



Pixel Art Challenge

Activity • Grade 3–6 • Art & Design

Make a pixel art emoji in ten easy steps!

About the Author

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Marie-Lee is a MakerSpace educator at Pinnguaq and an explorer of the world of visual arts. She loves to travel and learn about all the different cultures and histories of each place. Marie-Lee is Inuk and grew up in the province of Quebec but now lives in Iqaluit, Nunavut.

Overview

Today we will be creating pixel art using a program called GraphicsGale. You can download this program for free by following the link below.

In the [Blob-Art Challenge](https://pinnguaq.com/learn/blob-art-challenge) (<https://pinnguaq.com/learn/blob-art-challenge>) we explored shape, color, and texture. This time I would like to invite you to turn your work into digital pixel art.

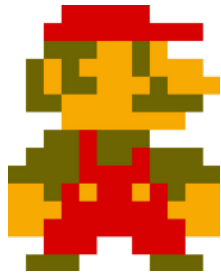
Background Information

What is a pixel? Well, pixels are nearly everywhere! Everyday we see millions of pixels. Your TV, computer, and even your cellphone all use digital displays (or screens) that show us information in the form of images or video. The images we see on the screen are actually made of millions of teeny-tiny pixels. Pixels are the smallest unit in a computer-displayed image. They are so small that you can't see them individually. If you could see them individually, they would probably look something like this:

The number of pixels in a display describes the resolution of a screen. The more pixels in a display means the more information you can show. Today, we are used to seeing higher resolution images.



Consider these Mario sprites:



Blocky, low-resolution



Smooth, high-resolution

The first image is an 8-bit version of Mario from the early video game consoles. He is small, blocky, and only has four colors. He doesn't have very many features because early computers couldn't store nor display many pixels.

The second picture of Mario has many more pixels and much more detail, therefore giving him a smoother look.

Pixel art is a style of digital art that we can use for fun by using a limited number of colors and simple shapes. Back in the early days of computers, video game artists relied on pixel art because it was the only way to display graphics. Early computers couldn't store a lot of information, therefore they could only display low-resolution graphics. Today we have improved our computers to store and display much more information so we no longer need to rely on pixel art (but we can still use it for fun!)

When we use pixel art to make characters, we call these characters *sprites*.

Now that we know all about pixels, let's start making some sprites!

Materials

- GraphicsGale
<https://graphicsgale.com/us/download.html>

Step by Step Instructions

Step 1

Open up GraphicsGale by double-clicking the icon.



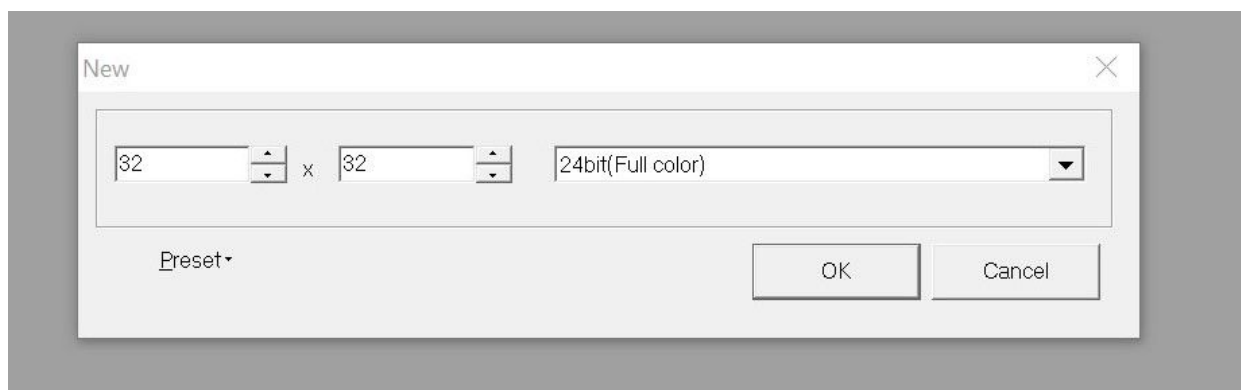
Step 2

Open up a new file by clicking *File, New* at the top left corner of the screen



Step 3

A dialogue box will appear that will ask you to set the dimensions of the page, set it to 32 x 32. This means the page will be 32 pixels wide by 32 pixels tall. Once you have that input, press *OK*. This will open a window with our workspace.



