Interlocking cubes in Onshape

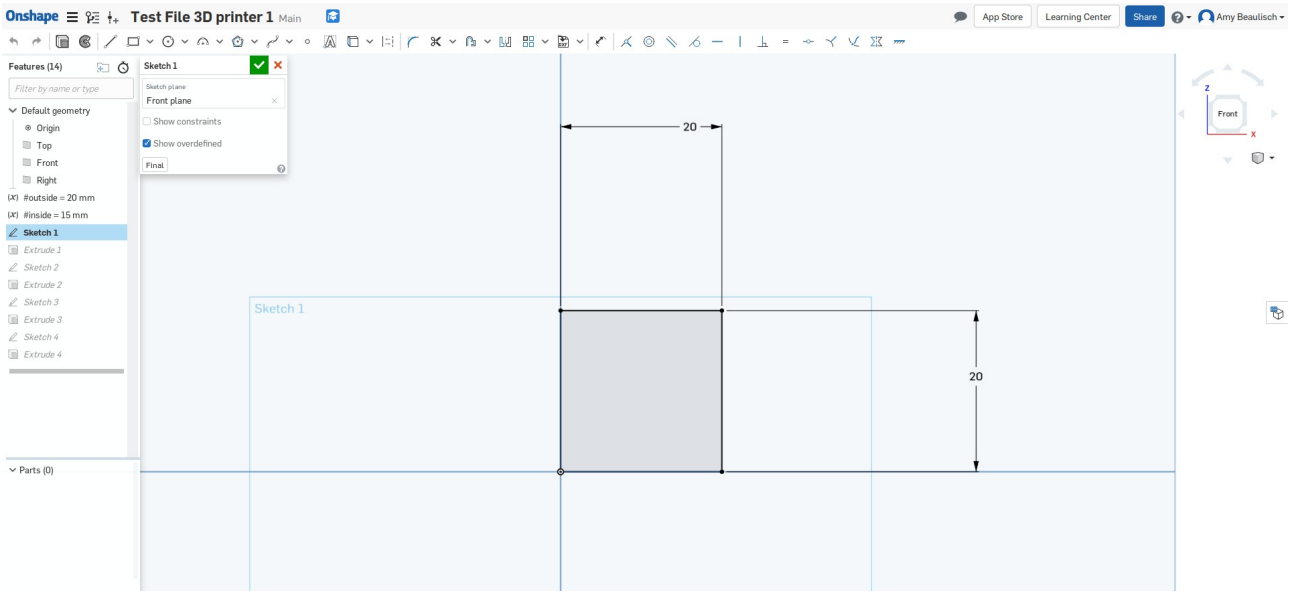
In this manual you will find:
how I made my 3D print assignment.

1. Define your parameters
For this assingment I made my cubes parametric. Because of that I can easely change the size according to what's best to print.

I declared:
- #outside = 20mm
- #inside = 15mm

The formulla to keep the hole always in the center is this: #outside/8

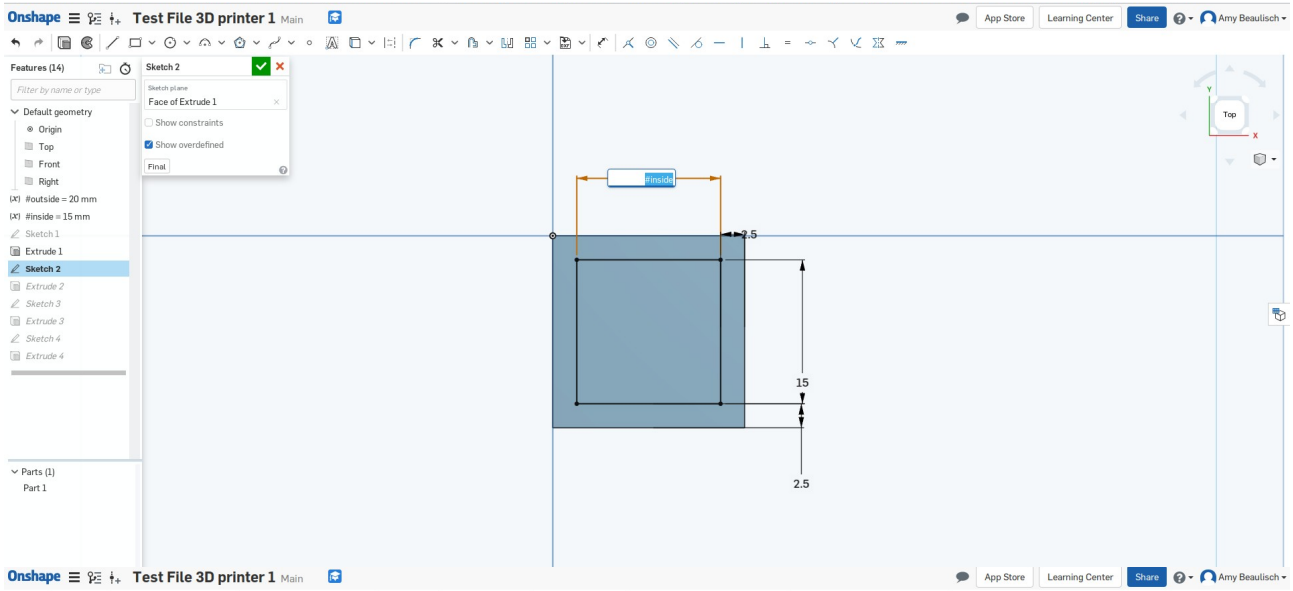
2. Draw your cube
Once you have defined your parameters, you can draw your cube.

