

# ALL ABOUT LAYERS

**BETA** Fall 2022

THIS SLIDE DECK GOES WITH:

Video Tutorial 2:  
All About Layers (17:23)

<https://vimeo.com/596118592>

In this slide deck we will be going over basics of *layers and non-destructive editing, which includes blending, adjustments, masking, and keyboard shortcuts to recover from mistakes.*

Credit: These slides have been created by Adjunct Professor Helen Miller to accompany tutorials by Studio Foundation (SF) Cage Instructor Jackson Boener and SF Cage Manager Gene Preble.

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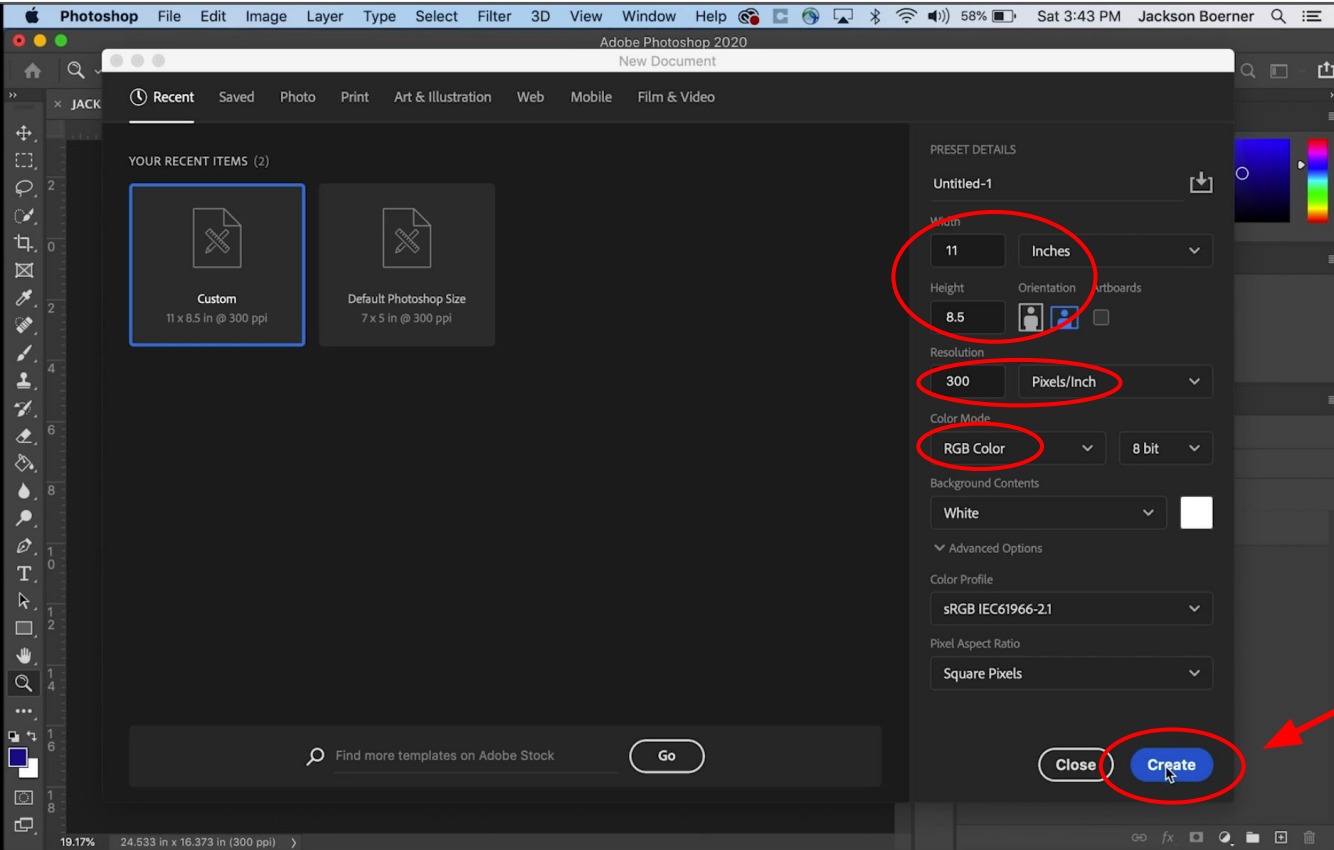
THIS SLIDE DECK GOES WITH:

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All About Layers ([17:23](#))**

<https://vimeo.com/596118592>

*Password: SFCage2021*

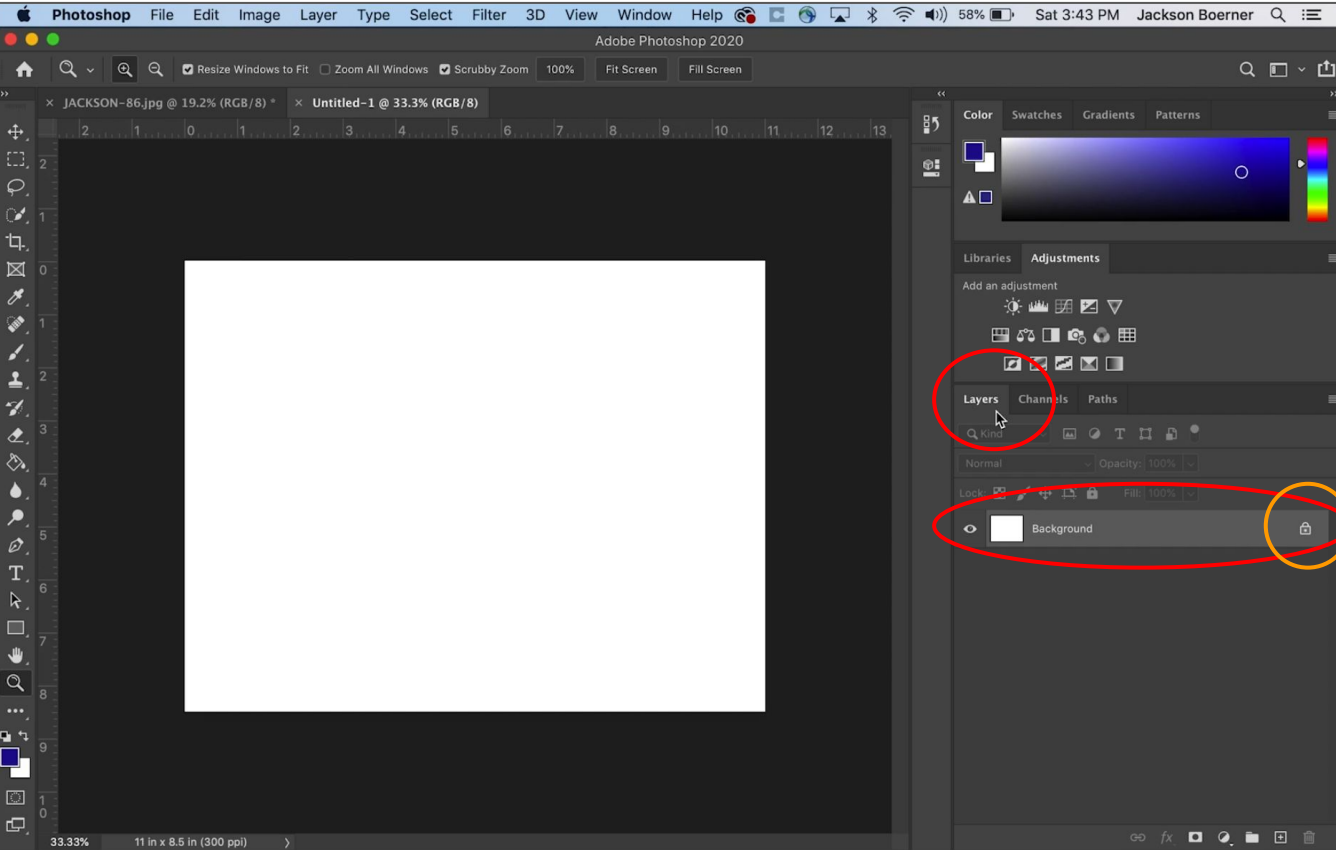
# OPEN PHOTOSHOP AND CREATE A WORKSPACE



The first thing we're going to do is open photoshop and make a **canvas**.

