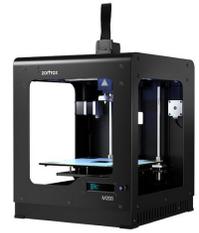


3D Printer Hyperdoc



Skim the following online articles to answer the questions below. Write your answers in the textboxes below in full sentences.

1. Visit 3D printing.com's article. <https://3dprinting.com/what-is-3d-printing/>

Is 3D printing an **additive** or **subtractive** process? How is the object created?

What do we need to **make** first before we print?

2. Look at Matterhacker's article on the parts of a 3D printer.

<https://www.matterhackers.com/articles/anatomy-of-a-3d-printer>

Look at the section named **print bed**. What do heated printed beds prevent the plastic from doing?

Look at the section named **filament**. What is filament? Which colors does our 3D printer have?

Look at the section named **extruder**. What does the extruder do? What two parts does it consist of?

3. Skim the How Stuff Works article on the 3D printing process.

<http://computer.howstuffworks.com/3-d-printing4.htm>

What are the steps for making a 3D printed object? Be sure to add details (I did steps 2 and 3)

- 1.
2. Convert the design to an STL (standard tessellation language) file, which most 3D printers can read
3. Transfer STL file to 3D printer software and manipulate it so it will print to your specifications
- 4.
- 5.
- 6.
- 7.
- 8.

In class we will be using Tinker**CAD** to produce our 3D models. What does **CAD** stand for?

4. Check out Science Daily's article on saving money with a 3D Printer.

<https://www.sciencedaily.com/releases/2013/07/130729144622.htm>

In the study, the researchers chose 20 household items and compared costs. How much would the items **cost on Google Shopping?** How much did it **cost using the 3D printer?**

What is the **price range** of 3D printers?

5. Visit the Business Insider article on industries being transformed by 3D Printers.

<http://www.businessinsider.com/five-fields-3-d-printing-is-already-transforming-2013-9>

What **four industries** are using 3D printing extensively?

Pick one industry. According to the article, how is this industry using 3D printers?

6. Skim through the Dogonews article on MIT's 3D Printing Platform.

<https://www.dogonews.com/2017/6/1/mits-autonomous-3d-printing-platform-could-be-key-for-building-a-mars-colony>

What is the name of MIT's special 3D printer?

Why might 3D printers be the **optimal** solution to building a colony on Mars?

7. Check out the Dogonews article on 3D Printed Adidas running shoes.

<https://www.dogonews.com/2017/1/7/adidas-unveils-limited-edition-3d-printed-running-shoes>

How much will these special shoes cost?

What are some of the benefits of having the shoes 3D Printed?