# How to start making pixel art #2

## Cluster sketching and painting

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Also, this is the part 2 of a series of articles, read the whole series here in the Pixel Grimoire.

I'm using Aseprite for this tutorial. In this article I'll teach a technique for sketching and drawing pixel art that is similar to the process of a traditional painting. I usually call this technique *cluster sketching,* since I start with big color clusters and refine them until I'm happy with the result.

## What is a cluster
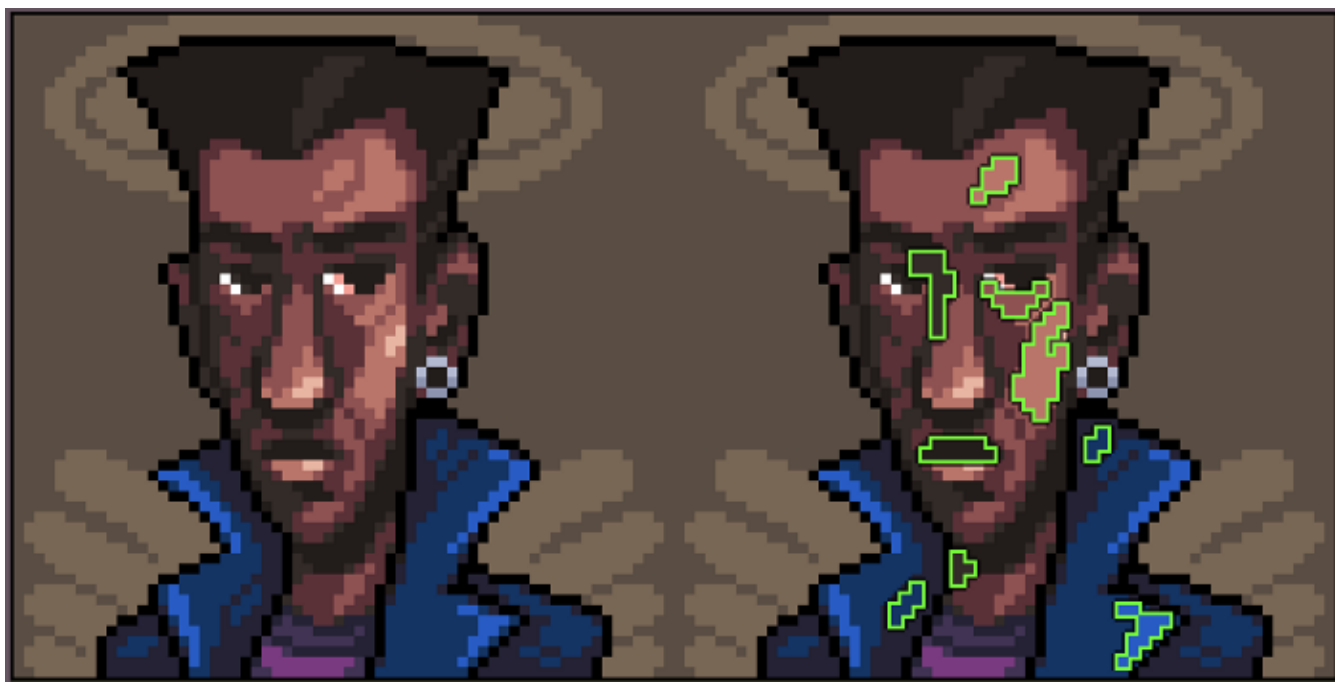


Some pixel clusters highlighted

A **cluster**, also called **color cluster** or **pixel cluster**, is a continuous group of pixels of the exact same color. There's some debate whether they can connect diagonally or not. I believe they do connect, I call that a *weak connection* and I try to avoid them, but I don't worry too much about it.

While making pixel art, my focus is to have **as few** clusters as I can and to avoid one-pixel clusters by all means. These one pixel clusters are also called **orphan pixels** and they usually are responsible for the image looking noisy and confusing.



