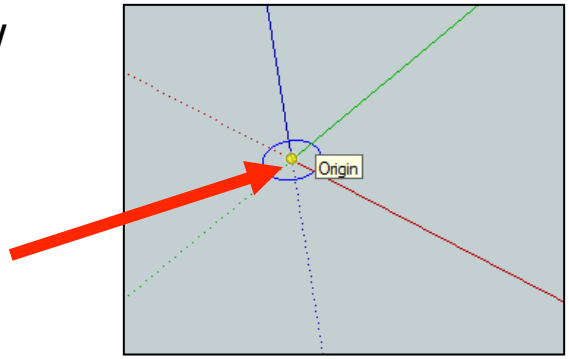
3a Select **View**

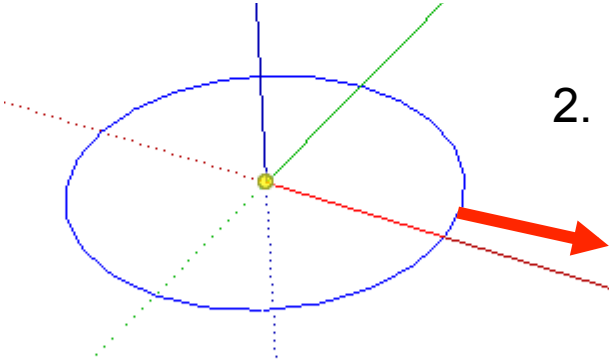
3b Tick Getting Started

3c Tick Large Tool Set

Note**: this will place a tool bar across the top **(getting started)** and the side **(Large Tool Set)

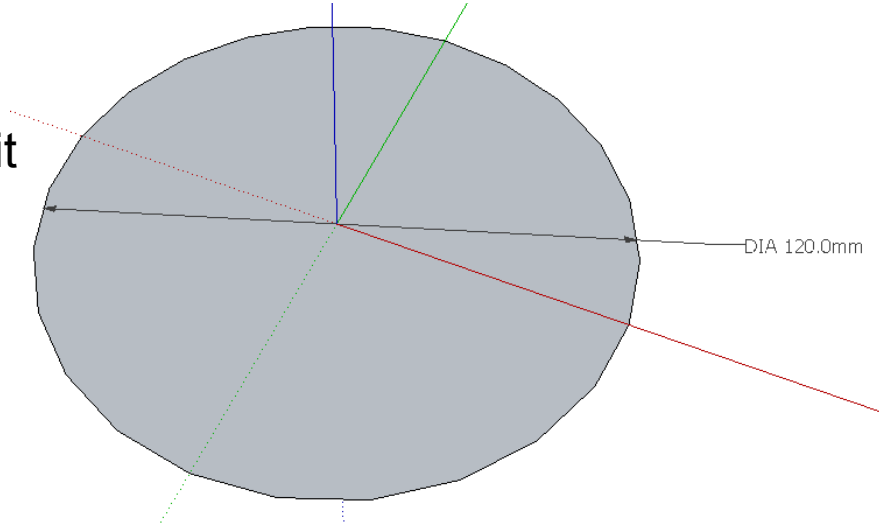
1. Select the ***Circle tool*** and draw a circle on the base, starting by clicking on the ***axis origin point for the circle centre***. *Look for the yellow dot that shows the origin point.*

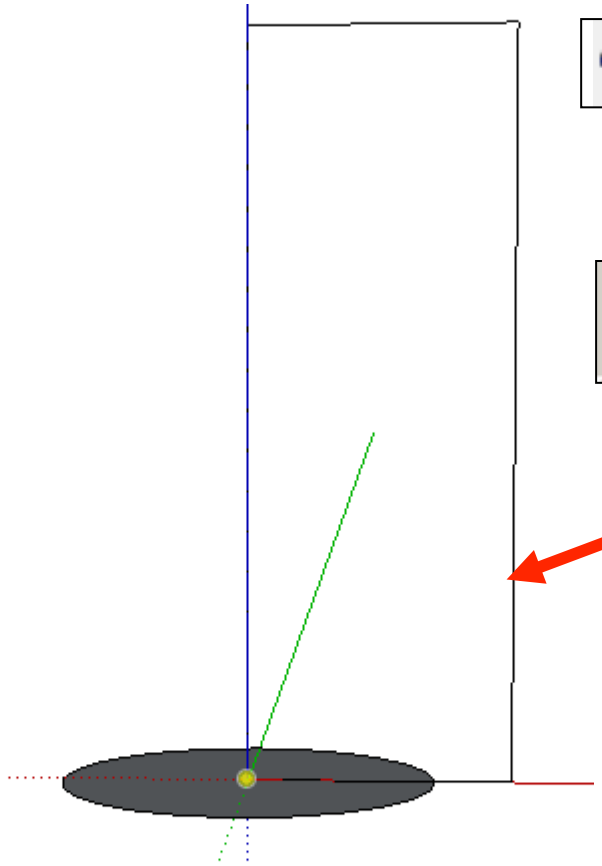




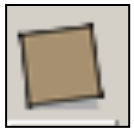
2. Using the ***Circle tool*** pull it outwards.

