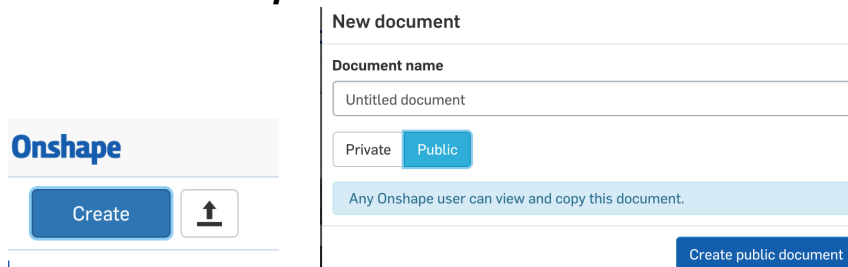


# OnShape 3D Modeling Program

## Basic instructions for the “web-based” program

1. Log-in at <https://www.onshape.com/edu> (create an account with your @apps.district196 account. Go to Gmail, Spam Folder, Open email from Onshape)
2. Create new **public** document



New document

Document name

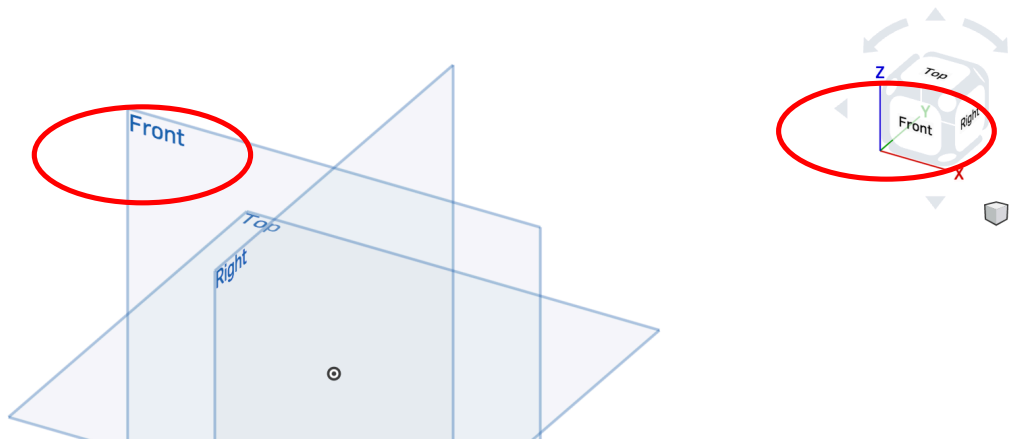
Untitled document

Private  Public

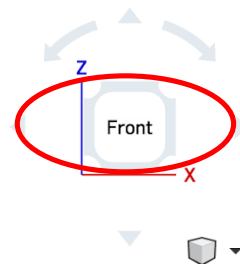
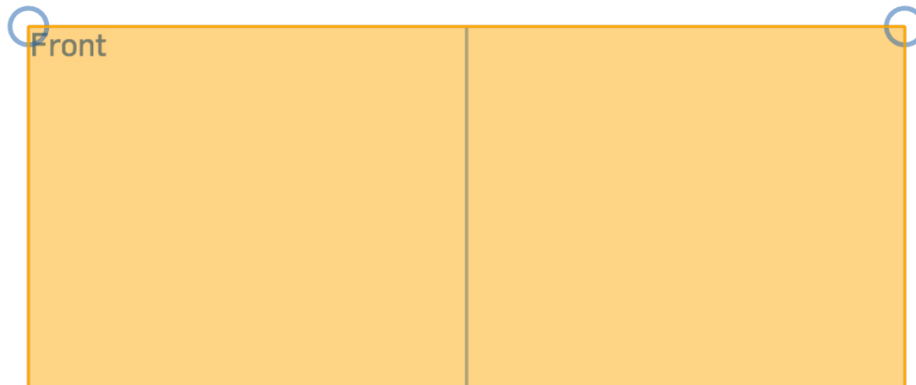
Any Onshape user can view and copy this document.