Identifying and changing orphan pixels to small clusters

Sometimes you can just remove the orphan pixel and sometimes you need that detail. For the latter I have some favorite shapes to replace the orphan pixel, they are the green shapes below the cookies. But there are also some cases where they can be used, for texture, anti-alias (I'll talk more about that in future chapters) and for strong details, like the red eyes of this skull:

Orphan pixels are not always bad!

## Let's Draw

Let's draw something! I'm making a little scene using the **DB32** palette and a really big resolution, 100 by 64 pixels. For this exercise a drawing tablet is highly recommended because making natural strokes helps a lot with the result.

If you think this scene is too complex for you, feel free to tone it down by removing some stuff, like the building or the person. Always draw something comfortable when trying out a new technique. If you feel like the canvas is too small or too big you can also change the size a little, but I wouldn't go smaller than 64 or bigger than 128 pixels, at least not for now.

## Step 1: Big clusters

Last time we sketched with lines and then we filled the interior with colors, this time we will start straight away with the colors. Just do a very messy version of the image you want to do, focusing on choosing the colors and the vibe you want. Favor gestural movement and do **not** add detail.
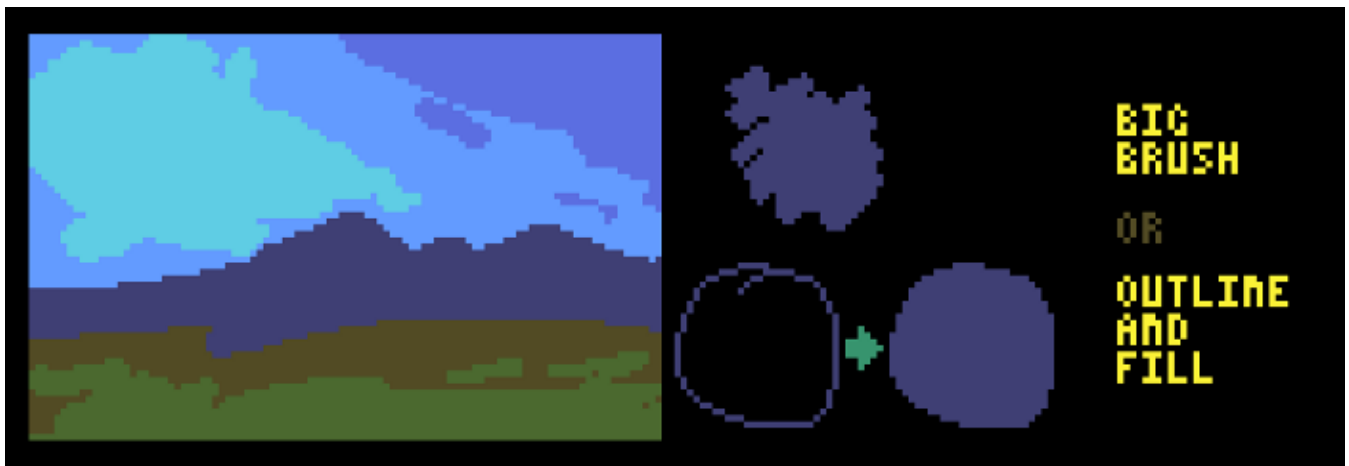


Step 1

The idea with this technique is to start with big blobs of color and go smaller each step. This is one of the few situations that it's OK to use the brush tool with 2 or even 3 pixels size. To increase and decrease your brush size, use the "+" and the "-" keys. Another way to do this is to draw the outline of the cluster you want and then just fill it with the paint bucket tool (G key is the shortcut).