3. Using the ***Circle tool*** pull it outwards. Type in ***60*** and ***press enter***.

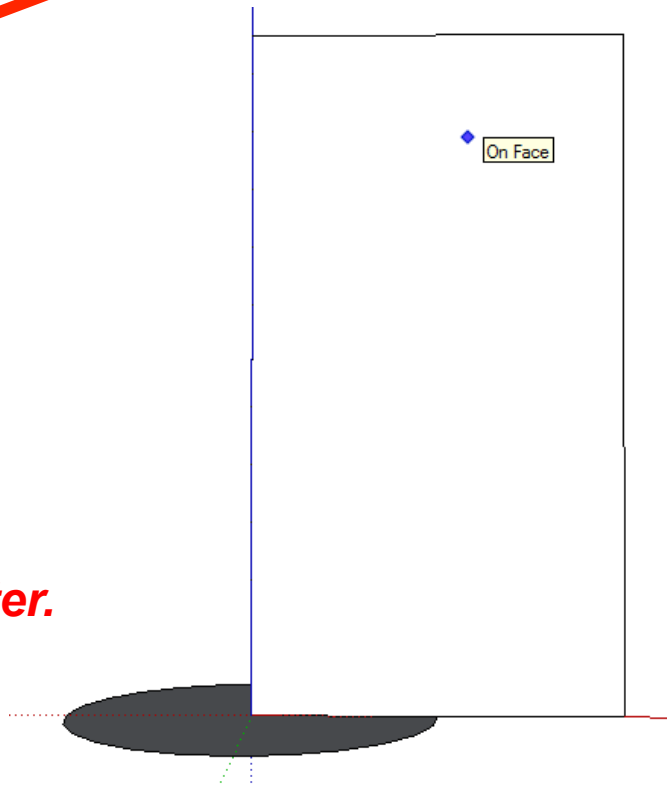




4. Use the ***orbit tool*** so you can position your drawing so you can see the ***horizon in the background***.

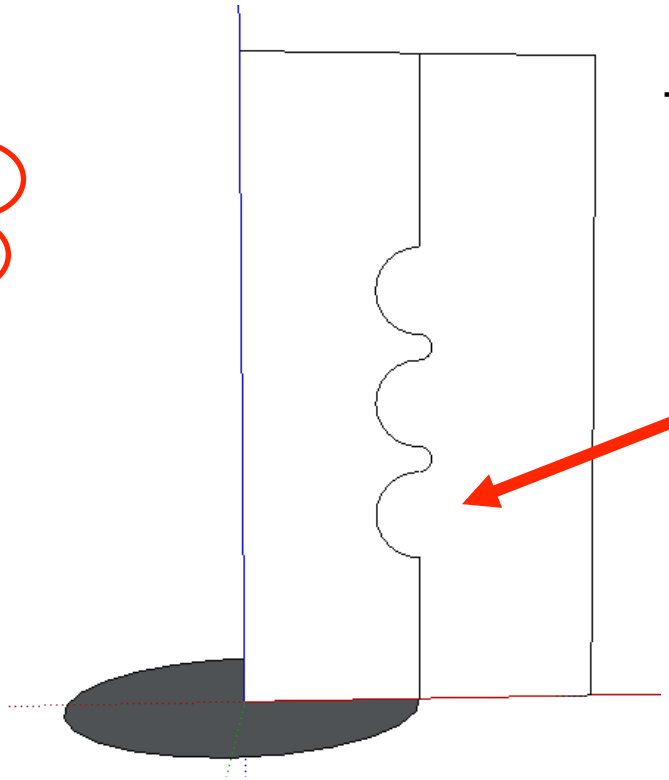


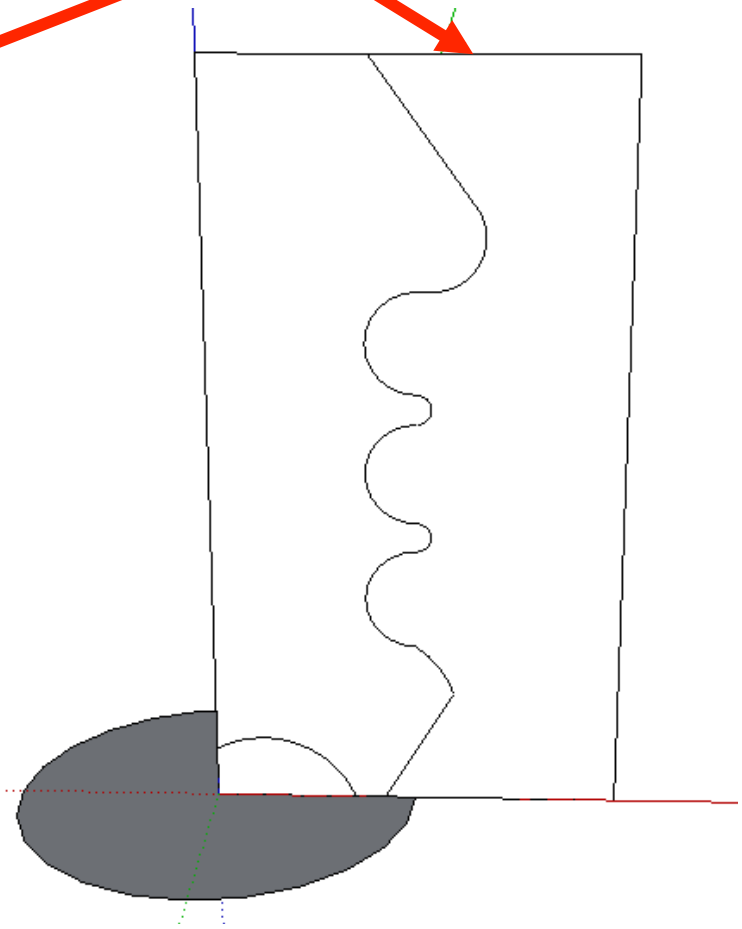
5. Select the ***rectangle tool*** and draw a rectangle from the centre of the circle ***vertically*** up in the air.



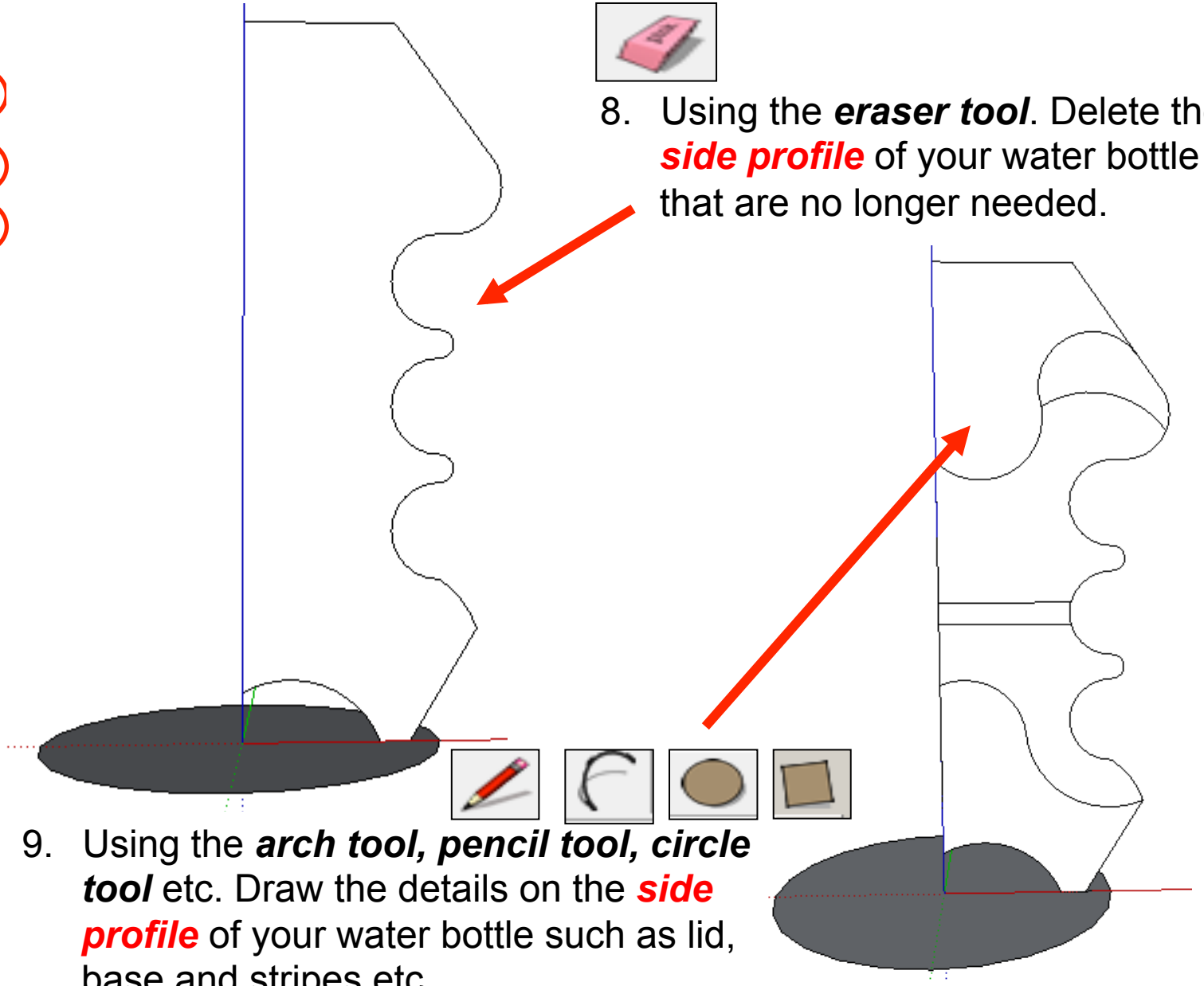
6. Type in ***120,220*** and press ***enter.***