Create public document

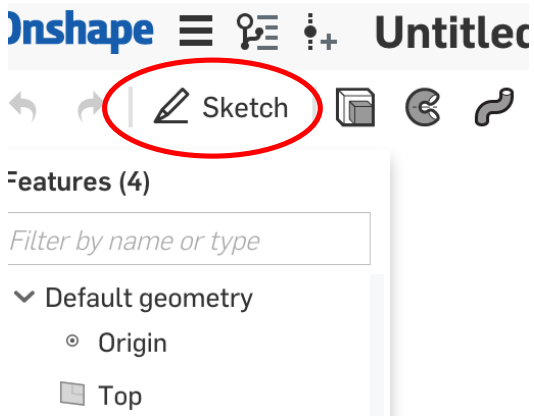
3. Click on the “front” plane and then the “front” of the view cube



4. You should now be looking at the “front” plane straight on

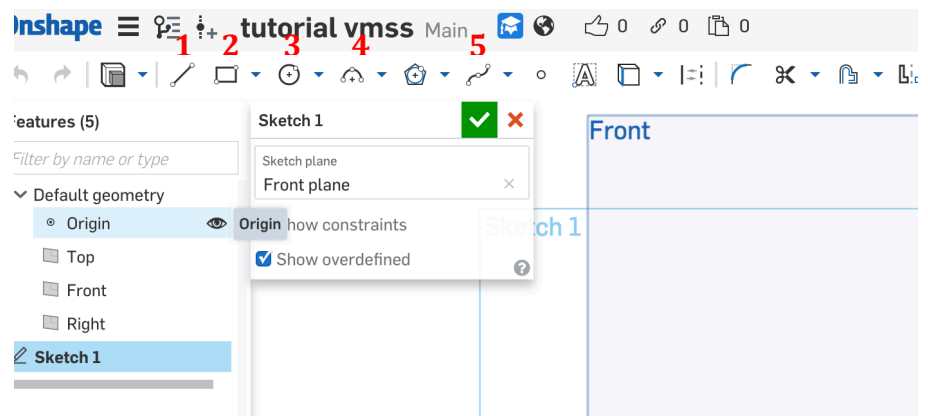


5. Click “Sketch” in upper left of screen

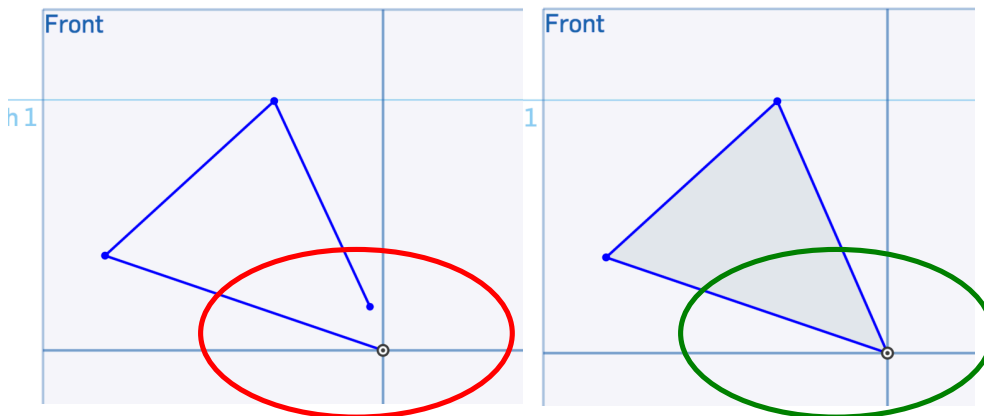


6. Choose your drawing tool in menu bar of upper left of screen...

- 1. Line Tool
- 2. Rectangle Tool
- 3. Circle Tool
- 4. Arc Tool
- 5. Spline Tool

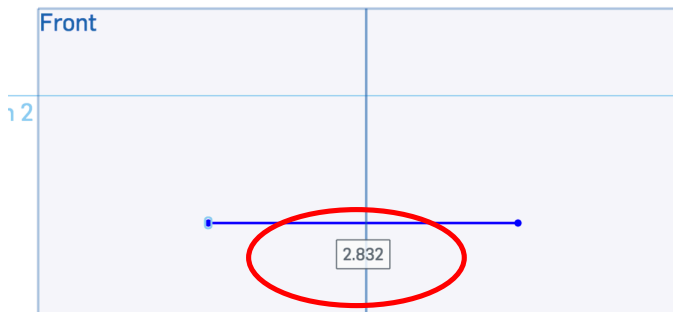


7. The end result of using the tools should be a “closed shape.” When the shape is “closed” the inside will be light gray in color...