I'm making mine *11 inches by 8.5 inches* at *300 pixels per inch* in the **RGB Color** mode. After clicking **Create** you will be in the workspace.

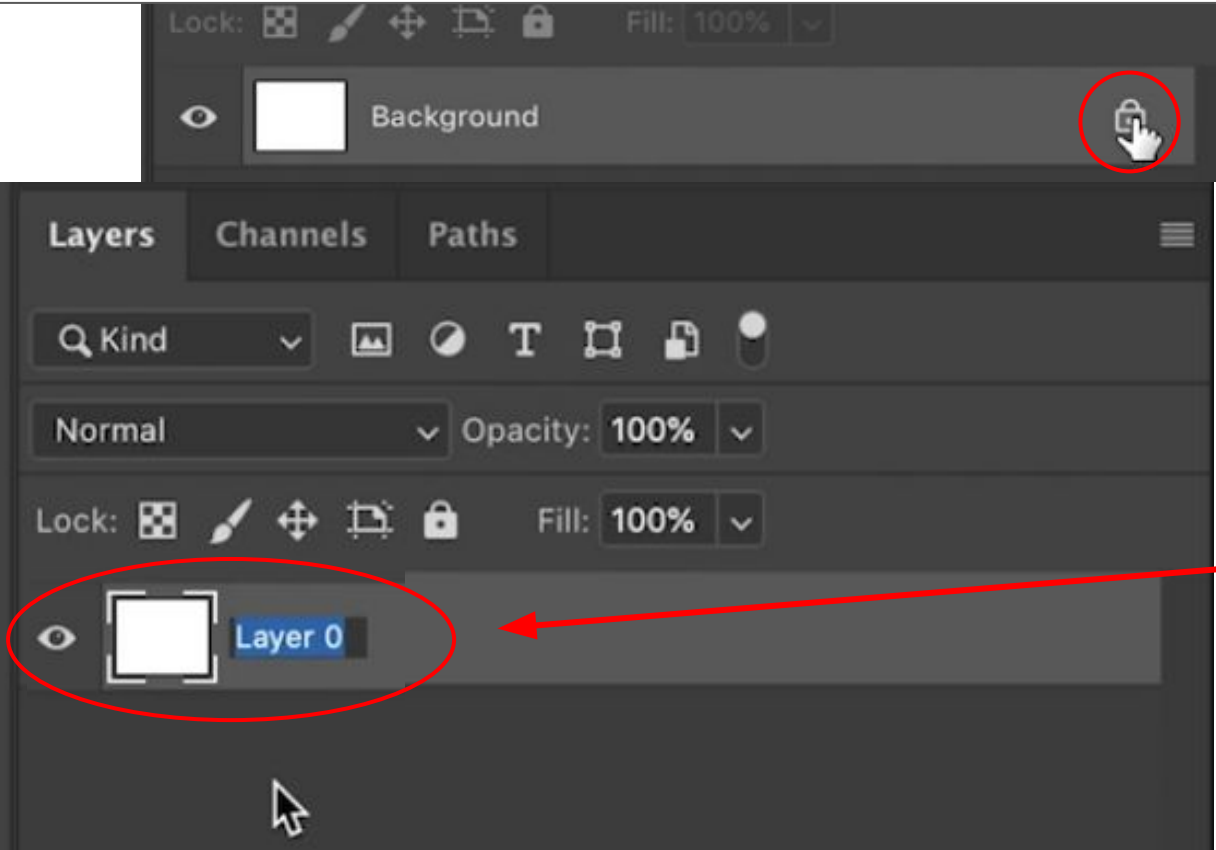
# THE BACKGROUND LAYER



If we go over to the left of the workspace we can see a tab called **Layers** which should be selected by default. Below this we will see our first layer called **Background**. Layers are an integral part of Photoshop and are incredibly useful for editing and manipulating individual parts of a project, be it a photo, a collage, or an illustration. The **Background** layer is a default layer that is initially white, or non-transparent, and **locked** so it can't be edited.

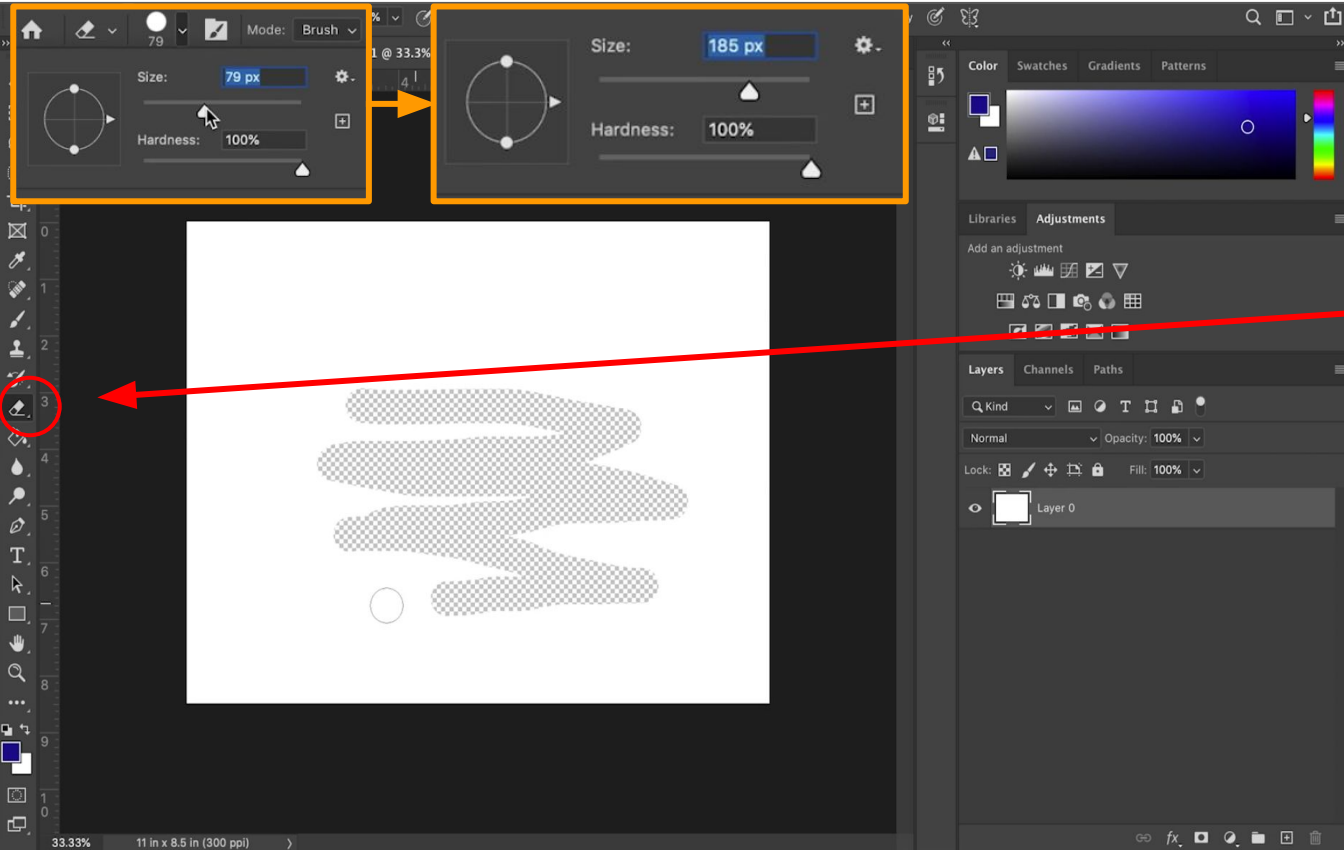
# THE BACKGROUND LAYER

# UNLOCK & RENAME



To lock or unlock a layer you can select the layer by clicking it and then click the *padlock* icon at the top of the layer panel under lock. If you unlock the background a dialogue box will open you can just click enter, its name will change to **Layer 0**. If you wish to rename a layer you can double click on the name and rename it to anything you would like.