Step 4

Now our window is really small. Click *Maximize* to make it bigger.



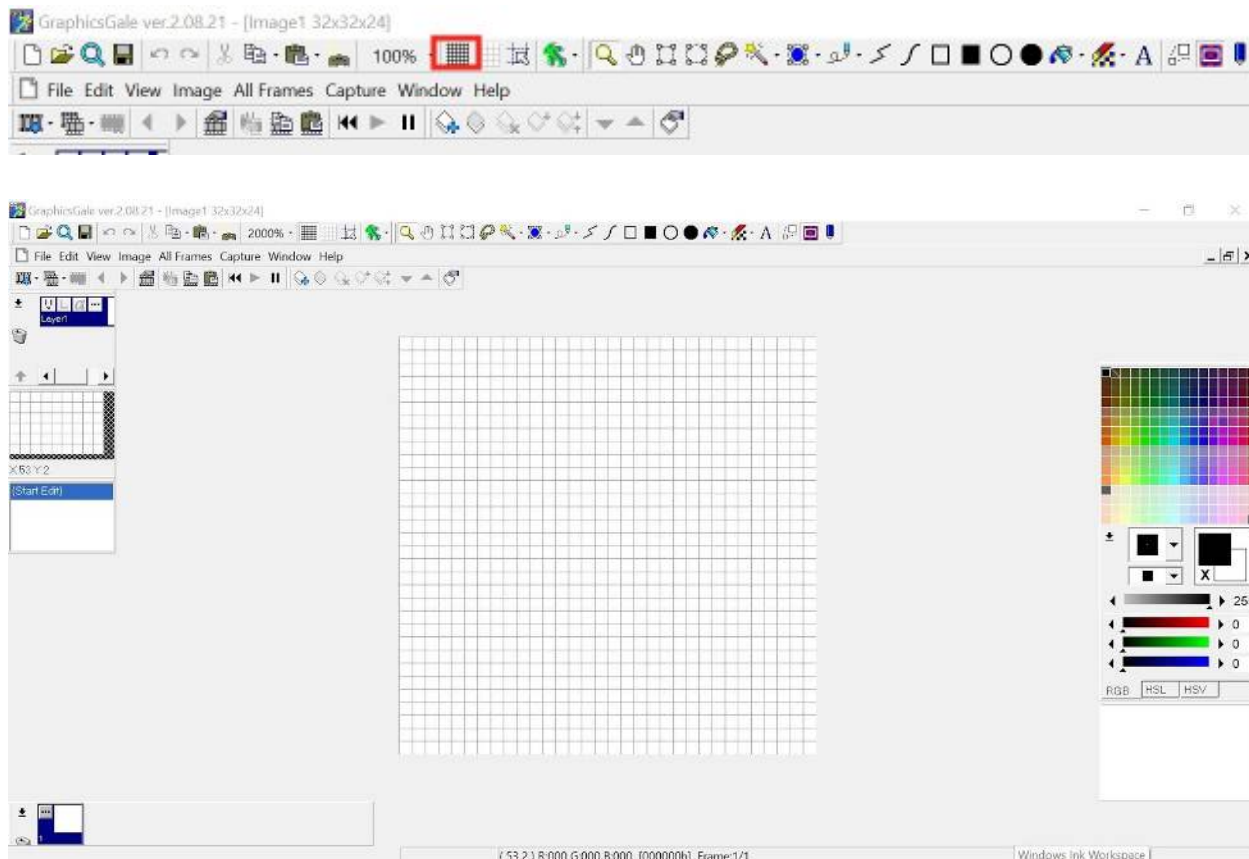
Step 5

You should see a tiny white box in the middle of your screen. This is still too small to work with, so we will increase the magnification by clicking where it says *100%*. We want to magnify our page to about 1500%.



Step 6

Now you should have a bigger, white box. Click the *Show Grid* button. This will help us visualize the pixels!



Step 7

The pen tool lets us draw using any color selected by using the color selector pane to the right of your screen. If you click once anywhere on your workspace, you will draw one pixel. If you click and drag your mouse you can draw a continuous line of pixels.