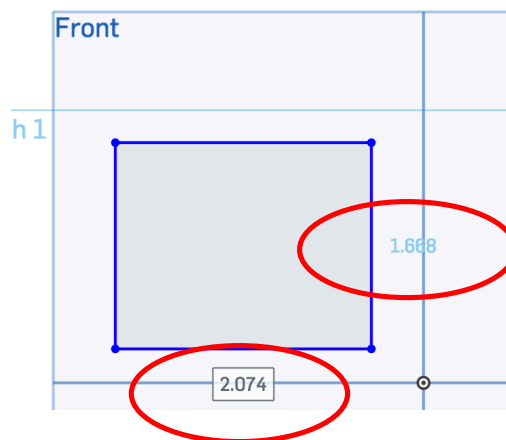


## How to use each tool:

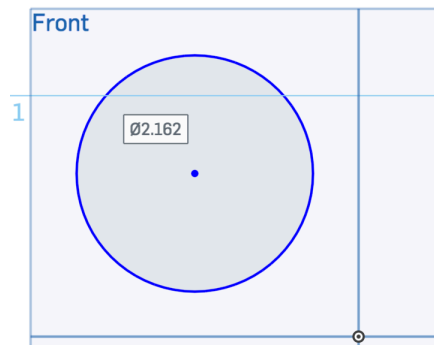
**-Line Tool:** Click, drag in direction you need line to go, click again. A little white box will appear...WITHOUT CLICKING in the box, type the measurement of the line and then return or enter (for example, if you want it to be 3 inches, type 3 enter).



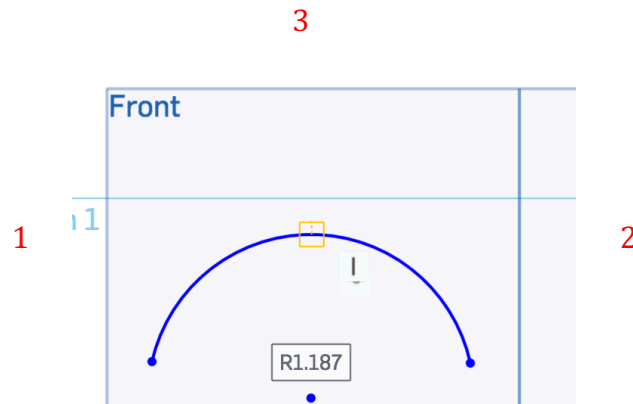
**-Rectangle Tool:** Click, drag in direction you need rectangle to go, click again. A little white box will appear...WITHOUT CLICKING in the box, type the measurement of the 1<sup>st</sup> side of the rectangle and then hit return or enter (for example, if you want it to be 5 inches, type 5 enter). It will then turn the box white on the other side of the rectangle... type the measurement in for that side and hit return or enter.



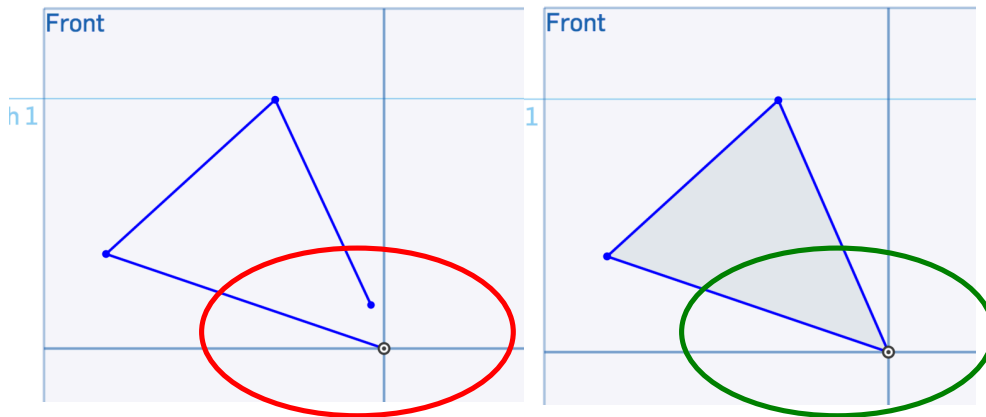
**-Circle Tool:** Click, drag and it will create a circle outward from the center, click again. A little white box will appear...WITHOUT CLICKING in the box, type the measurement of the diameter of the circle and hit return or enter.



-Arc Tool: Use the “3 point arc” tool. Click where you want the arc to start, where you want it to end, and then in the middle.



8. When the shape is “closed” the inside will be light gray in color... You can now **EXTRUDE** the shape into a 3D object.