# LAYER TRANSPARENCY

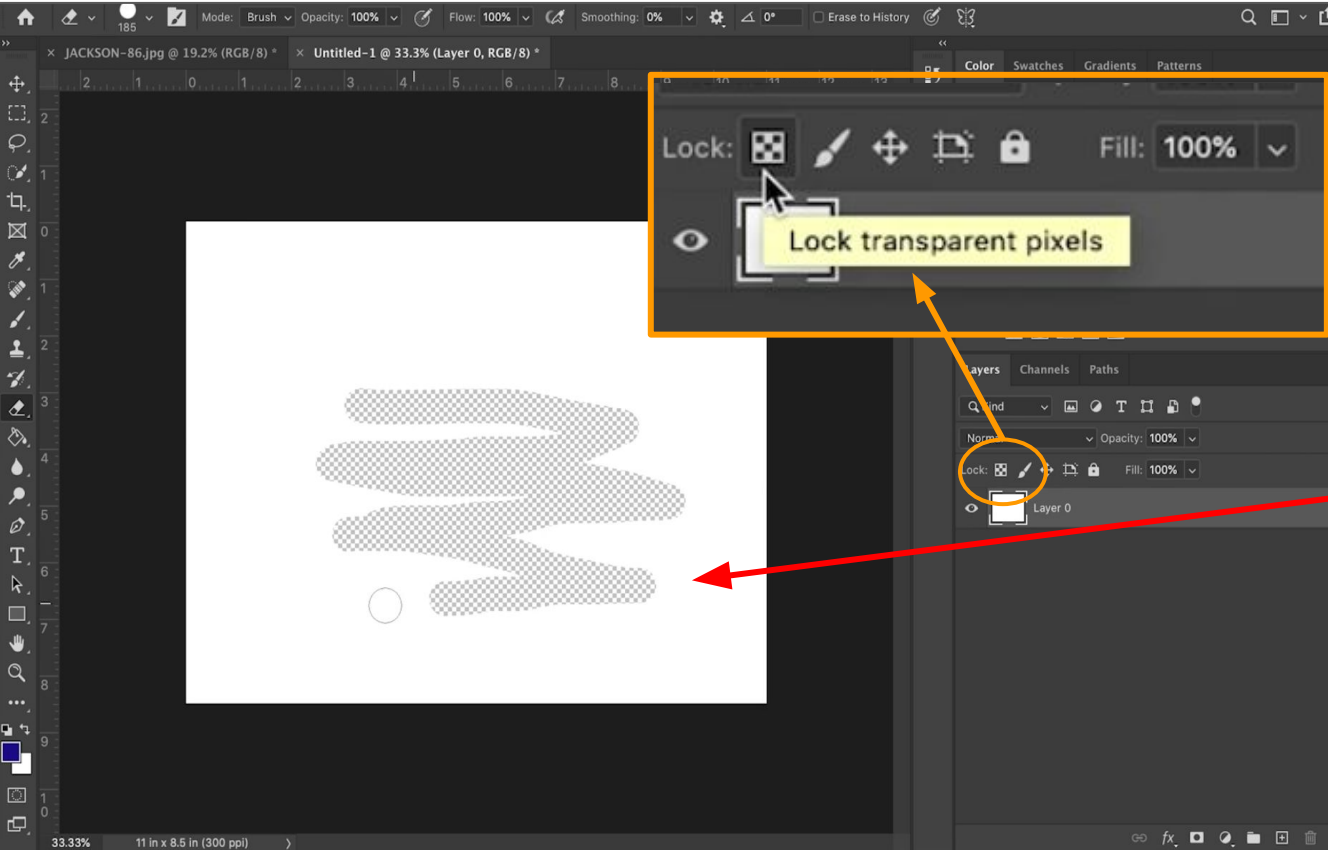


I mentioned that the background layer is initially white or non-transparent.

Let me show you what I mean. I'm going to take the **Eraser** tool, which is the 12th tool down on the toolbar, and **increase its size in the options bar** and draw on the canvas. A checkered pattern will appear. In my previous video when we erased with the eraser tool it drew with the background color in the color picker squares in that case white.

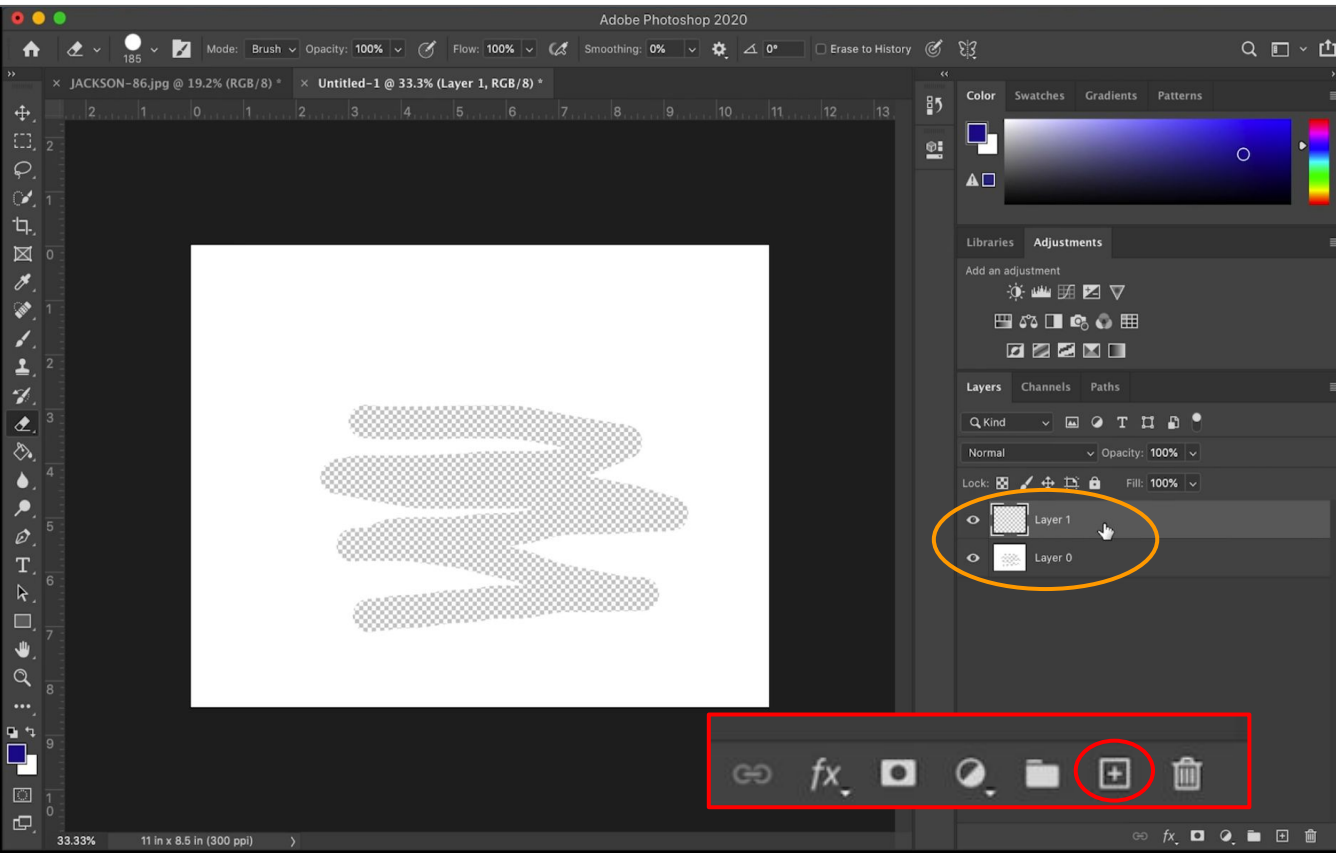
# LAYER TRANSPARENCY

(CONT...)



When I unlocked the background layer, specifically its transparent pixels, I told photoshop that I am not using a background color. I can now erase all colors from my canvas, the **checkered pattern** is an indicator of transparency and that no data exists on the canvas at that location. The ability for a layer to be transparent is incredibly useful and lets us start thinking about *non-destructive editing*.