7. Using the ***arch tool, pencil tool, circle tool*** etc. Draw the ***side profile*** of your water bottle.

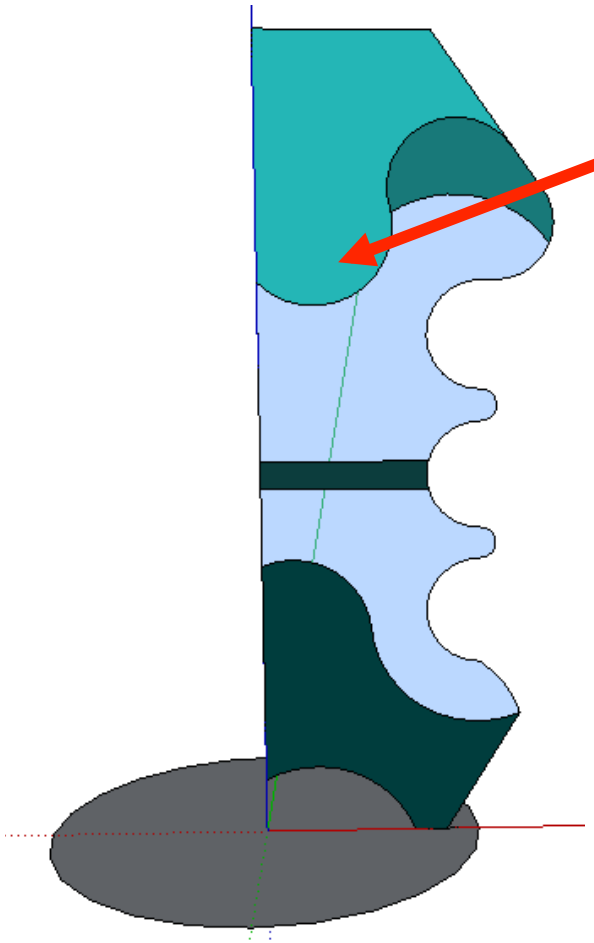




8. Using the ***eraser tool***. Delete the ***side profile*** of your water bottle that are no longer needed.

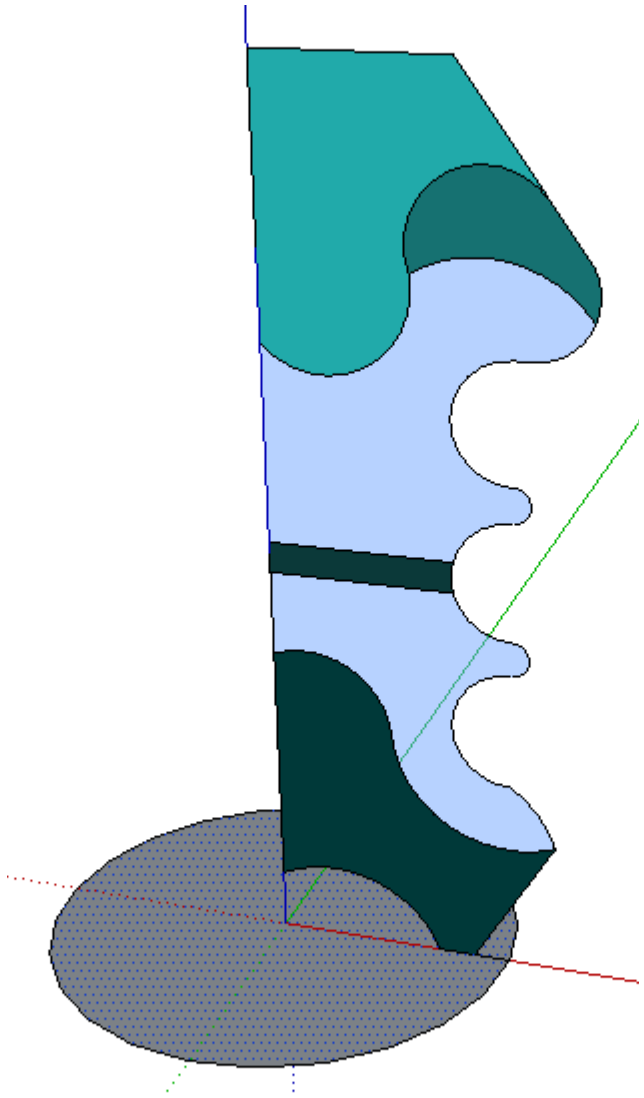


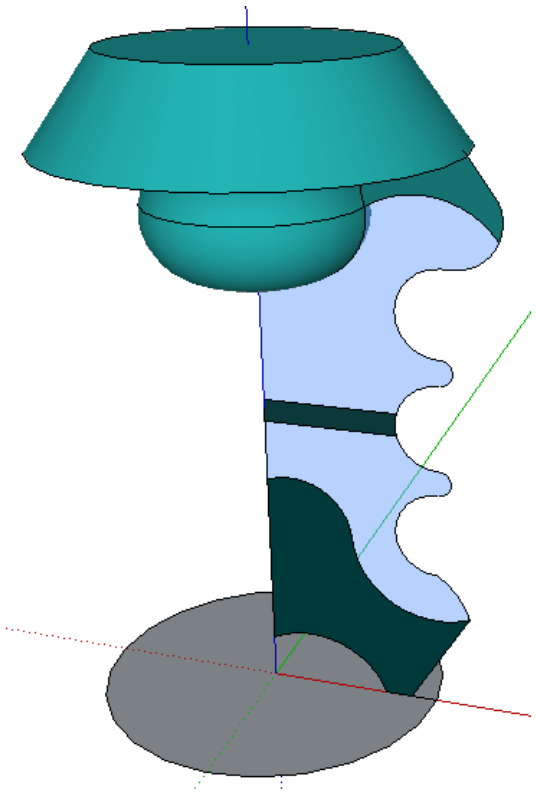
9. Using the ***arch tool, pencil tool, circle tool*** etc. Draw the details on the ***side profile*** of your water bottle such as lid, base and stripes etc.



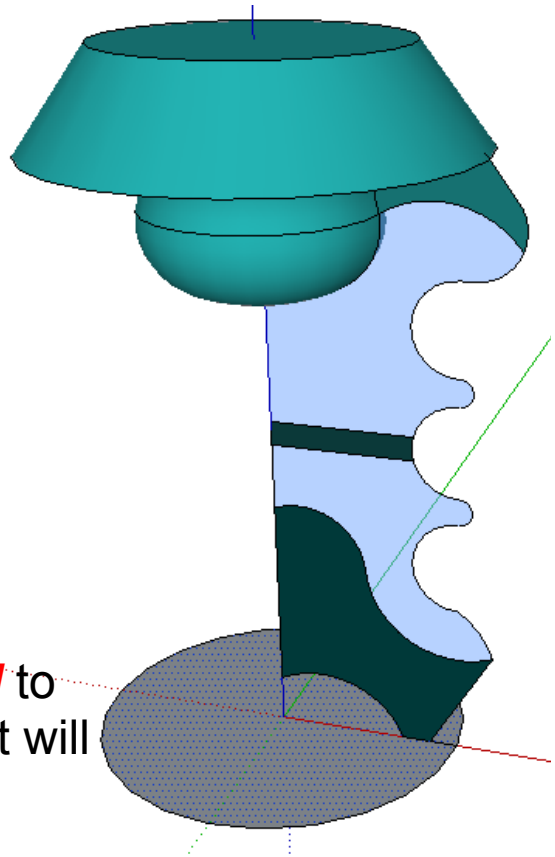
10. Using the ***colour bucket*** to render your design

11. Use the ***select tool*** to ***click*** on the base. It will go dotted.



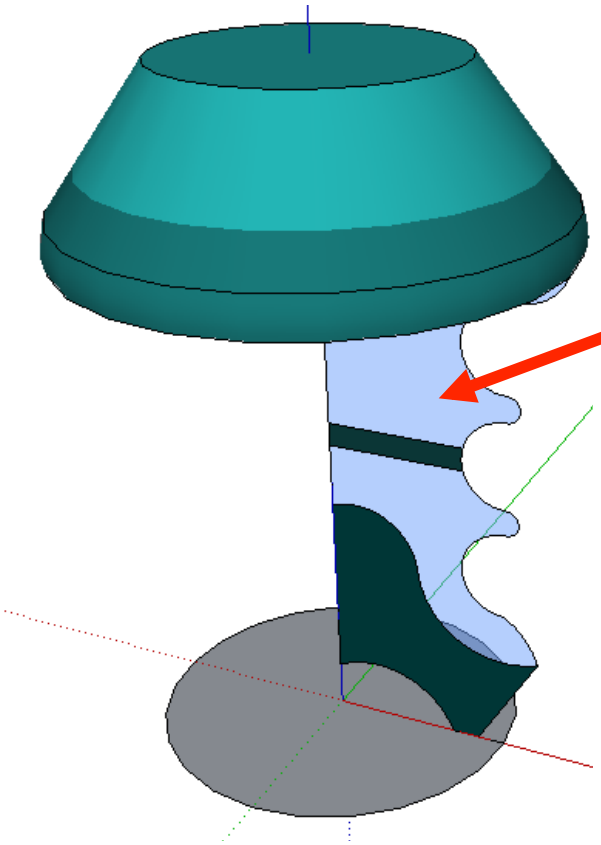


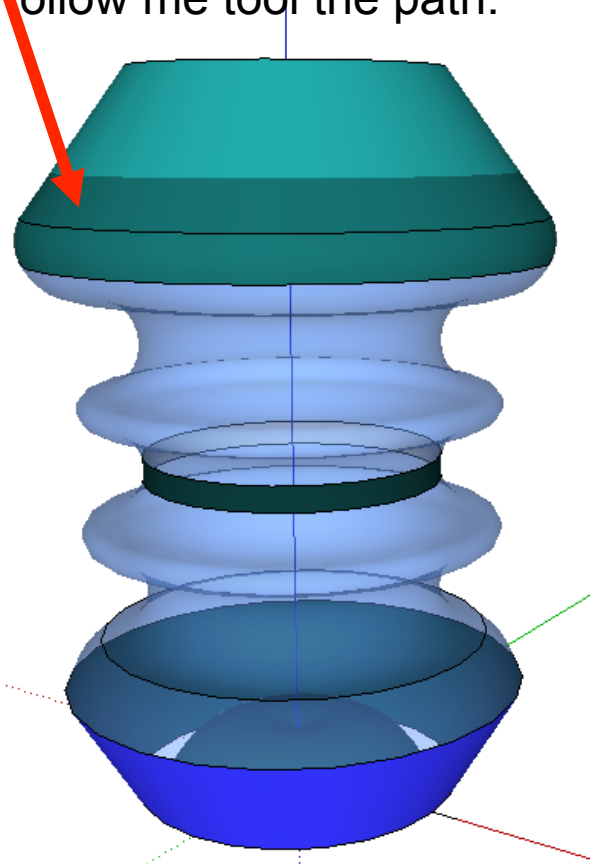
12. Select the ***follow me*** tool and ***click the top part of the shape*** on the side

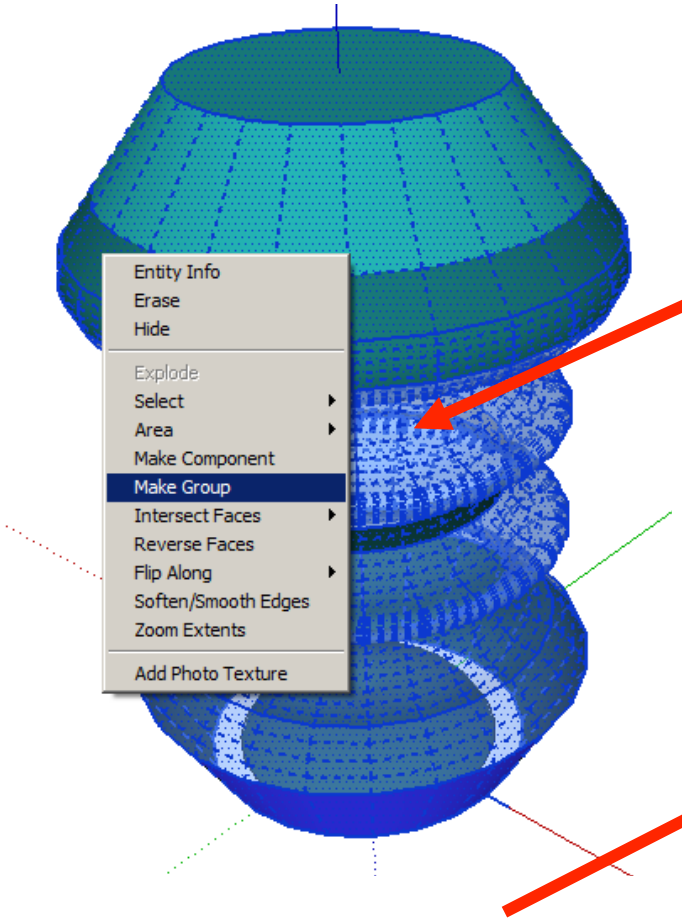


13. Use the ***select tool*** to ***click*** on the base. It will go dotted.

14. Select the ***follow me*** tool and ***click on each part of the shape*** on the side in order. You will need to click on the base first each time to show the follow me tool the path.