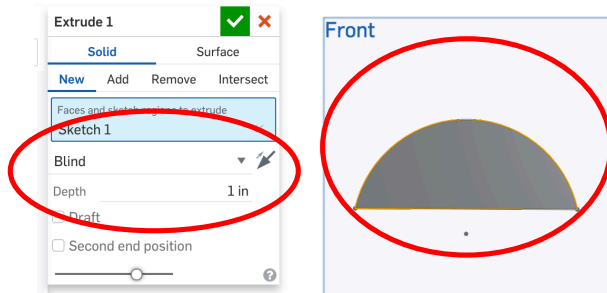


To **EXTRUDE**, click this icon

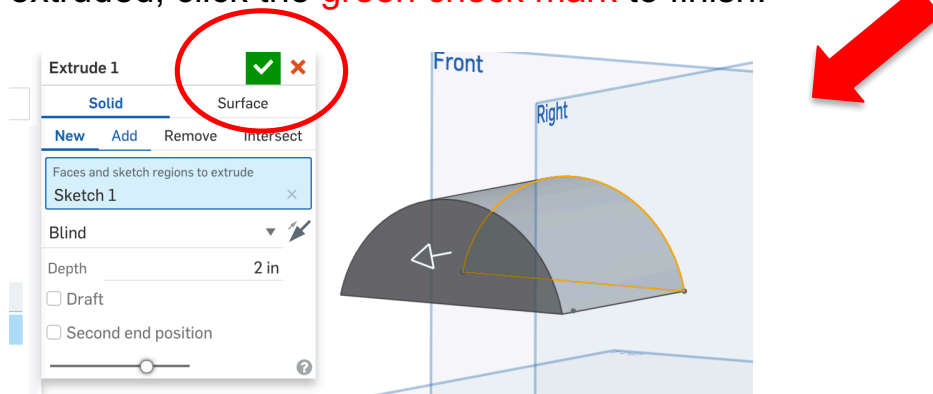


in the upper left corner of the

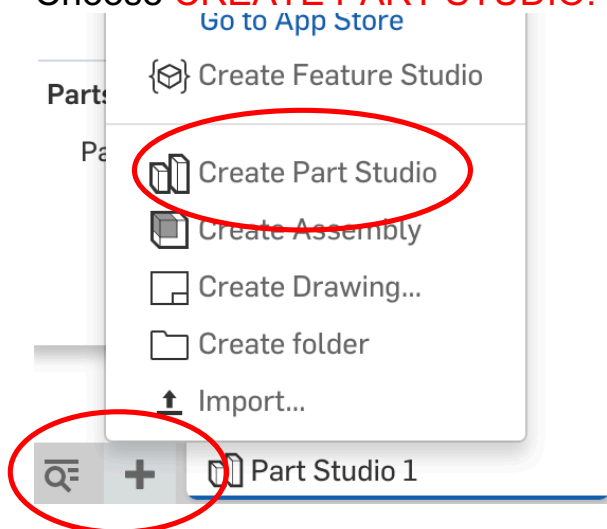
9. In the box that pops up, type in the “depth” measurement (how thick you want the object to be), and make sure the middle of the shape is now DARK GRAY. If it is not dark gray, click in the middle of the shape.



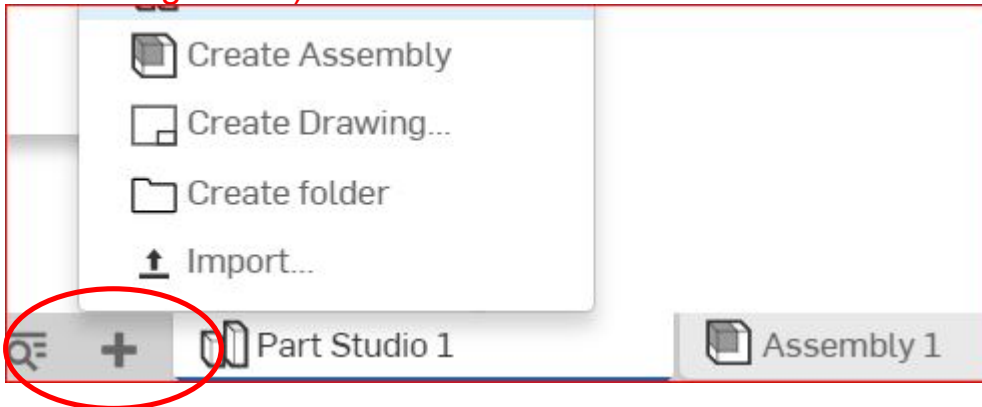
10. To see if the shape has been extruded, RIGHT-CLICK and drag. If it is extruded, click the green check mark to finish.