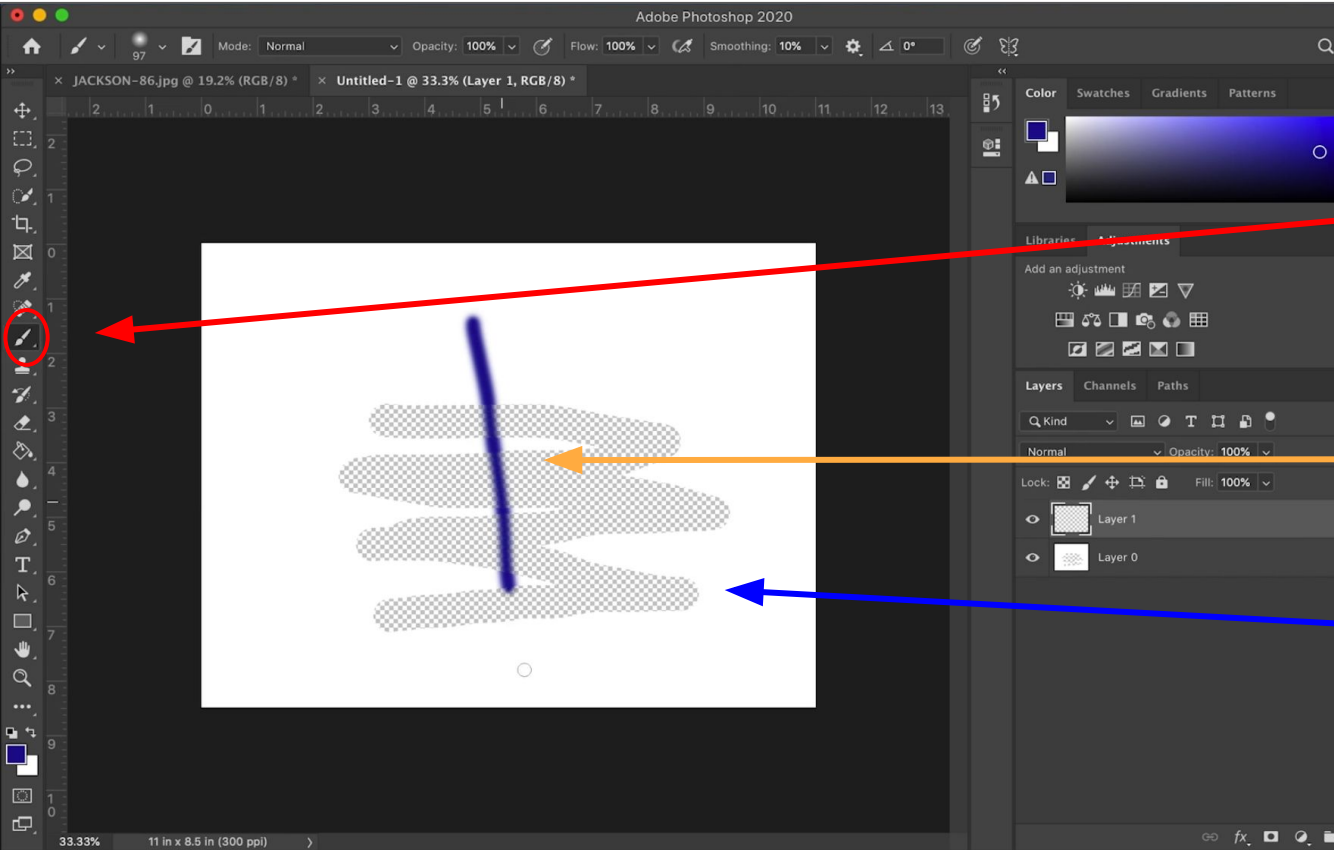
# MAKING A NEW LAYER



Let's make a new layer. On the Layers panel at the bottom right corner you can see a series of icons, one is a **square with a plus sign**, it is second from the right. When you click this icon a **new layer will appear above Layer 0 called Layer 1**.



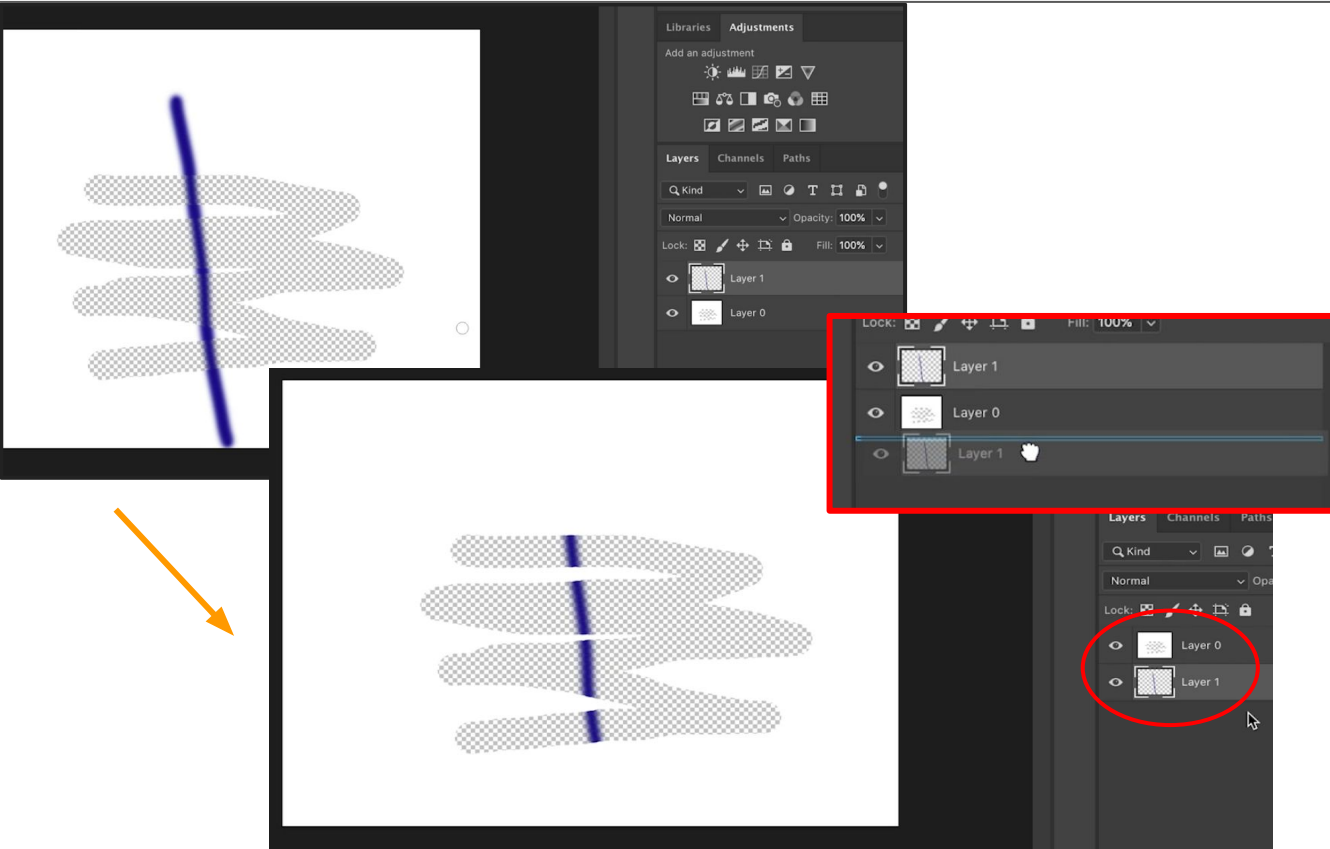
# HOW LAYERS STACK



I now have two layers. I'm going to click on Layer 1 to select it. Next I'm going to select the **Brush** tool and draw a line on **Layer 1** and to be accurate a white canvas with erased marks on **Layer 0**.