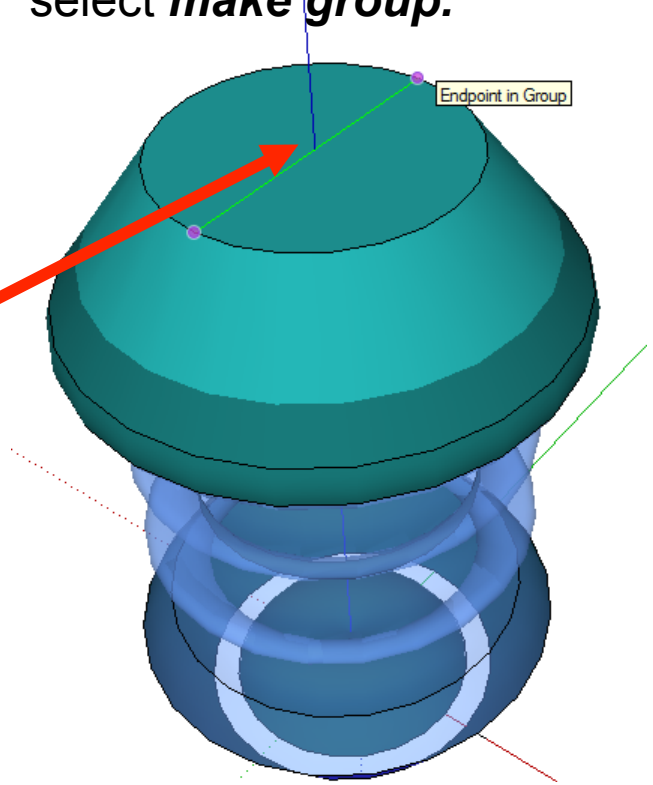




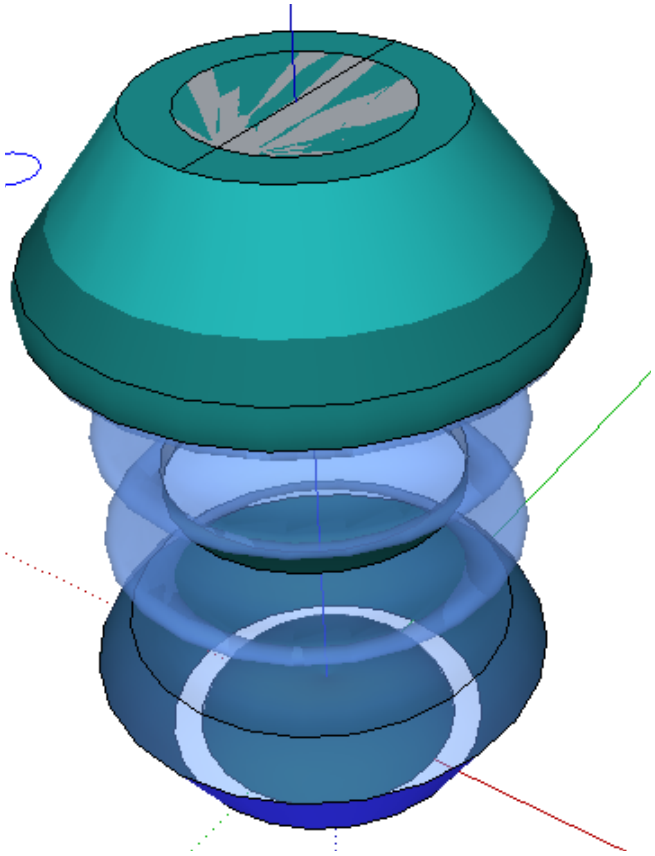


15. Use the ***select tool*** and click on the middle shape. Then ***click on it three times*** to select the entire object.

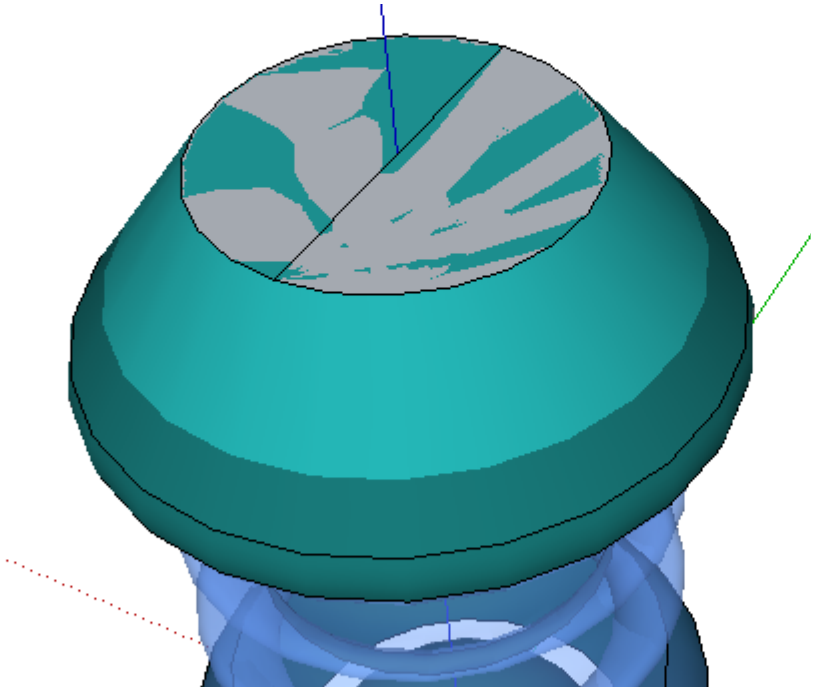
16. On the mouse ***right click*** and then select ***make group.***



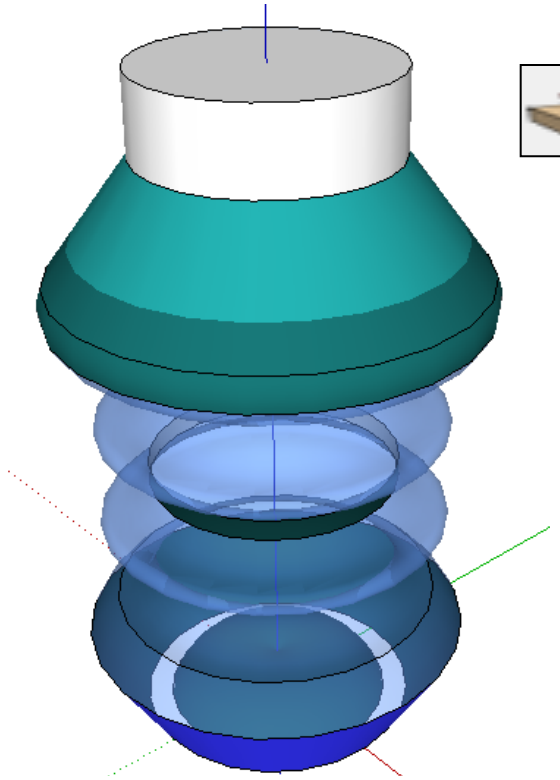
17. Use the ***pencil tool*** and draw a line across the middle of top of the shape.