There is no eraser in GraphicsGale, however, you can just select a color and paint over any pixels or you can press the *Undo* button. Pressing the *Ctrl* key and then the *Z* key on your keyboard will also undo your last action



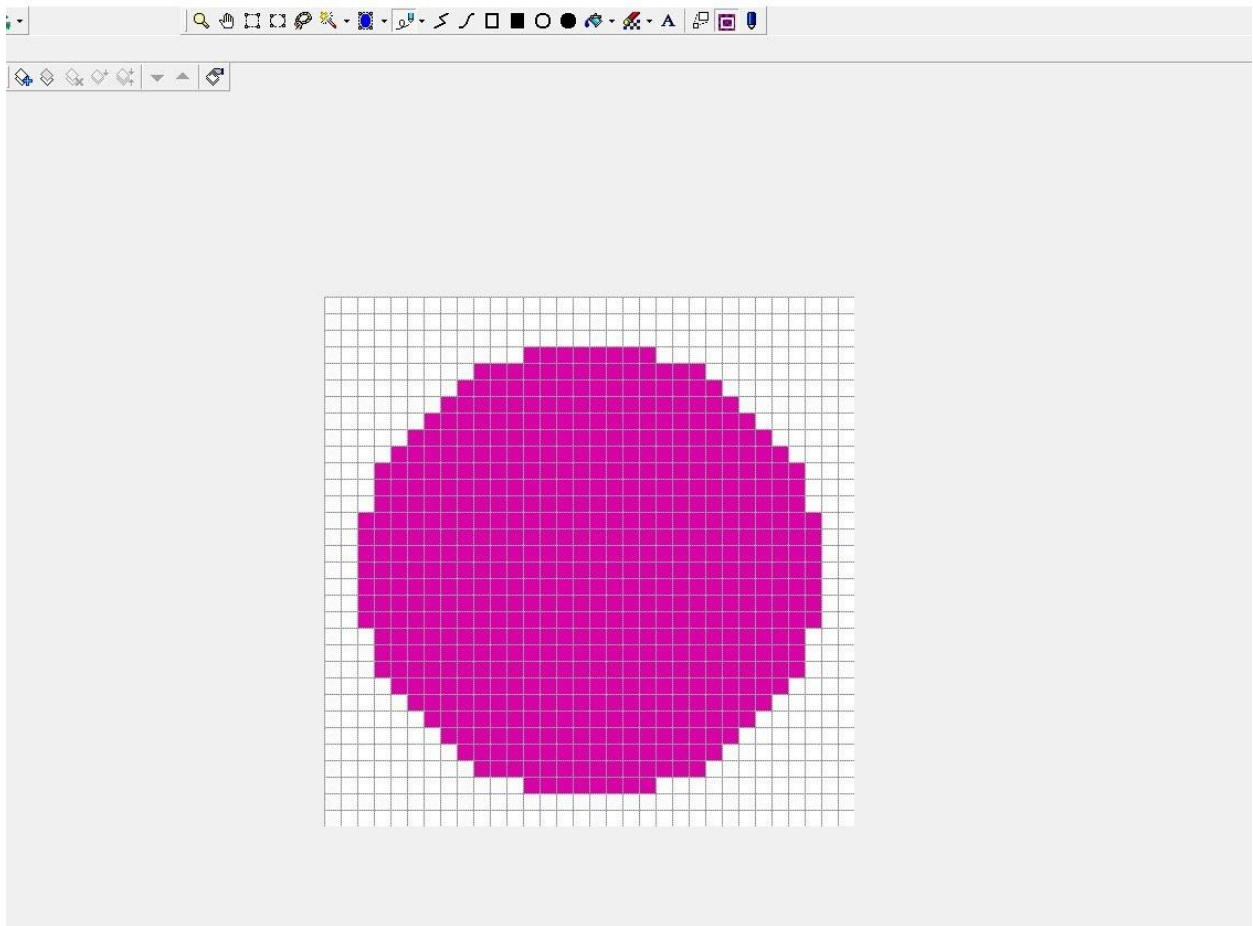
To start, let's try to draw an emoji!