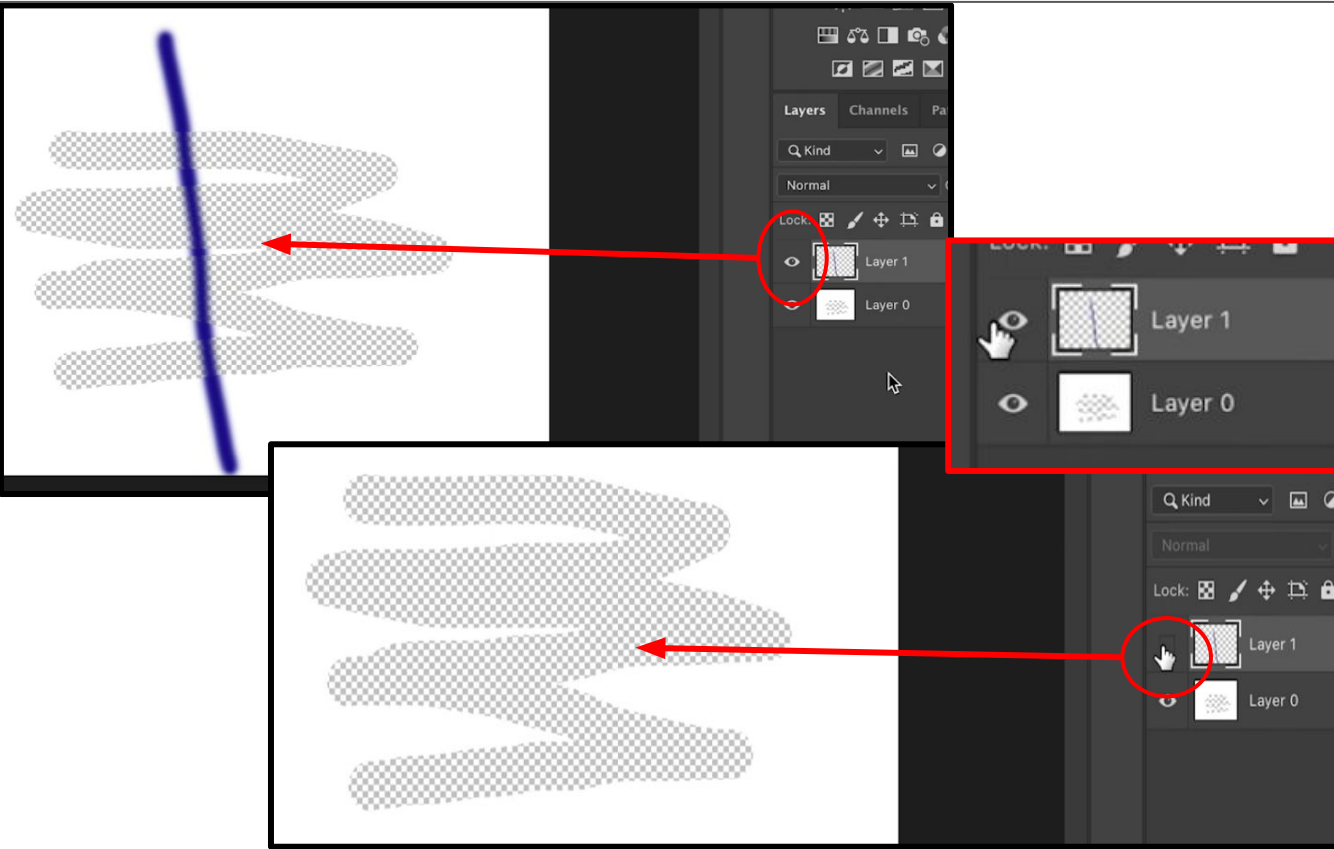
# HOW LAYERS STACK

(CONT...)



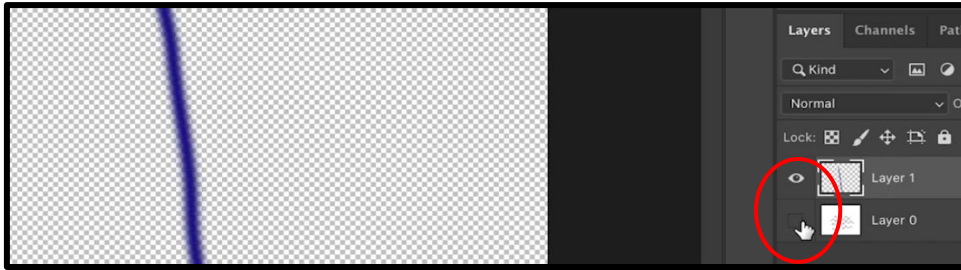
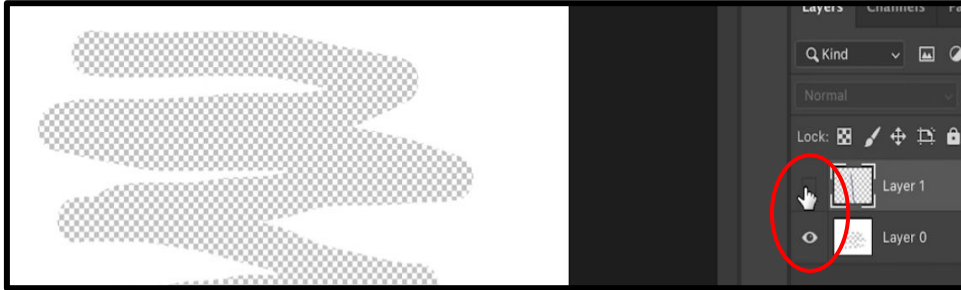
Next I'm going to **click and hold Layer 1 and drag it below Layer 0**. The line I drew on Layer 1 is now below or behind the white of Layer 0. Layers stack and **if a layer on top has any media on it, it will cover any media on the layers below it**.

# MAKING A LAYER VISIBLE OR INVISIBLE



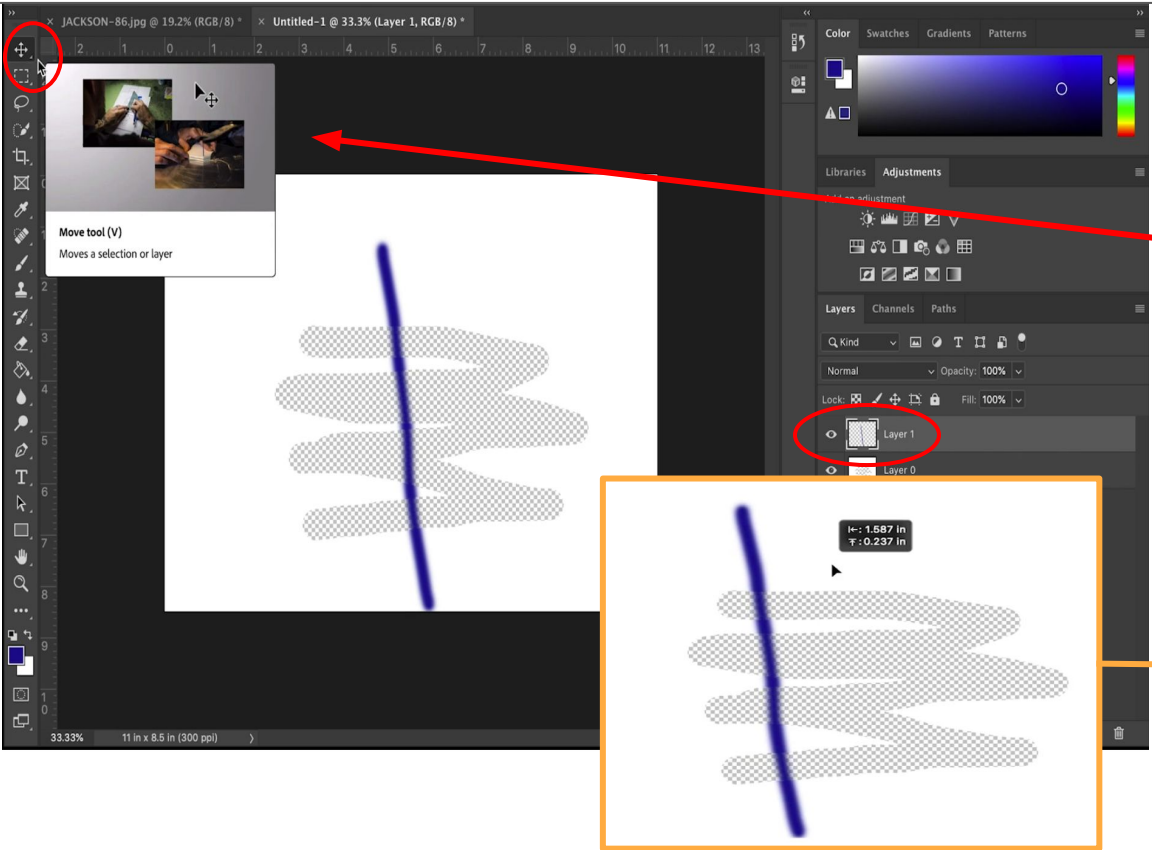
Let's move Layer 1 back on top. I can also make layers disappear and reappear from view without moving them by clicking the *eye shaped* icon to the left of the layer in the layer panel.

