



The New Lego with 3D printing

By:
Maya Ortiz
Christopher Yañez
Christian Yañez

Layer

All shapes made up with straight or the previous steps to reach for the precision of the object. It will give you the number of layers that will be made with. Also it will give you two options for the thickness of the layers in 0.25 mm and 0.125 mm.

We will see these on the screen of the object, showing how far from top of our object and how far it is on the side.

Support Fill

Support material is used to brace the model material during the build process. This material is removed after the part is complete. The amount of support material used affects the strength and time the part takes to print.

- **None** - It uses less support material and it takes less time to print.
- **Minimal** - It automatically minimizes support material and reduces the build time.
- **Standard** - It encloses the entire model with support material. As a result, it uses more material and it takes more time. The file will use support, because there are no flat surfaces that our model won't fall upon.

Orientation

The orientation in which the part is being printed is also a very important. A 3D part being in XYZ axis will have plenty of effects on the part. Weight, strength, time in production, and material are examples of what is affecting the part.

When the part has the axis of the gravity, that is the area where we start the part to lay on. The greater the area the better for it to be on, therefore that is how we will guide our layer to be the parts to have a greater strength.

Material Extrusion

- 3D process in which material is selectively deposited through a nozzle or orifice.

Model Interior

Once you upload your model to a different software for an example to CAT, one of the questions that you will have to fill out is the model interior. Other model creator you have three options that you can pick from which are solid, sparse high density, and sparse low density. They all affect your product that you are trying to print in every way possible. Before to go for no-void, it means the product more solid and being better. Therefore if you want sparser high or low density your product becomes less stronger but it use material and less time consuming.

Additive Manufacturing

- "Process of making 3D solid objects of virtually any shape from a digital model."