Step 8

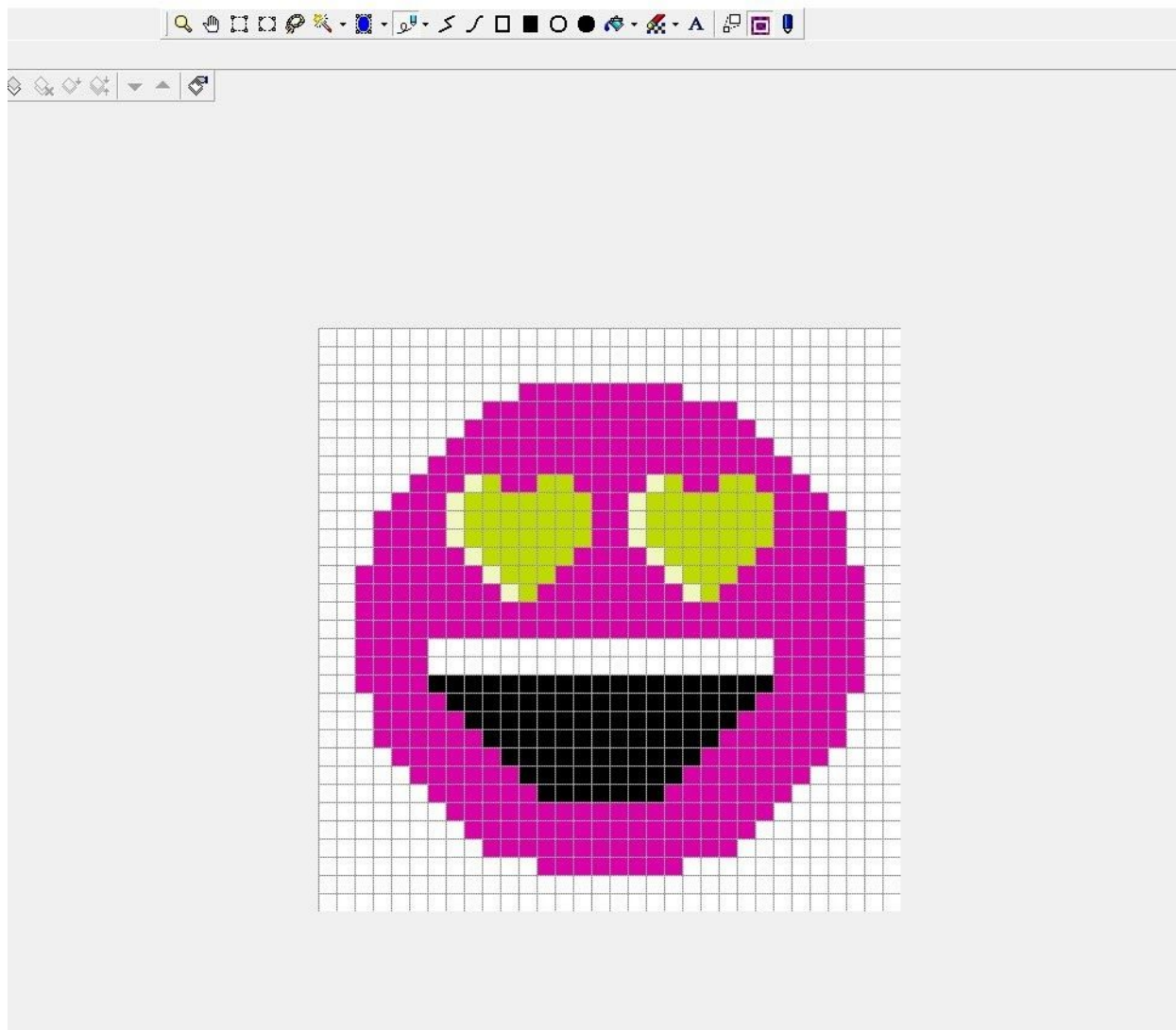
Drawing circles pixel art style can be tough. Select the circle tool to make a circle. Click and drag your mouse to make a circle, then let go once you have a big enough circle.





