How Can I Use 3D printing?

3D printing is an amazing process that can make you rethink the constraints of manufacturing items. Have you ever imagined a design for a school or business project and wished you could have a physical 3D copy? Well, 3D printing makes that possible. There are many things you can create such as parts for a design, a scale model, and even tools. There is no end to the possibilities.

Helping the World

Since the Covid outbreak masks have been used as a part of daily life. Because of this there has been a demand for masks and 3D printers have been filling that void by making masks and other various medical items. According to the *FDA (Food and Drug Administration) website* protective 3D printed Materials can include: protective clothing, gowns, gloves, face shields, goggles, and face masks. This has helped relieve our hard

working medical workers.

How Does It Work?

While 3D printing may be a revolutionary device, it can't make things out of thin air. It is imortant to know how the manufacturing process works. But first, it is essential to know that there are different types of materials to print with. The most common materials are **PLA** and **ABS** but there are many different types to use. Some printers can even print metal.

At the beginning everything starts on the computer. You design or download a 3D model and put it in a slicer. A **slicer** is where you can "slice" the model and select other settings. Slicing basically means that it renders the model to how it will be printed. Afterward you download it to a USB file. Put the USB into your printer and find the PDF file. After selecting the file, the printer will heat up the **nozzle**. Afterward, the printer will be moved along the X, Y, and Z axis. The material will be pushed through the **boden tube** by a gear. This pushes the material through the nozzle and onto the print bet.

“Your imagination is your limit”
- Gabe Waits

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