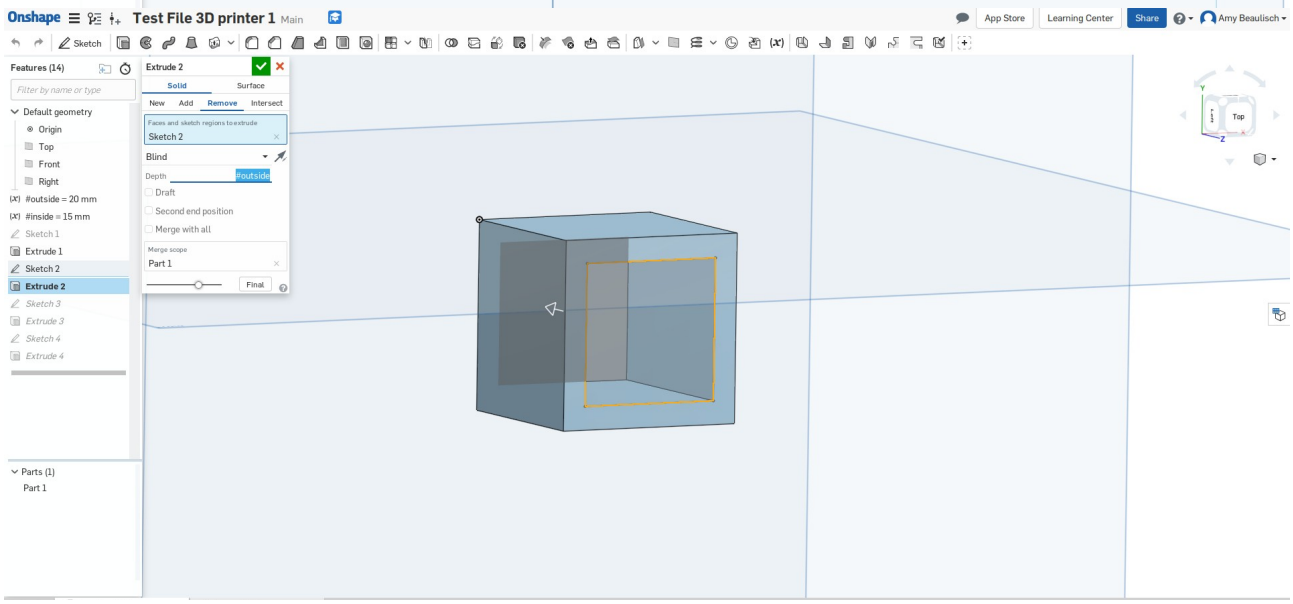


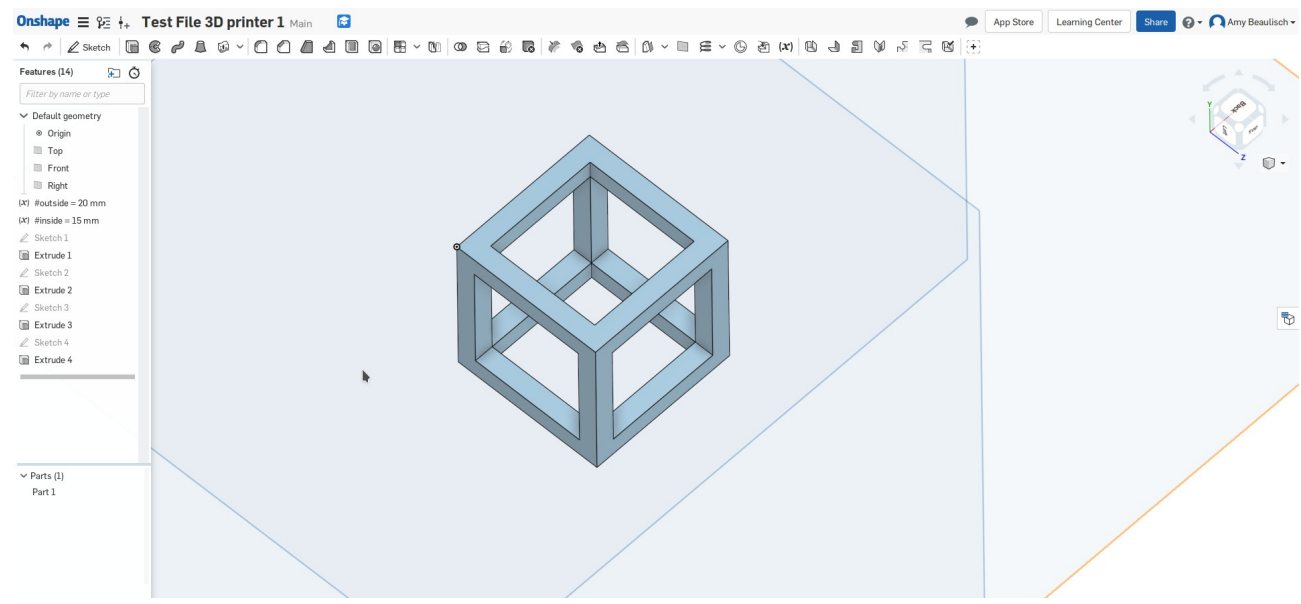
I didn't add a boolean here yet because I wanted to go step by step. Give the extrusion the dimension of #outside as this results in a perfect cube.

3. Make the holes in each side
The next step is to make the holes in each side. You don't have to do this 6 times, but only three times as you can let the extrusion run all the way through.