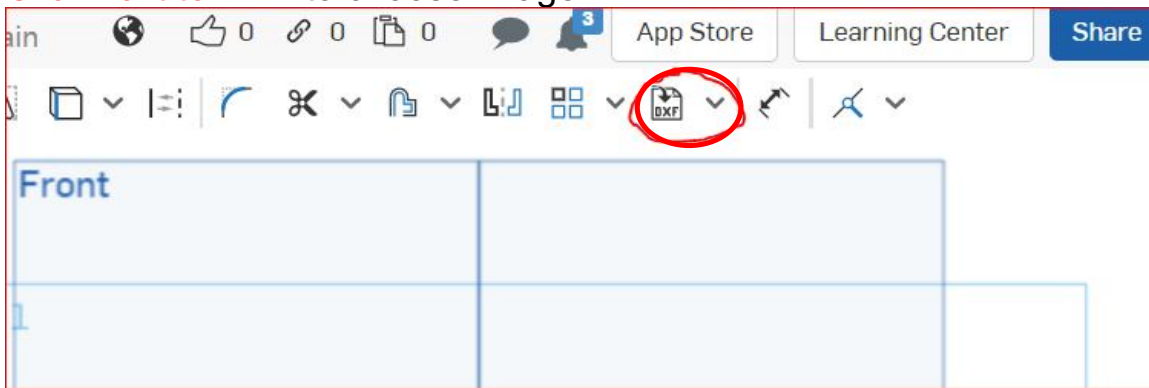
11. To start a new shape or drawing, click the + in the bottom left of the screen. Choose CREATE PART STUDIO.



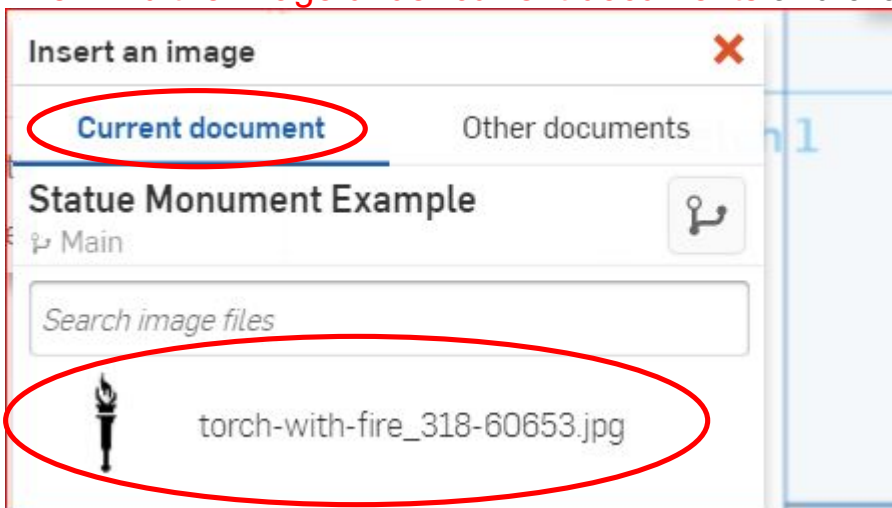
12. To **CREATE A CUSTOM SHAPE** by tracing an object or picture (i.e. Minnesota, a country, a sword, a number or letter, a torch, a pineapple, etc), click the **+ sign** in the bottom left of the screen and choose **import**. (save the image from Google first!)



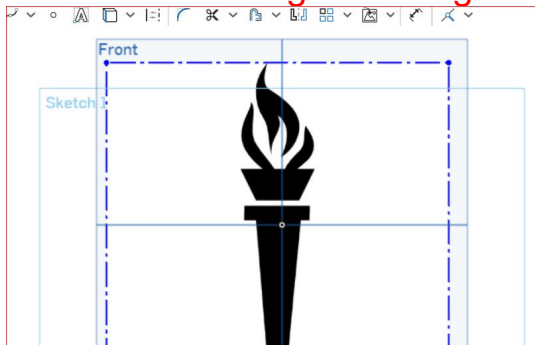
13. After the image is done uploading, choose **insert image** from the menu bar. **Click next to DXF** to choose image