Step 9

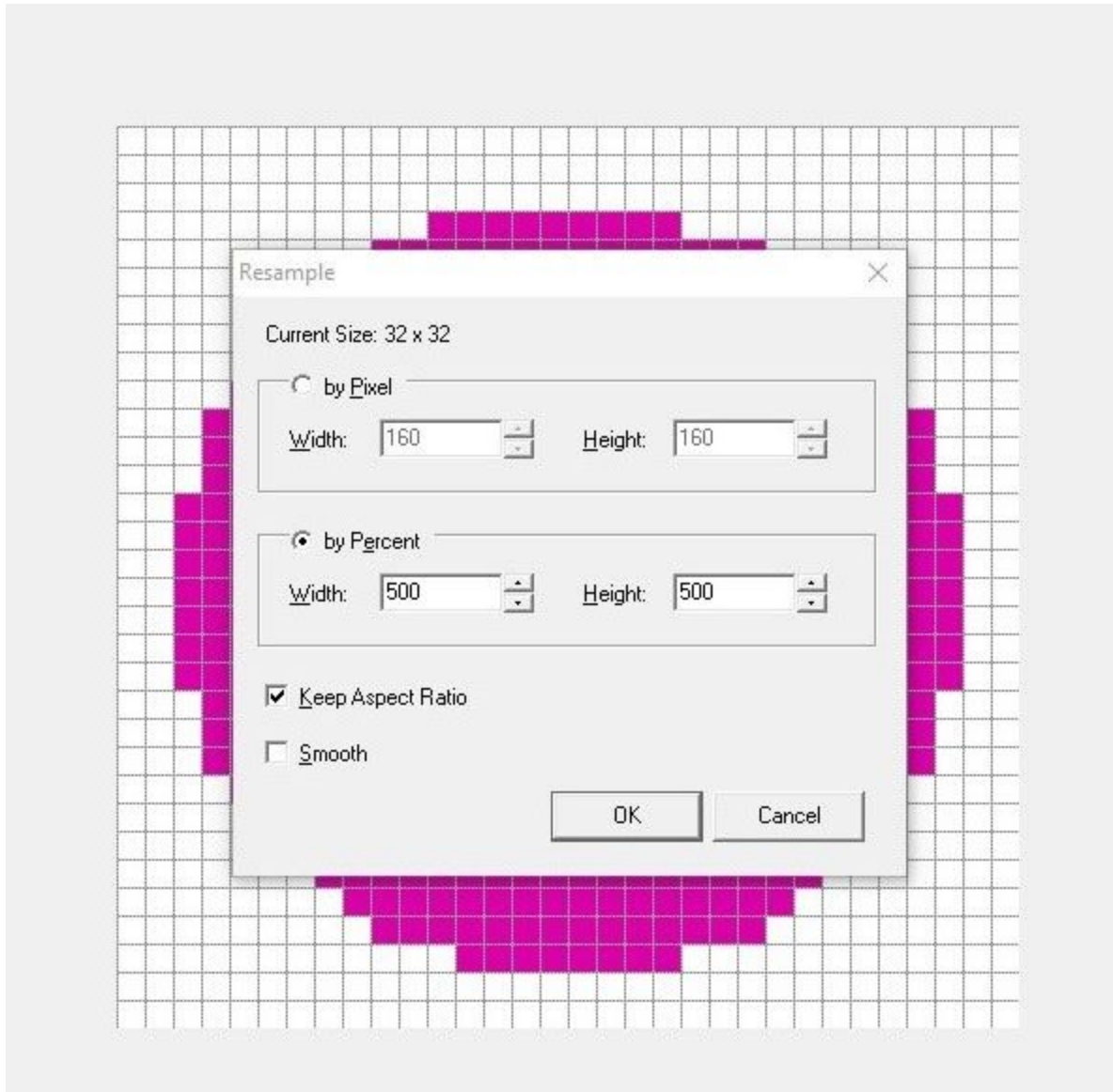
Great job! Next we should add some features. I will use the Pen Tool to draw this emoji's eyes and mouth. First I will select a new colour. I will add some yellow heart eyes by drawing the individual pixels.



Here's a Pink pixel emoji with yellow heart eyes and an open-mouthed smile!