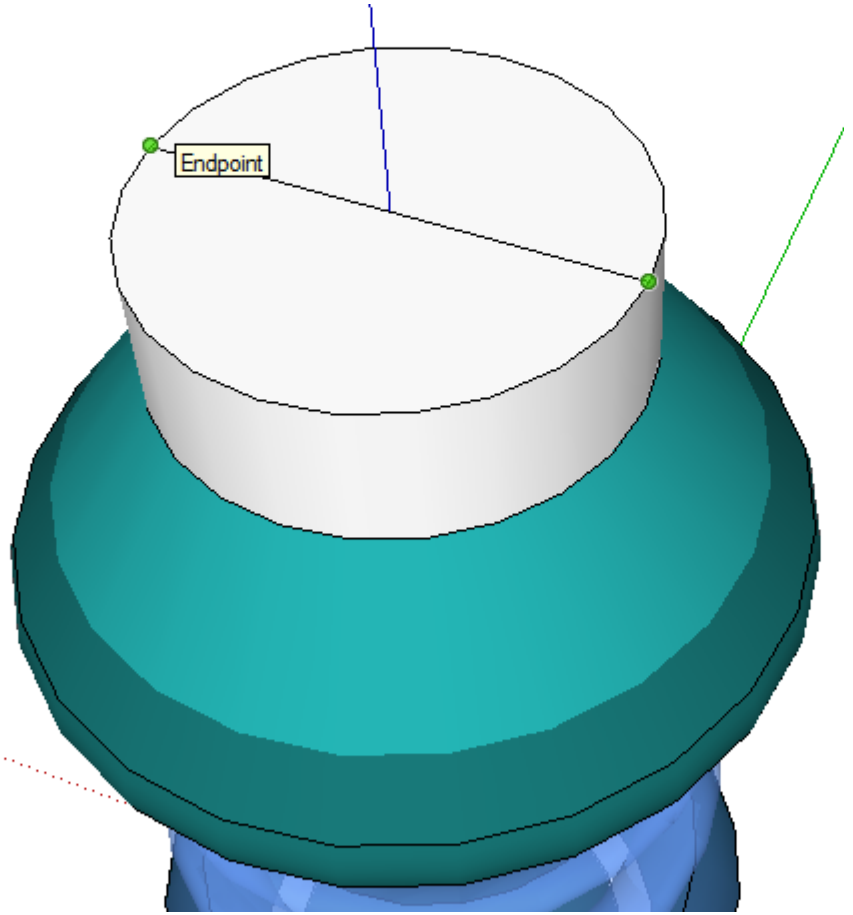
18. Use the ***circle tool*** and snap to the middle of the line and the top of the shape.



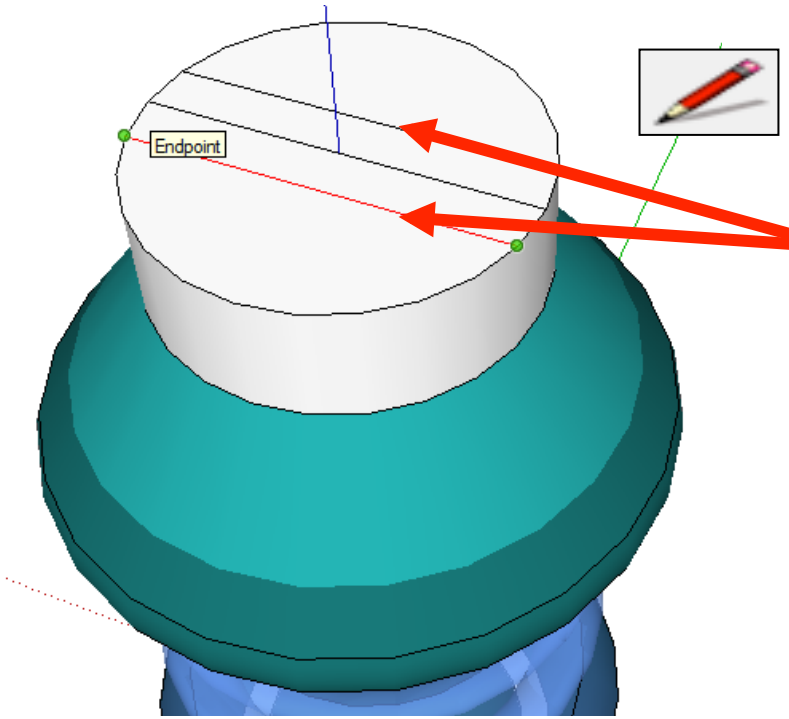
19. Using the ***circle tool*** bring it out to the ***edge*** of the top shape.



20. Use the ***push pull tool*** to pull the lid upwards. Type **30** and ***press enter***.

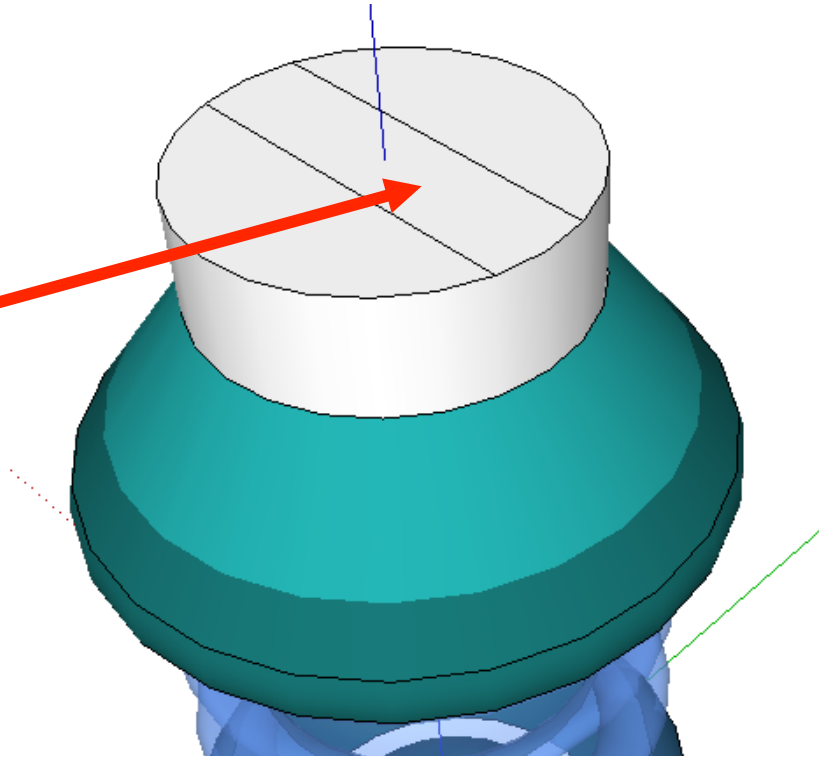


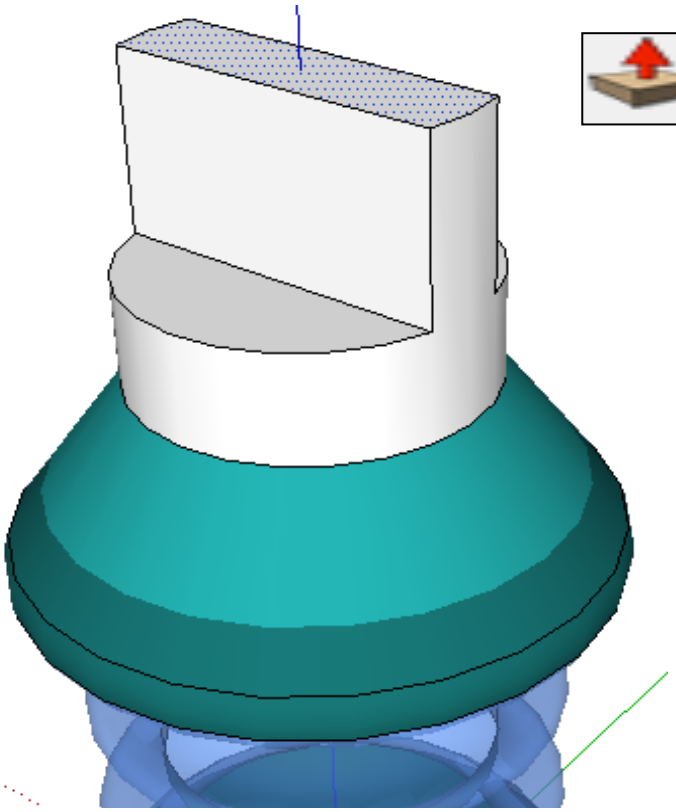
21. Use the ***pencil tool*** and draw a line across the middle of top of the shape.



22. Use the ***pencil tool*** and draw a line across the top of the shape ether side of the middle line you have previously just drawn.