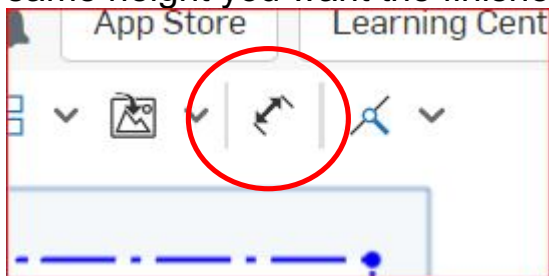
Then find the image under **current documents** and click on it:



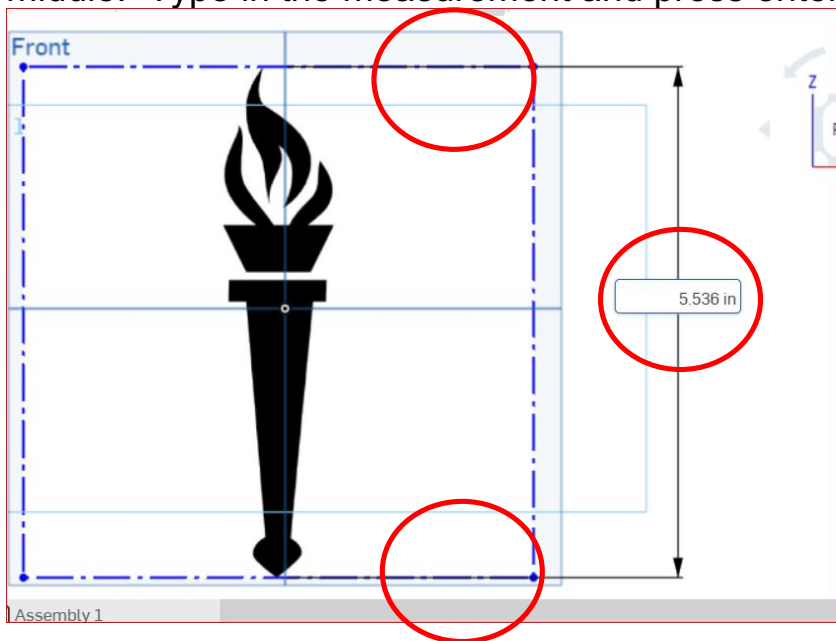
14. Click and drag a rectangle to place the image:



15. Now, **resize** the image using the **DIMENSION TOOL** (make the image the same height you want the finished 3D part to be).



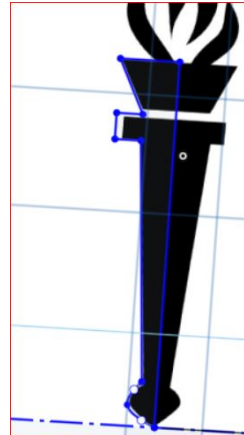
Click on the top dotted line, then the bottom dotted line, then click a 3<sup>rd</sup> time in the middle. Type in the measurement and press enter.



16. Now, using the drawing tools (line, arc, spline tools, etc) **TRACE** the object, then extrude, or revolve.

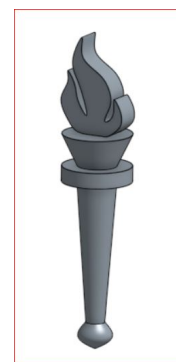
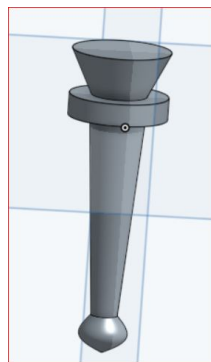
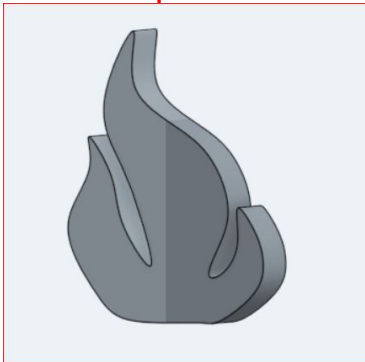


TRACE FOR EXTRUDE



TRACE FOR REVOLVE

**Finished parts:**



17. **EXPORTING PARTS FOR 3D PRINTING!** 😊

**RIGHT-CLICK** on the **part tab** at the bottom of the screen. Choose **EXPORT**. Make sure it is an STL file, in MILLIMETERS... name the file and click ok.