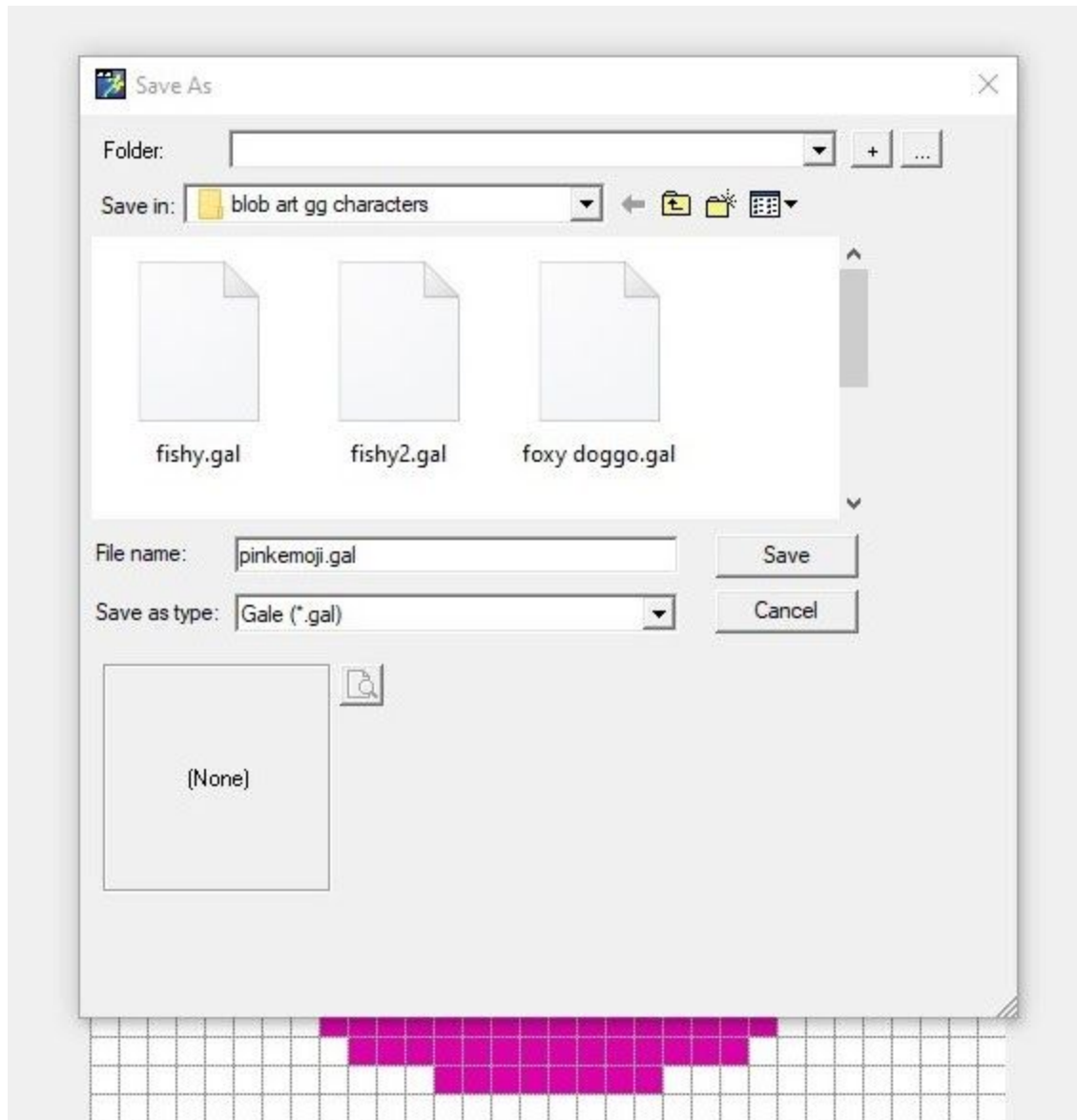


Right now our emoji is really small. So before we try and export it as an image, we first need to go to *All Frames, Resample*. A dialogue box will open and we will resample the image by Percent. In the first text box next to *Width* we will enter 500. This should automatically adjust the height. Below there are two checkboxes. Uncheck *Smooth* and click *OK*.