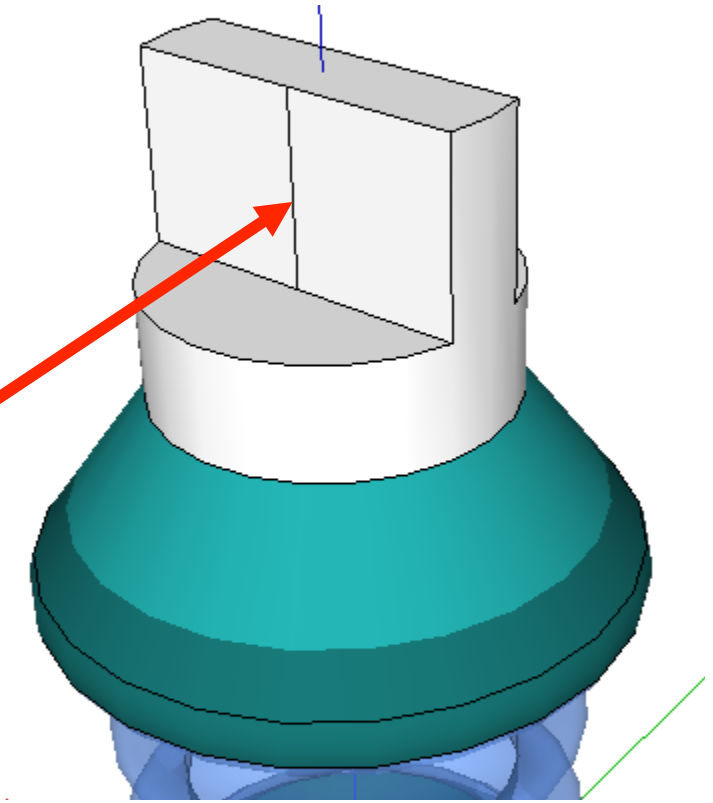
23. Using the ***eraser tool***. Delete the ***middle line***

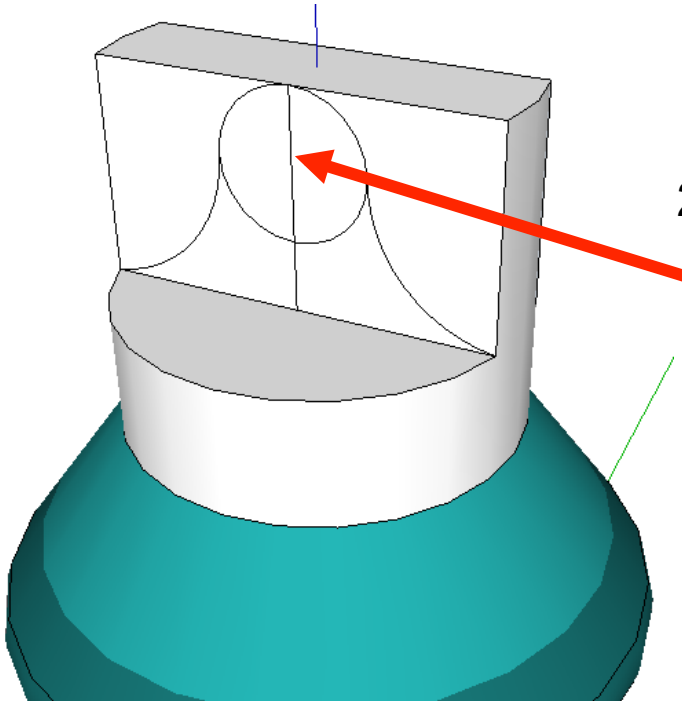




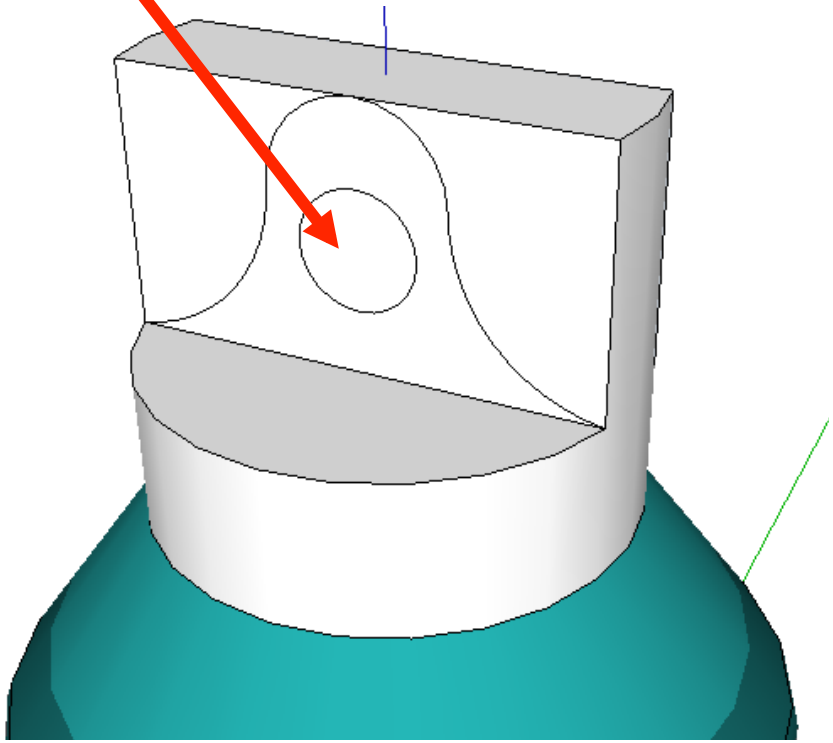
24. Use the ***push pull tool*** to pull the lid upwards. Type **50** and ***press enter***.

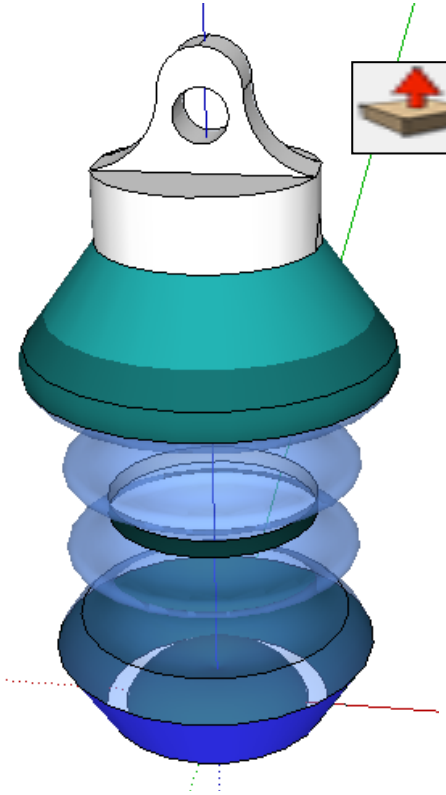
25. Use the ***pencil tool*** and draw a line show up the middle.



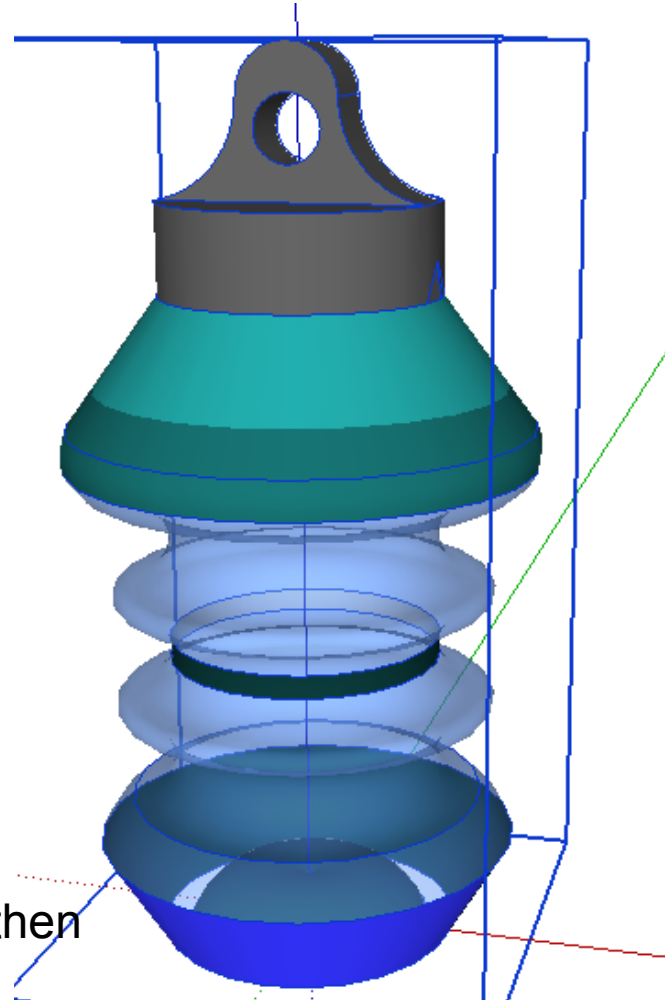


26. Using the ***arch tool, pencil tool, circle tool*** etc. Draw the ***handle/lid*** of your water bottle.



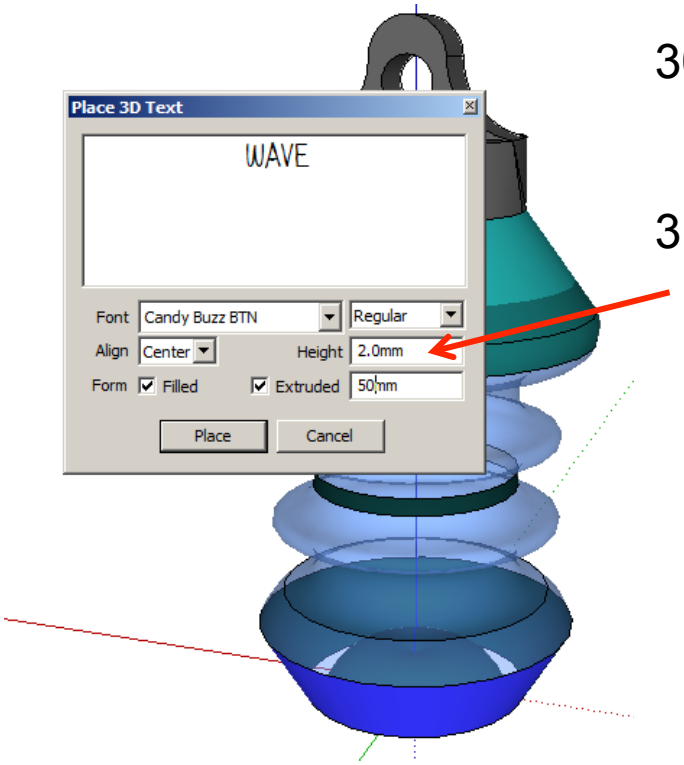


27. Use the ***push pull tool*** to trim the excess of the lid away



28. Use the ***select tool*** and click on the middle shape. Then ***click on it three times*** to select the entire object.