Created by Amy Beaulisch
February 2019



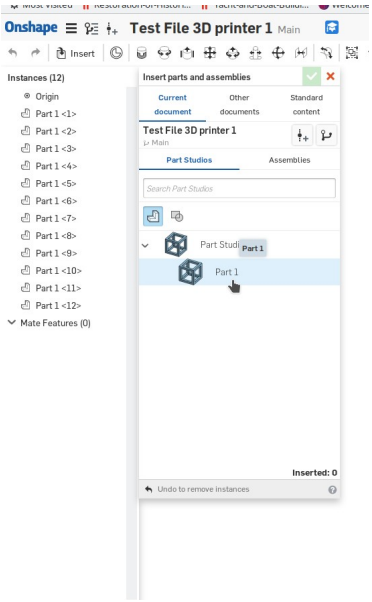


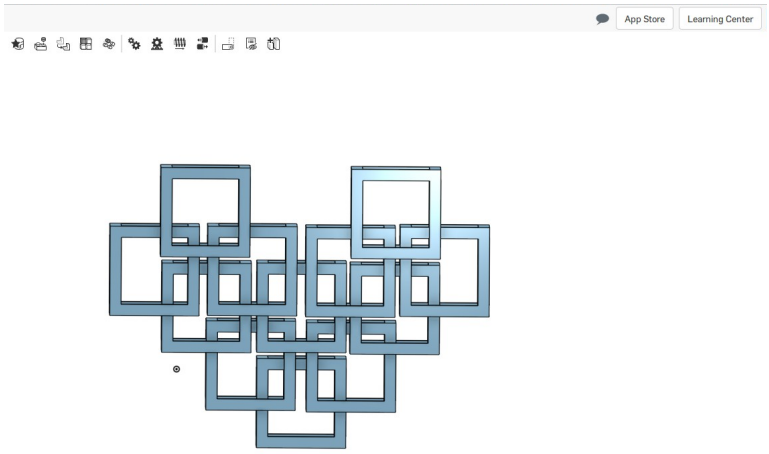


Created by Amy Beaulisch
February 2019

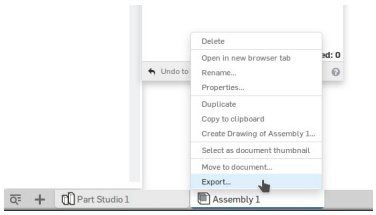
4. Title 4

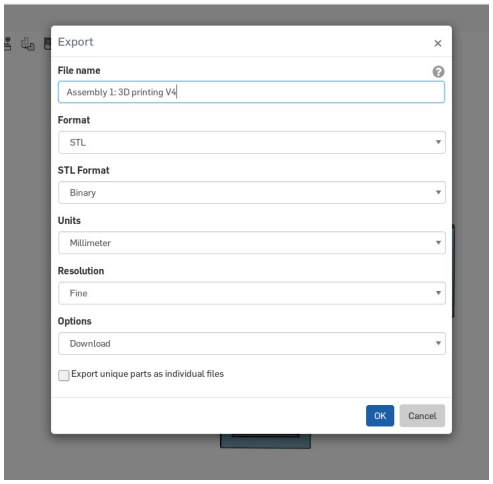
Once you have done this, you can start the assembly.





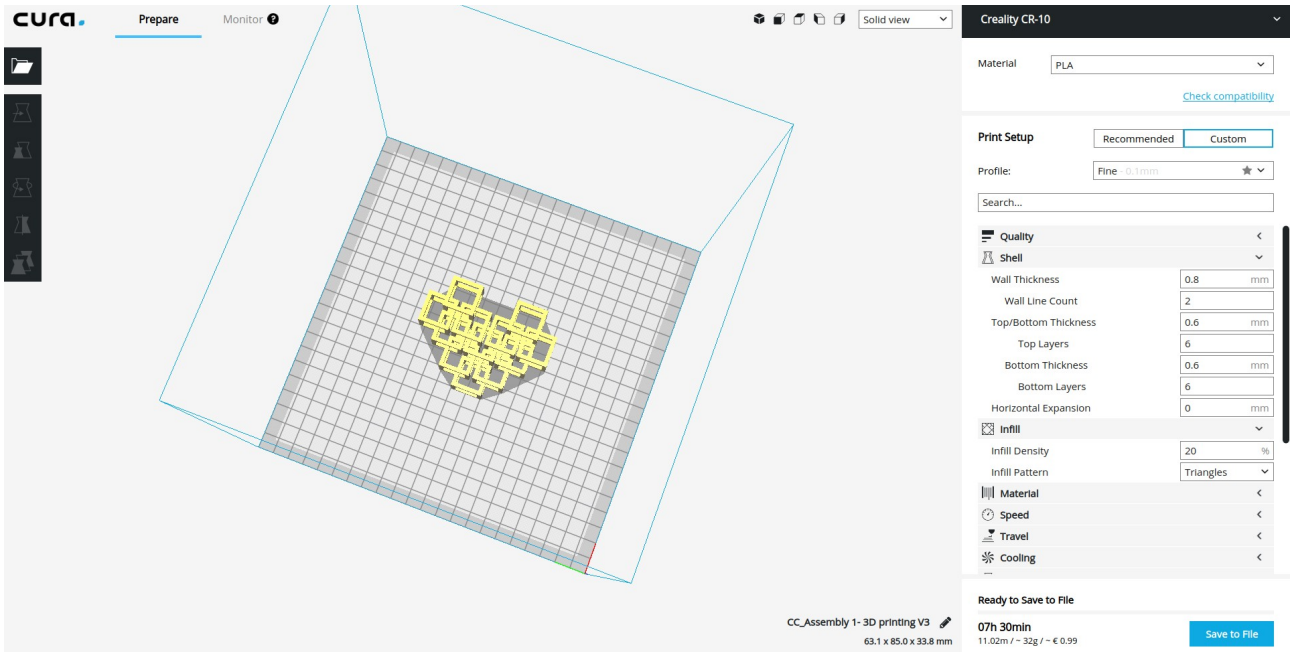
5. Export the file for 3D printing





Created by Amy Beaulisch
February 2019

6. Slice the file in your favorite slicer



I could give you the right settings, but as every 3D printer is different, even from the same brand, I wont. The thing I mostly do is always print on 0.1mm as I only print technical parts and want my quality as high as possible.

7. Print the .gcode

Speaks for itself.

Created by Amy Beaulisch
February 2019