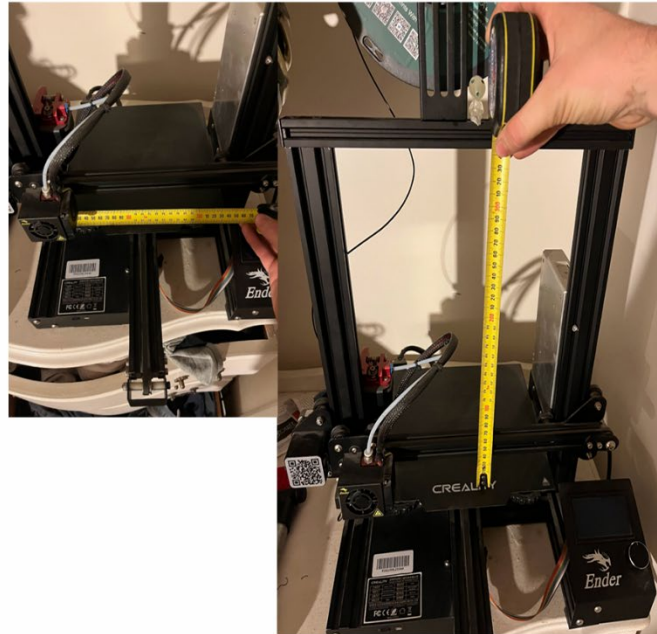


High Achieved
 NZQA Intended for teacher use only

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Bed size capabilities and of printer

In this sled i took into account the printing scale of what i'm making. eg Will it fit into the printing bed of the Ender 3 pro? How much space will i have what is the max height what is the width and length. We can see in the photos that there is more than enough space as my product is only (91mm long /90mm wide /32mm tall) and the bed has 235mm-235mm bed size with a max height of 250mm.



Correct setup of temp and ect

With 3d printing there are many verables that can affect qallty and if the print will fail or suckseed. These verables are. Temp speed feed, rate plastic qallty ,age and moisture, moter funchon dust ,file qallity ,basics settings ,nozzle ajustmint.

For temp i used 200c for the nozzle temp as i is the factory recommend teprece of the printer and for the bed i used 60c for the same reason. For the plastic it can lose strength with moisture so i have kept it in a dry environment to proswers this. I have tested the moter and feedrate shown in the image so see if they still work as intend. File qallty was fixed about 5 months ago so it is all updated in the slicer and good to go. Before printing i fine tuned the nozzle so it could be perfect.

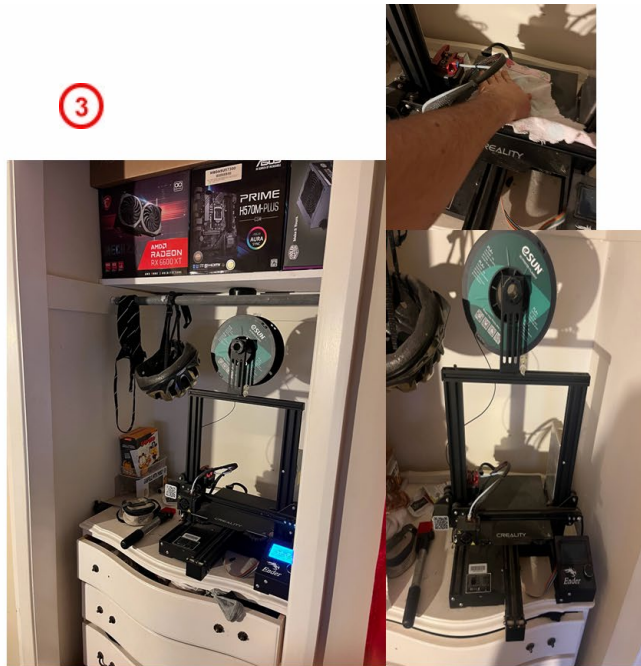


②



Health and safety

When 3d printing there are many health and safety risks such as burns from nozzle and bed. Fire risk and poisonous gas. To keep these minimised have been working on health and safety. For the gas I use PLA plastic a safe non-toxic plastic that has a low melting point and doesn't release gas into the area. For the fire risk I keep the printer clean and make sure not to leave it unattended at all times. I do this via keeping it in my room while I am at my work desk as well as cleaning the printer with a brush before every use. For burns I keep the printer in a corner of the room to minimise it being bumped into and causing damage. The rest of the time the printer is relatively noisy and makes itself well known.



Accessing and viewing product after print completion.

4

Once leaving the 3D printer work for the day while watching it, the print was complete. I measured it compared to the original diagram online and it came out as a 1 to 1 replica, (91mm long / 90mm wide / 32mm tall) which means that there was no inconsistency with sizing. Checking the quality of the print showed no cracks or warping in the printing which shows the sign of a successful and strong print. Testing it to see if the metal pipe would fit within the print it came out successfully and increased the rigidity of the structure. The only minor fault was where the raft adhered to the print leaving a bit of scoring but this is inevitable with using a raft to print on.



xxxxx good job getting the CNC standard finished at home. I think there are some areas that you could have gone into a lot more depth with which would help secure your grade, things like: Initializing the printer, how did you clean the printer before use, What are some of the tips and tricks you've learnt from the 5 years experience, nozzle offset and layers.

You have touched on all the necessary points for an achievement.

5