## Step 2: Refine
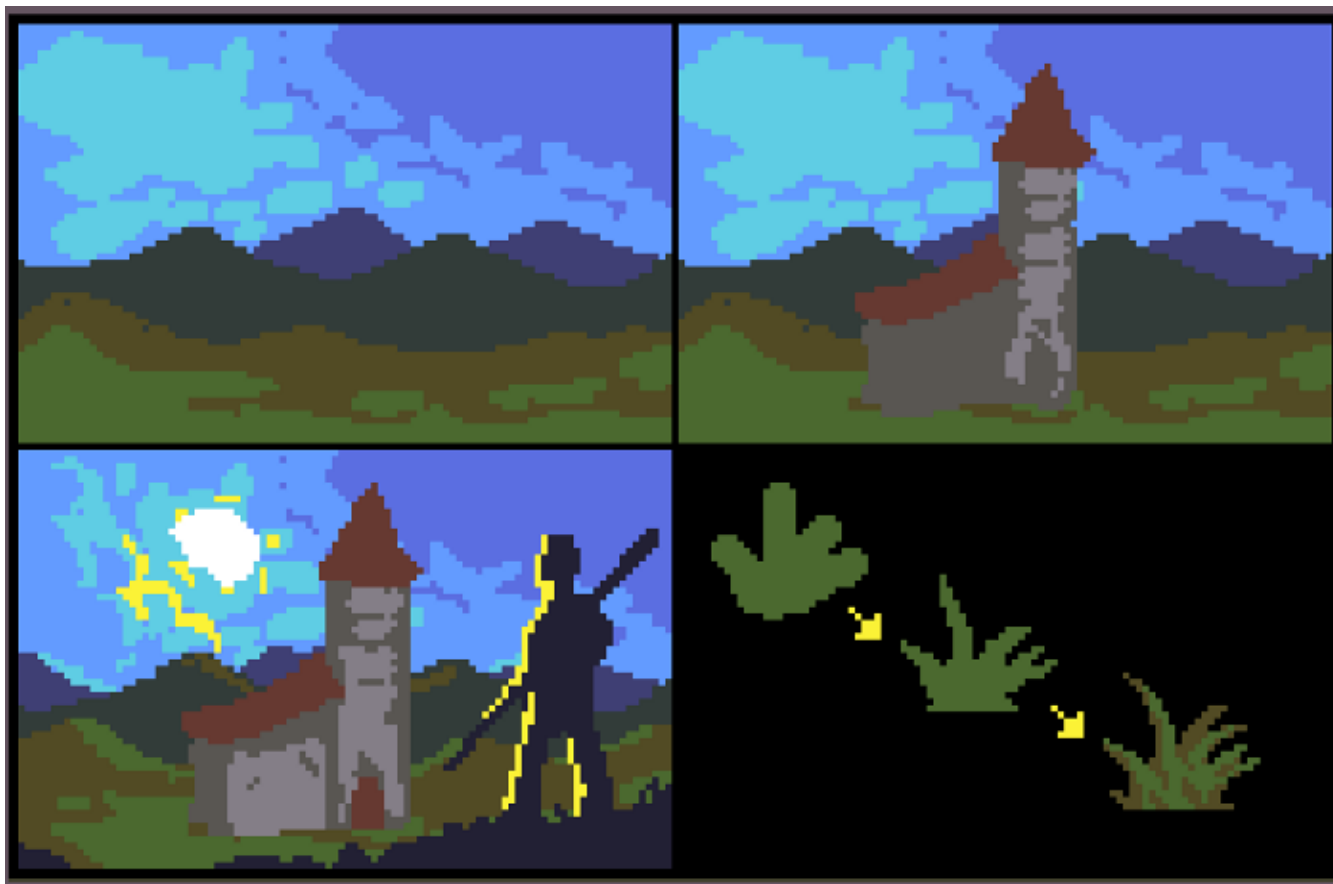
Step 2

You can also see that I start with the far back, like the sky and mountains, and then add the building, and then the silhouette in the first plane. This is a common painting technique and like most painting techniques it also works well with pixel art. The idea is to have your foundation ready before placing things on top of them, this way it's easier to choose colors and the scale of the objects.
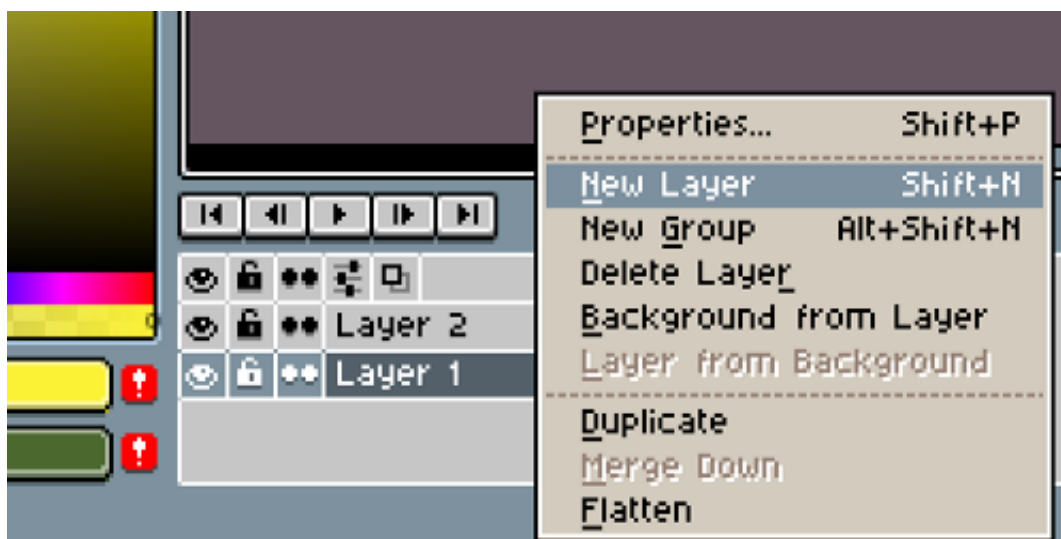


I also like to work with layers on images like this, with the sky, the building and the first plane being in different layers. To create a layer, right click the "Layer 1" in the

timeline on the bottom of the screen, and select **New Layer**. You can have as many layers as you want but I always try to work with as few layers as I can, otherwise things can get too messy.