# HOW LAYERS ARE INDEPENDENT



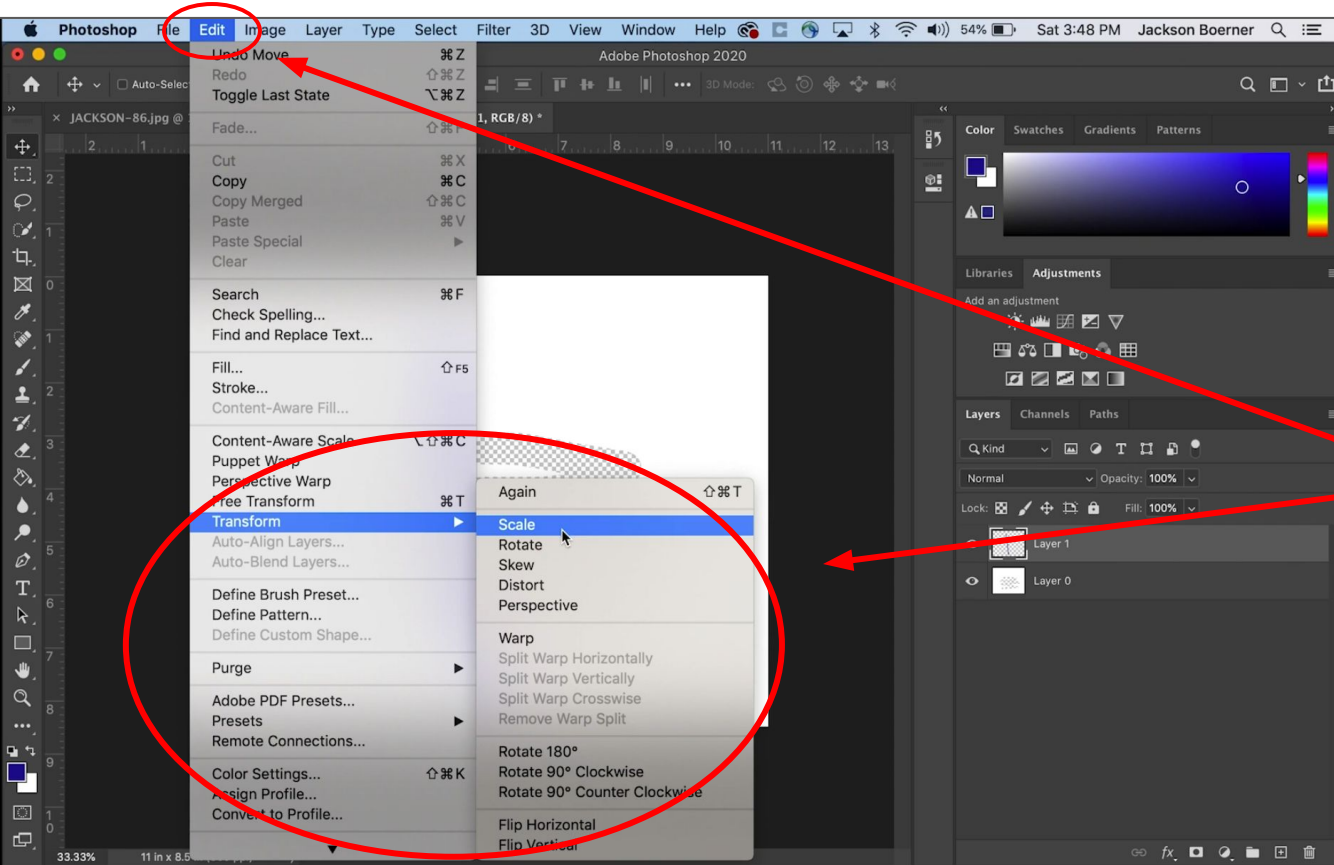
Each layer is an independent element in Photoshop. I can move them, transform them, and edit them all separately.

# THE MOVE TOOL



I can **select Layer 1** and then select the first tool in the tool bar, the **Move** tool, which looks like a cross with arrows. I can now click and hold the canvas and drag the layer I have selected around. The line I made on Layer 1 is not attached to anything on Layer 0.

# TRANSFORMING

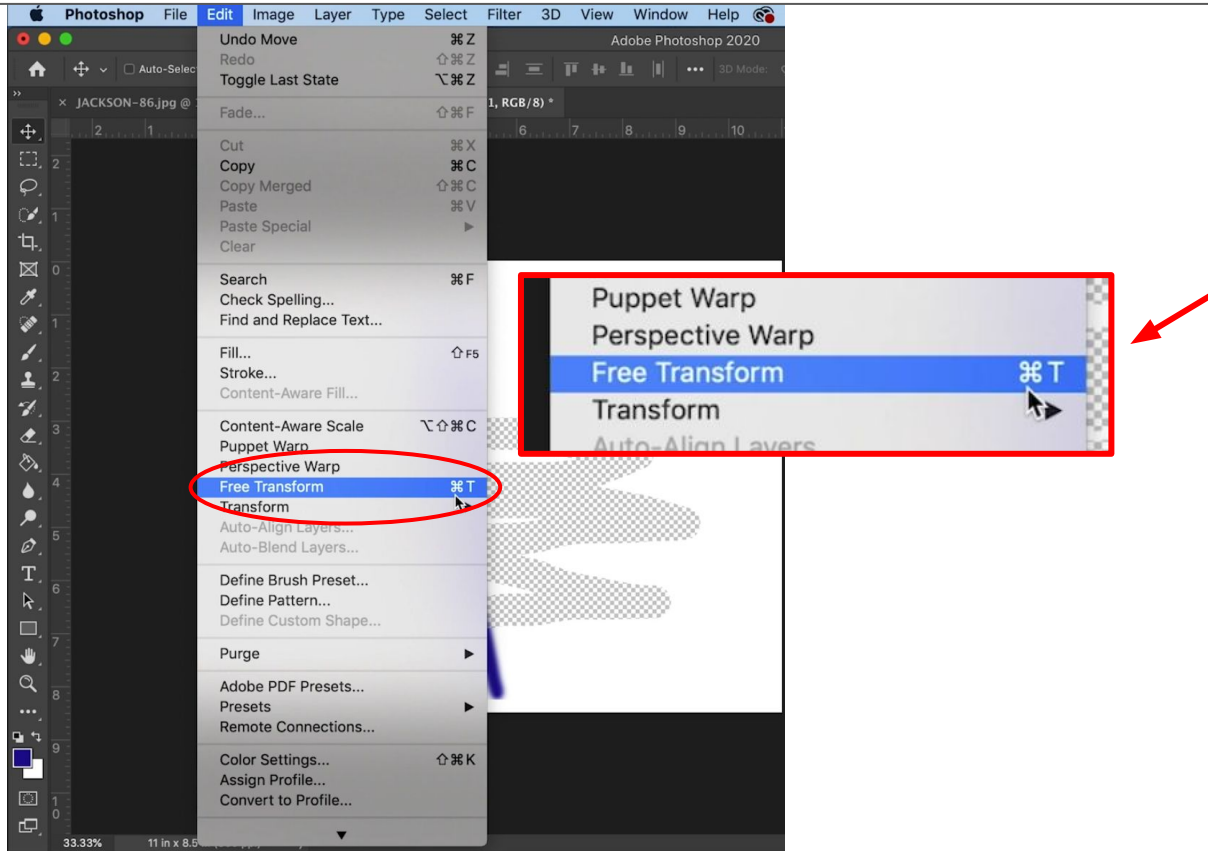


I mentioned  
**Transforming.**

Transforming is one of the many functions in Photoshop that isn't directly in the workspace. Go to **Edit** and hover over **Transform** and a dropdown menu will appear. In Transform I can select from a variety of actions including Rotations or Flips.