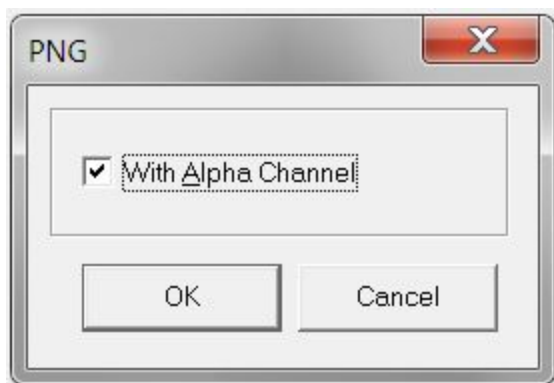
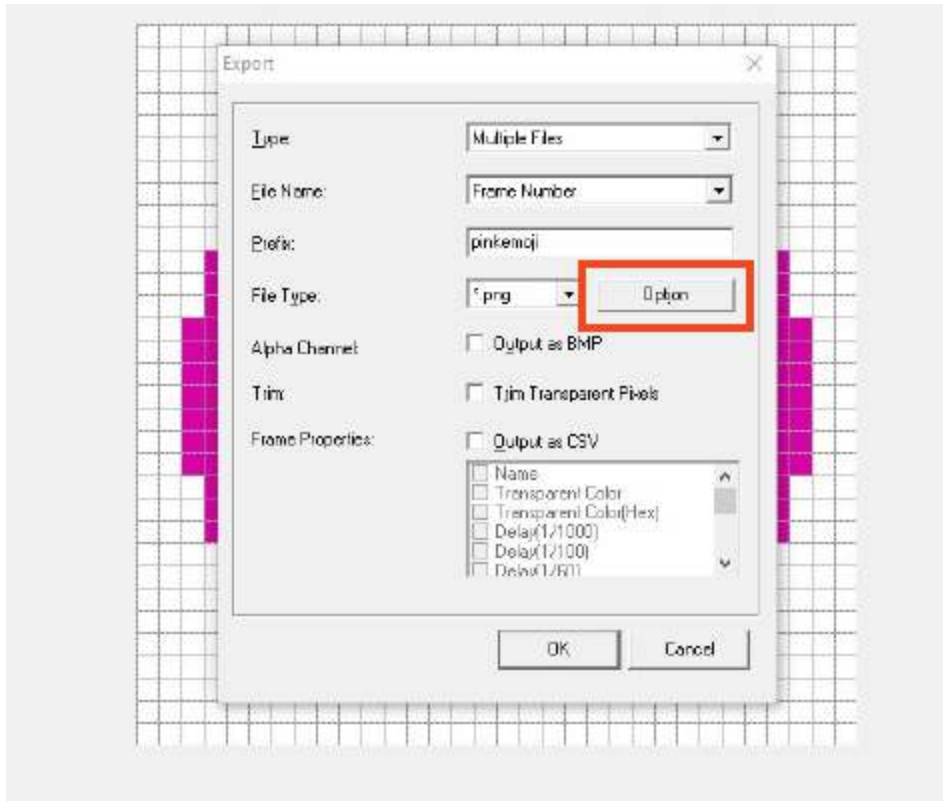


Step 10

Now you can save it to your computer. Like we did before, go back to the top-left corner and click *File, Save As*. I entered the file name *pinkemoji*. Click *Save* and your emoji will be saved as a *Gale* file. This type of file can only be opened using GraphicsGale and will allow you to go back to your work if you wish to keep working on it.



We want to save our file as a PNG image. This will make our background transparent when we use it as an image. We will go back to *File, Export*. This will open up a dialogue box where we will enter a name next to *Prefix*. We want the background to be transparent, so we will click *Option* and check the box *With Alpha Channel* then press *OK*.



Great Job! We have created a Pixel art emoji and saved it as an image. You can share your custom emoji on social media or even add some code in Scratch!

Follow Up

We want to see the awesome things you're creating! Take a photo or video and share your work with us by emailing media@pinnguaq.com or tagging @pinnguaq on [Facebook](#), [Twitter](#), or [Instagram](#). Don't forget to include the hashtag #LearnWithPinnguaq!

Useful Resources

- In case you missed the Blob-Art Challenge
<https://pinnguaq.com/learn/blob-art-challenge>
- More about pixel art techniques in this lesson plan series
<https://pinnguaq.com/learn/pixel-art>
- Quick Tips for Character Design
<https://www.cia.edu/blog/2014/11/quick-tips-for-character-design>