## Step 3: Fix jaggies and add detail
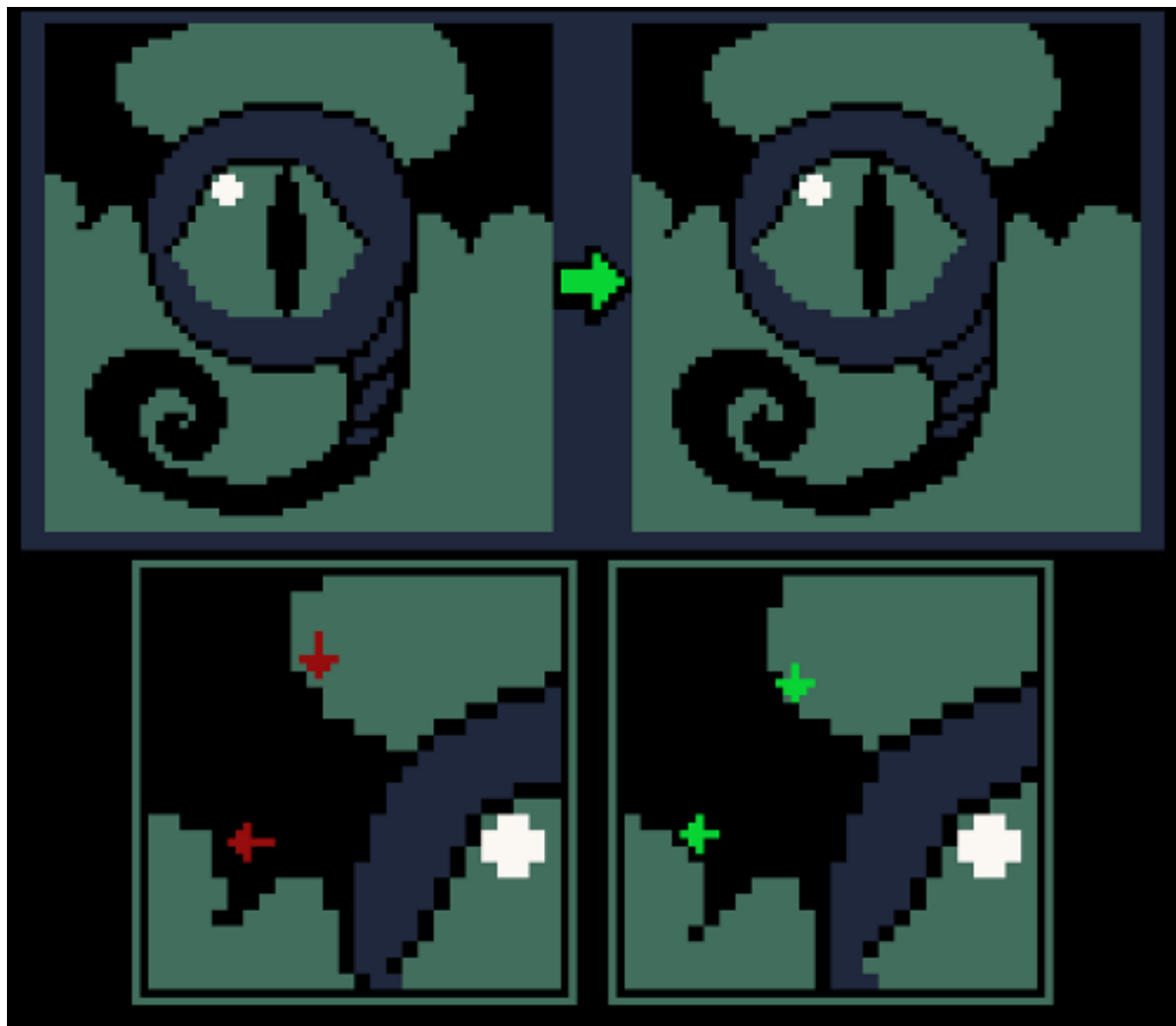


Pushing pixels around to fix jaggies

What are jaggies? OK, this will sound like it's super complicated, but I promise it isn't.

Jaggies are unintentional corners that appear in pixel art, usually when making natural hand movements, as a side effect of the lack of anti-alias.

Imagine that the border or line you are trying to fix is a staircase, you need to apply some logic to the number of pixels in each step. We need to manually count pixels and make sure that the number of pixels in each "step" increases as the curve approaches a horizontal angle and decreases as it approaches a vertical angle.
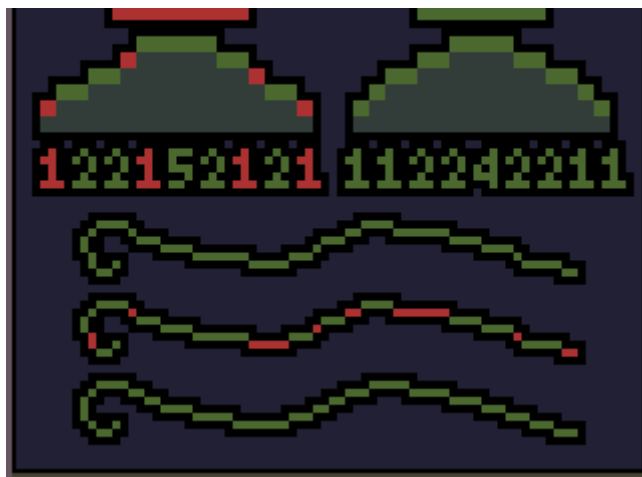
Identifying and fixing jaggies

Let's break this down. Every line or cluster border should follow some kind of logic. You can see in my example that the amount of pixels in each step on a *perfect curve* goes up and then goes down. That's how curves behave, they usually follow some geometrical progression, exponentially going up or down.

The **jaggies** are just "missteps" on that logic. It's when a step size suddenly goes down and goes up again in the middle of a a curve (or the other way around). The numbers can go high or low really fast, that's not a problem, as long as the curve logic applies.

To fix them you push pixels around to make the steps follow a steady number or to make it increase or decrease correctly.

Let's get back to our image now.



Final step

The idea here is to "underline draw the rest of the owl" mainly by looking for jaggies and fixing one by one. While doing that I'm constantly adding details, stronger contrast, better

light, etc. It's not a very organized process but it gets the job done.

## Now What?

Now it's time to practice! If a complete scene is too much for you, try starting with something simpler, like a **rock** or a **tree stump**. This technique produces very organic and painterly results, so it's great for backgrounds and for drawing nature, like plants, water and mountains.

## Keep reading the part 3 <u>here</u>!

Thanks to Amora B..

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