# TRANSFORMING

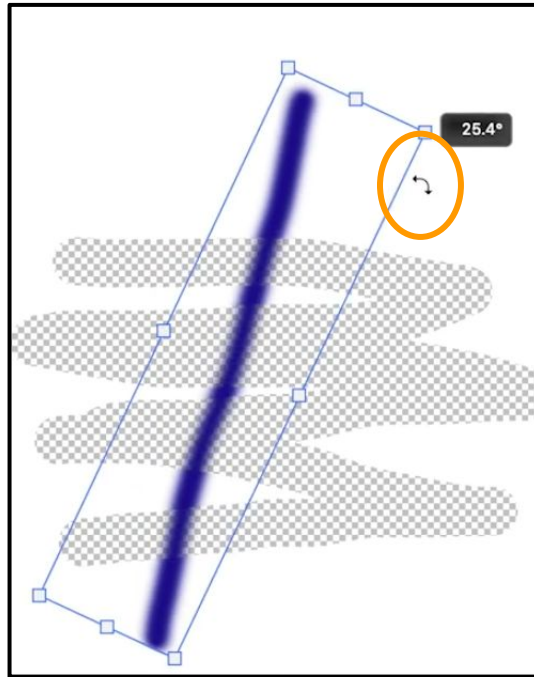
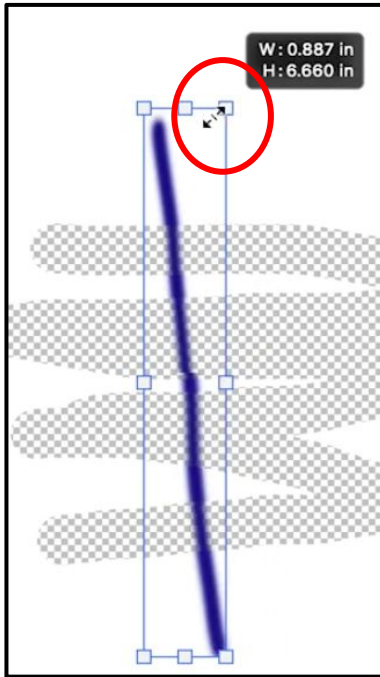
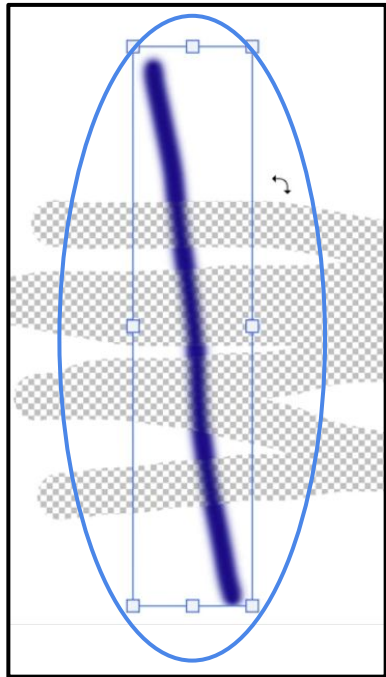
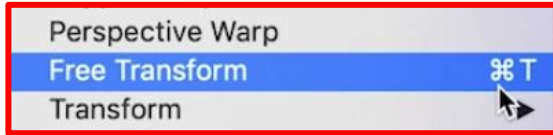
(CONT...)



Above transform you can also see **Free Transform** with the command symbol which looks like a clover next to a capital letter T. This indicates a shortcut performed by pressing all of the keys indicated on a keyboard at the same time just like a copy paste or save shortcut. Many actions in Photoshop can be accessed or performed with a shortcut.

# TRANSFORMING

(CONT...)



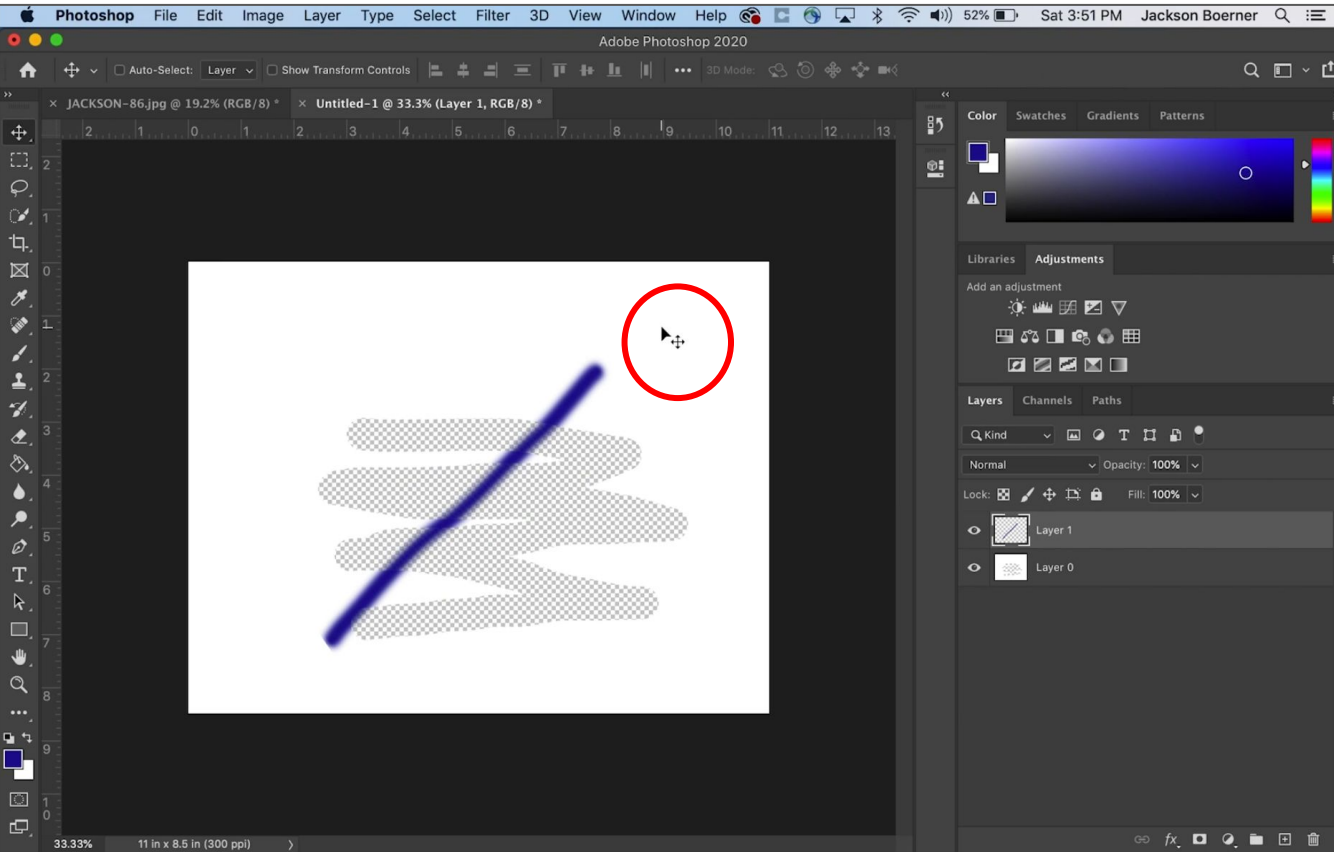
I'll press **Command T**.