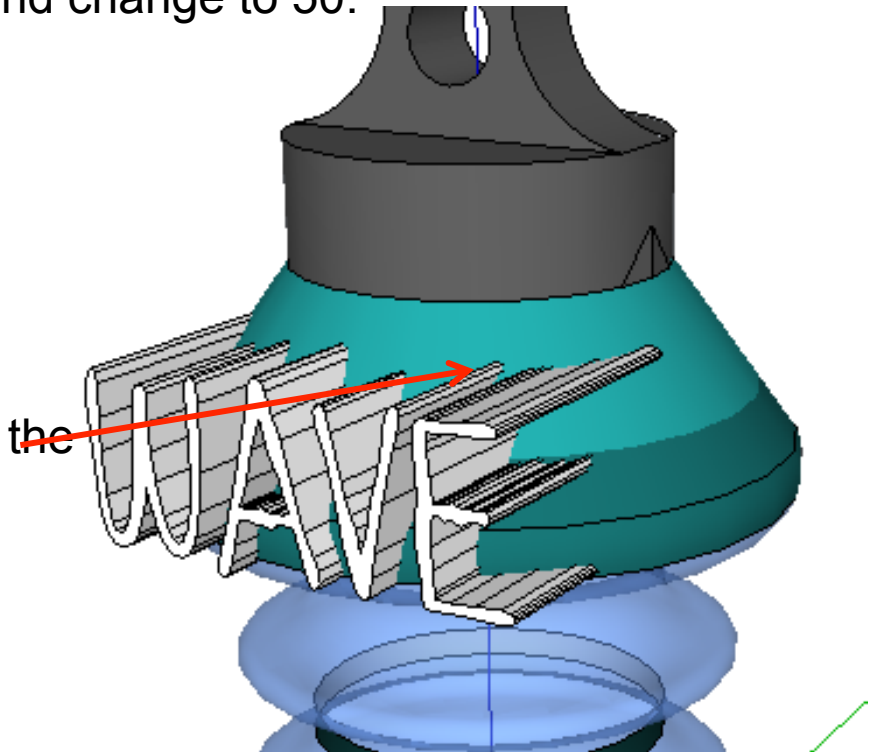
29. On the mouse ***right click*** and then select ***make group.***

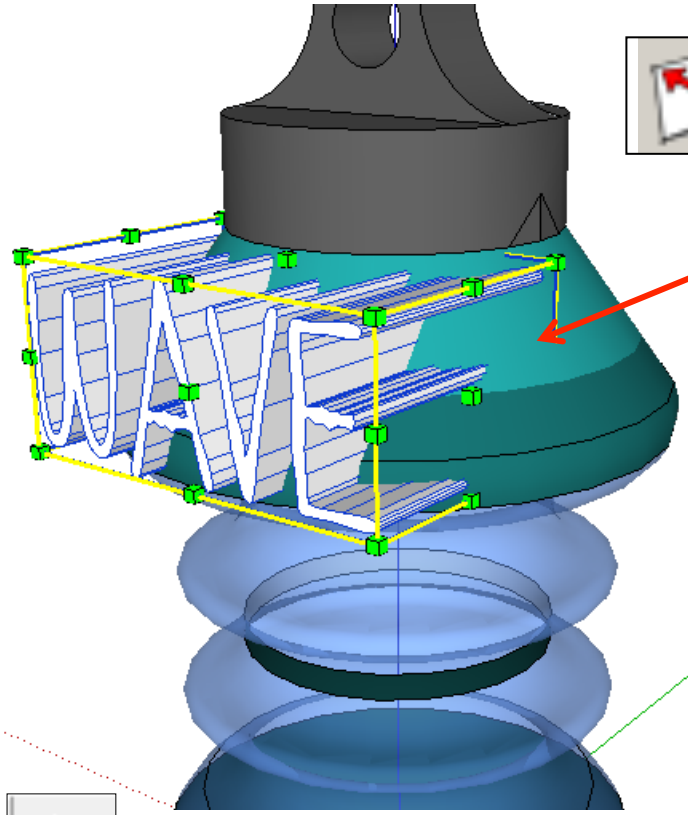


30. To put some simple graphics on the water bottle, first select the **3D Text**.

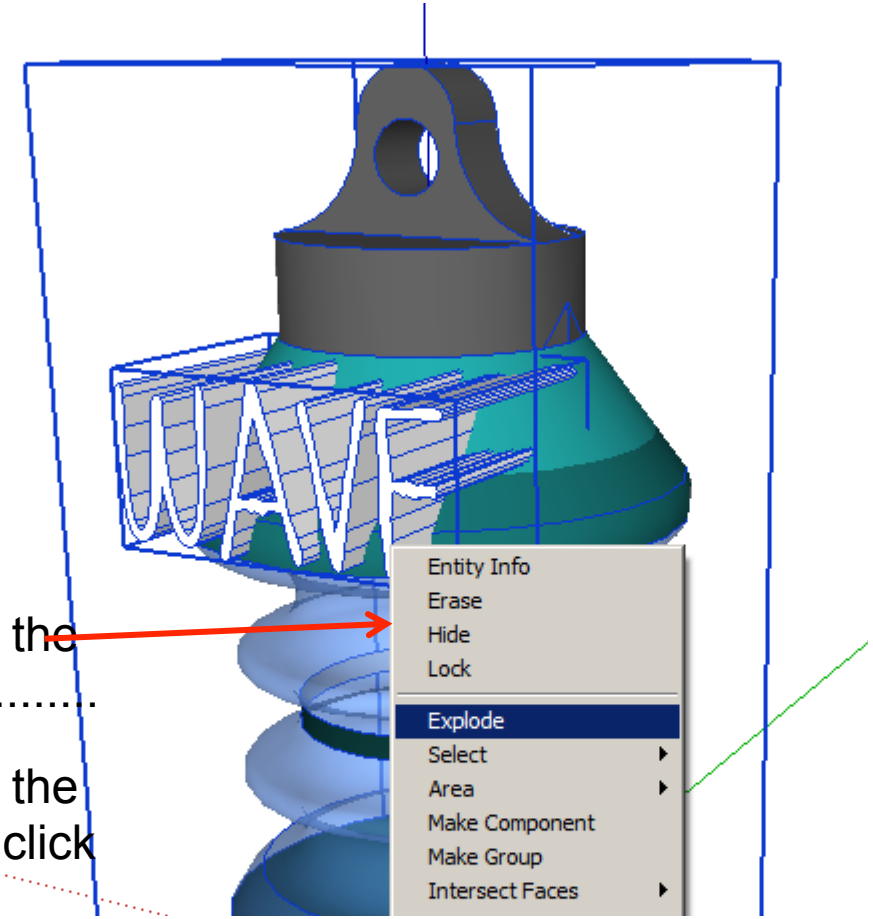
31. A pop-up box will appear. Type in the name you want to use for the water bottle. Change the height to 40mm, make sure extrude has a tick next to it and change to 50.

