

2a. The computational innovation that my computational artifact is representing is 3D Printers. The intended purpose of 3D printers is to make new model or pre-existing model and print 2D or 3D model out of a certain filament like PLA or Polylactic acid the most common 3D printer filament. My computational artifact represents the process of printing a model using a 3D printer and the step by step process.

2b My development process for making the computational artifact was first using the software google drawing which allows you to make posters on computer. My first step was laying out the images that I was going the use for the artifact in the right order. Then I mapped it out with arrows and then put steps inside each arrow. That was the development process for my artifact which wasn't that difficult because the process to use a 3D printer is not that complicated.

2c. A major beneficial effect of 3D printers is how 3D printing affects the manufacturing process, for example it has no limits besides size and you will be able to make what you want because your able to create your own model from scratch. It also affects the manufacturing speed because item can be made in a less significant amount of time sometime hours depending on the product. A harmful effect of 3D printing is fewer manufacturing jobs will be available because with 3D printer you will be able to cut out the middleman and that would eventually hurt the economy.

2d. A 3D printer uses 3D models as it's data it receives them and then proceeds to print the model. The innovation consumes filament and prints the object in similar way to an ink printer it takes information from the computer than prints the object layer by layer with heat the layers fusing them together. One major data storage concern is that the print is restricted by size because the printer cannot print something of a significant size.

2e. The Positive and Negative effects of 3D Printing. (n.d.). Retrieved from <http://scw3dprints.weebly.com/the-positive-and-negative-effects-of-3d-printing.html>

The source is <http://scw3dprints.weebly.com> and the date I received this information was March 30th, 2019.

Woodford, Chris. (2018, August 4). How do 3D printers work? Retrieved from <https://www.explainthatstuff.com/how-3d-printers-work.html> Date recieved is March 30th 2019

3D Hubs. (n.d.). What is 3D printing? The definitive guide. Retrieved from <https://www.3dhubs.com/guides/3d-printing/#basics> Date received is March 30th 2019