

BRINGING 8-BIT ART TO LIFE

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Play for Real! If you create an 8-bit masterpiece and want to bring it to life, follow this handy tutorial. All of the necessary digital files are included in this downloadable content (DLC) package.

Materials Needed:

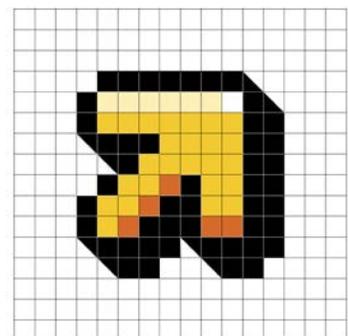
- Gridded Paper
- Colored Pencils (or a REALLY good imagination)
- Bit STL file (included in DLC)
- Computer and 3D Printer (or access to 3D printing resources)
- Colored 3D Printer filament or material(s)
 - Plastic-adhering paints may also be used in place of colored material
- Glue (appropriate for materials used)

Quick Note:

8-Bit generally refers to the number of bits used to represent colors used in early computer displays, which means early developers only had 256 or fewer colors to work with (only displaying 4 or 16 colors at a time was the norm). Displays also only had very small resolutions, which lead to the “blocky” look for 8-bit art. Nowadays the term “8-bit art” mostly refers to the blocky resolution, and less so the limited color palette, so let the artist in you decide which rules to follow!

Step 1 - Create the 8-Bit Pattern

This step might be the most difficult as it requires a bit of art, design, and patience. Take your gridded paper and colored pencils and “sketch” a pattern using the full grid blocks as individual “dots”. Be sure to keep your colors simple, making sure that you have the appropriate filament or paint to represent each color. It’s also important to keep the total size (height and width) relatively small - you’re eventually going to print out one “Bit” for each grid “dot” you use! Yes, the example here was pulled from artwork and is not completely correct (some grid spaces are diagonally half-filled for artistic effect), but I overlooked this because I liked the concept.



Step 2 - Take Inventory

You now want to count each dot used in each color - make a nice table that you can quickly reference. Even if you're going to paint the bits afterwards, it's still incredibly helpful to know how many of each color to paint.

Step 3 - Print

Now that you know how many bits you need (and of each color), print the bits you need using the handy Bit STL file included in this DLC. This may take several hours depending on how many bits you need to print, the speed of your printer, and how many bits you can print at once. Yes, I totally get the fact that we're almost essentially printing custom LEGO® bricks, so if you've got a huge stash of 1x1 LEGO® bricks of the right color, by all means use them instead! But I cannot in good conscience recommend applying glue to or painting any LEGO® part, ever. *#LEGOpurist*

Step 4 - Separate/Plan/Paint

Each bit has two "nubs" and two "pockets" to allow some simple mechanical interconnection - these are not meant to actively interconnect, but just provide guidance. Determine your desired orientation of the bits as you will use this as a standard for the build of your creation - if each bit is oriented the same, they'll fit together nicely. If you are painting your bits, now's the time to start painting. Take each bit, lay it down in its orientation, and paint the flat surface of each bit in its appropriate color. Once you're done, ensure you have the correct number of bits of each color.

Step 5 - Assemble

Begin assembling the bits on a flat surface. It's best to build the bits in rows or columns, according to the gridded art you created, and then place each new completed row/column next to the previous. As you're building, now's the time to add glue - just place a drop on each "nub" as you connect the parts together, and make sure the parts fit together tightly. You may realize that if done correctly,



you may only have to glue the outer perimeter of your creation together (thanks to the nubs/pockets). You're welcome.

Step 6 - Share

Share your 3D-printed 8-Bit art with the world!