32. Using the ***move tool*** position the writing over the water bottle lid.



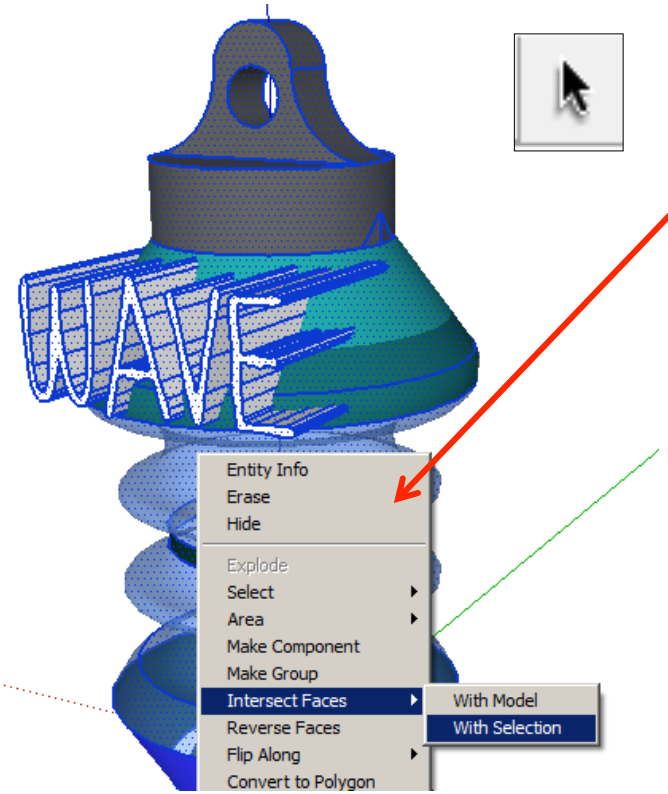


33. Make sure the writing touches and goes through the lid as shown. Use the ***scale tool*** to adjust if needed.



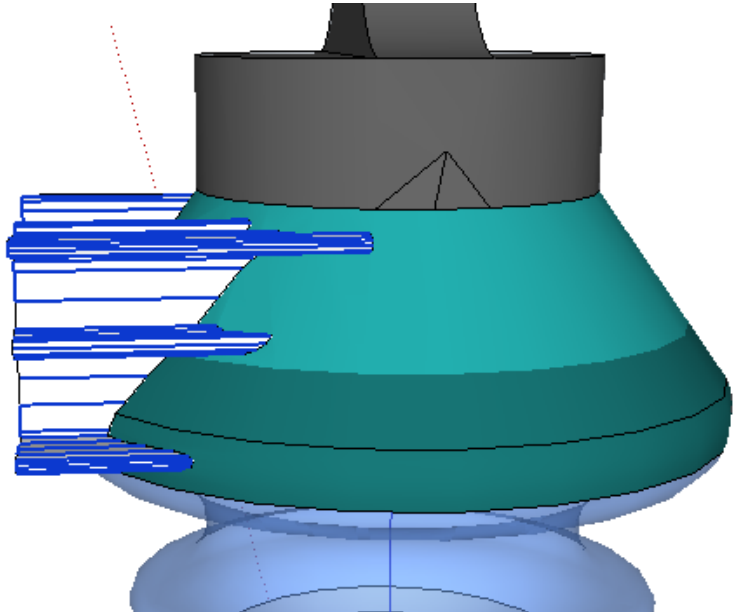
34. Using the ***select tool*** highlight the writing, right click and explode.....

35. Using the ***select tool*** highlight the water bottle lid and body, right click and explode.....

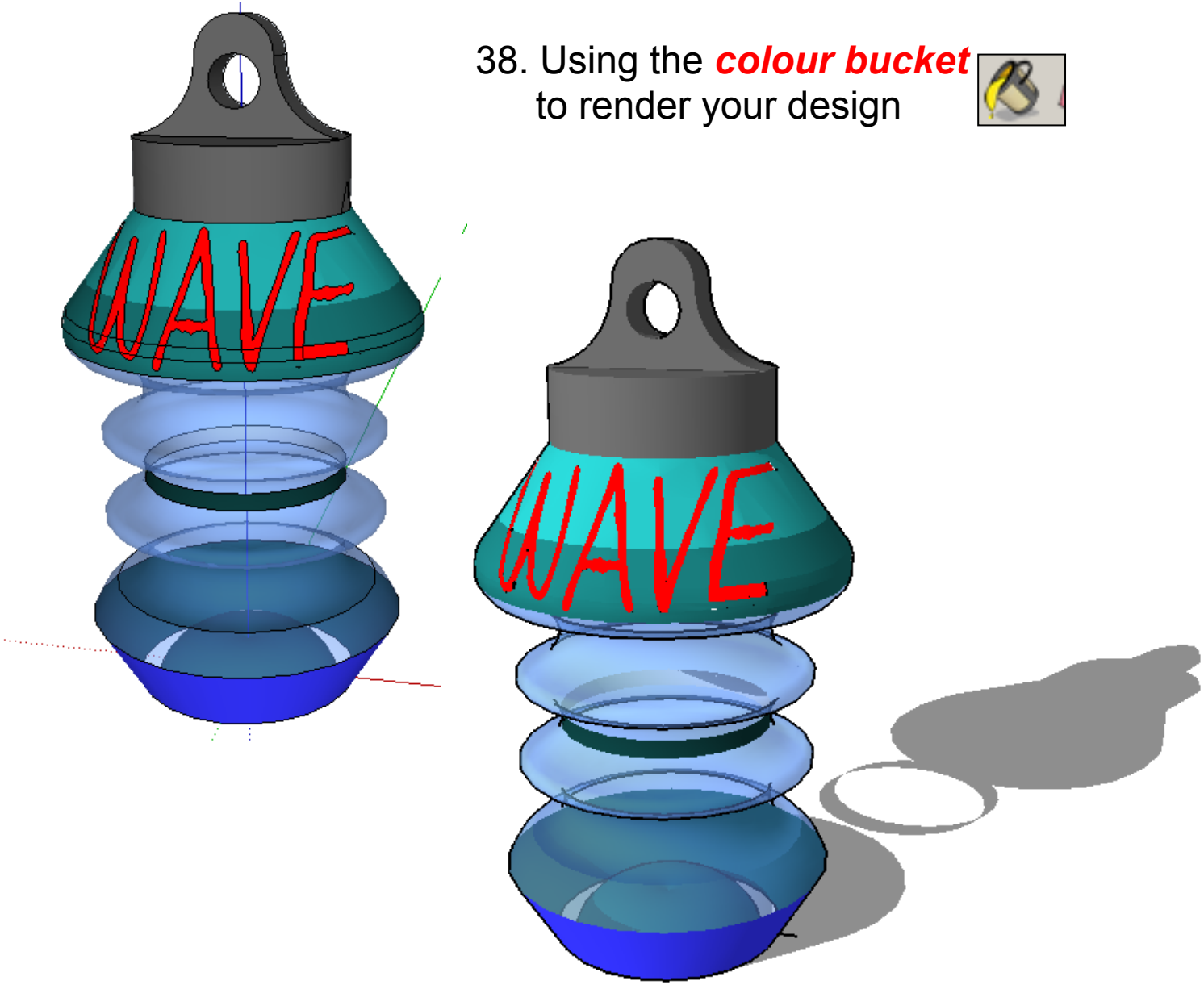


36. Using the ***select tool*** highlight the body and writing now they are un-grouped. Make sure both are highlighted. Right click and Intersect faces with model. This will attached the letters onto the main body

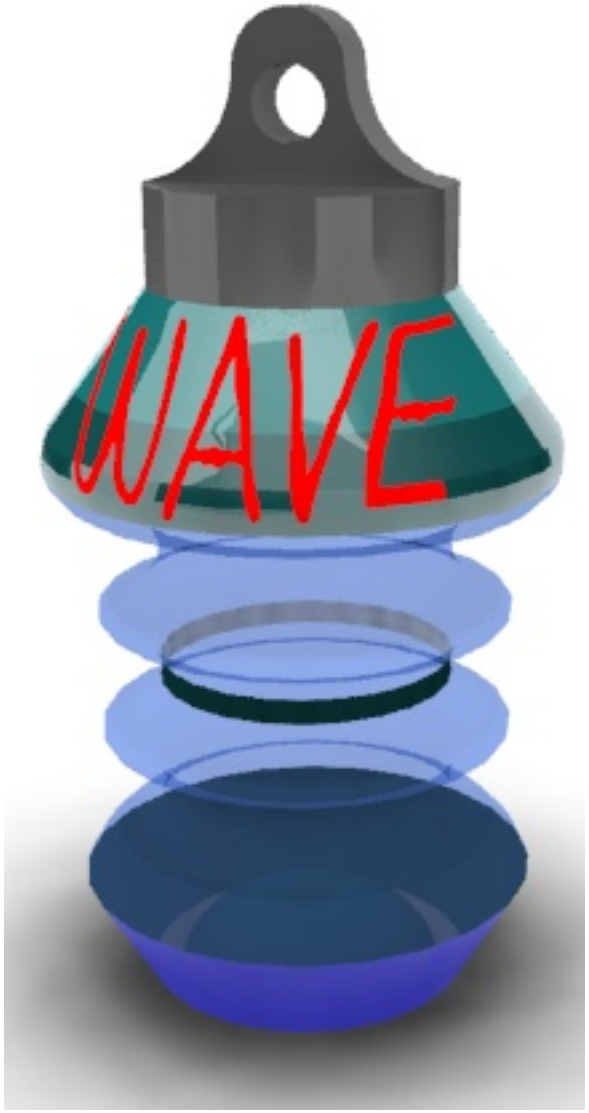
37. Using the ***eraser tool*** deleted the 3D part of the letters sticking out to leave the writing wrapped around the body as shown in the next scene



38. Using the ***colour bucket*** to render your design



ABC


WAVE