Once I perform the shortcut a thin blue box will surround my image on the canvas. I can mouse over one of the corner squares and click and drag to change the scale. I can also hover just outside a corner until the cursor looks like a curved double arrow and click. Now I can rotate my image.



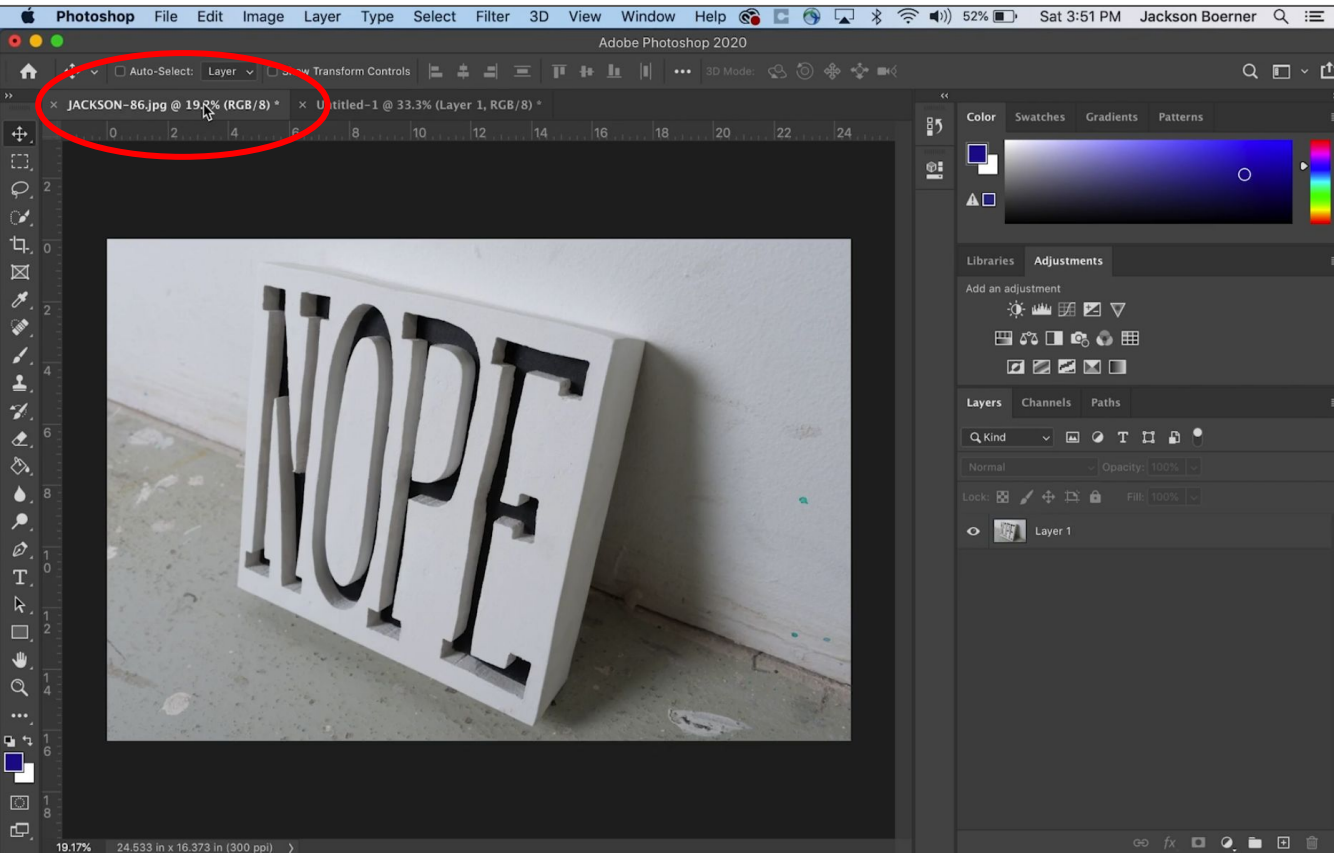
# TRANSFORMING

(CONT...)



**Transforming** can be very useful to get something up to size or to just the right angle. **To end a transform action you must hit enter on your keyboard.** Be aware that if you scale something up too much Photoshop will make up some data to fill in the resolution. Photoshop takes its best guess and assumes you don't want pixelated images.

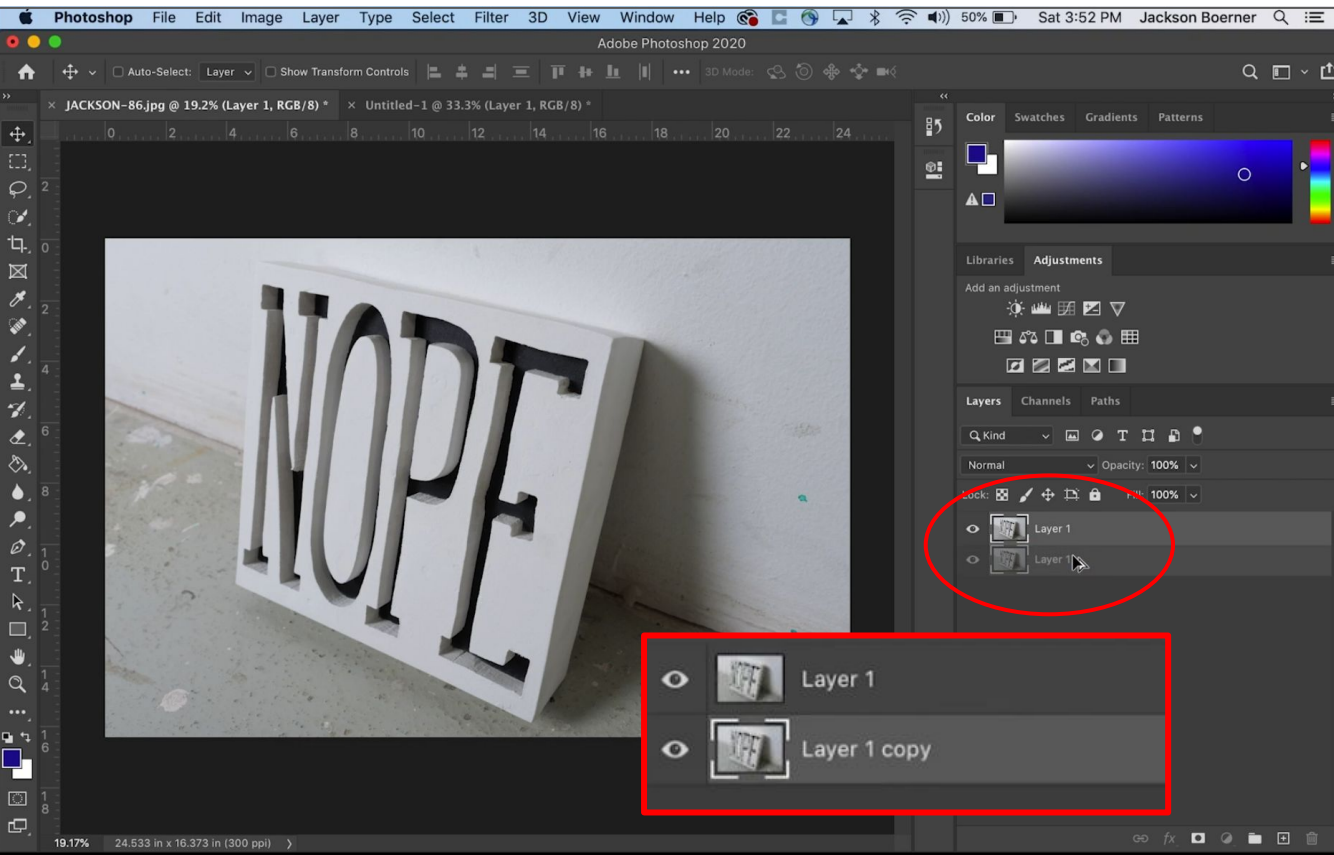
# LET'S PRACTICE



I'm going to **open a new file** with a photo of one of my sculptures and show you how I generally use Photoshop and why I learned it to make my photos look better.

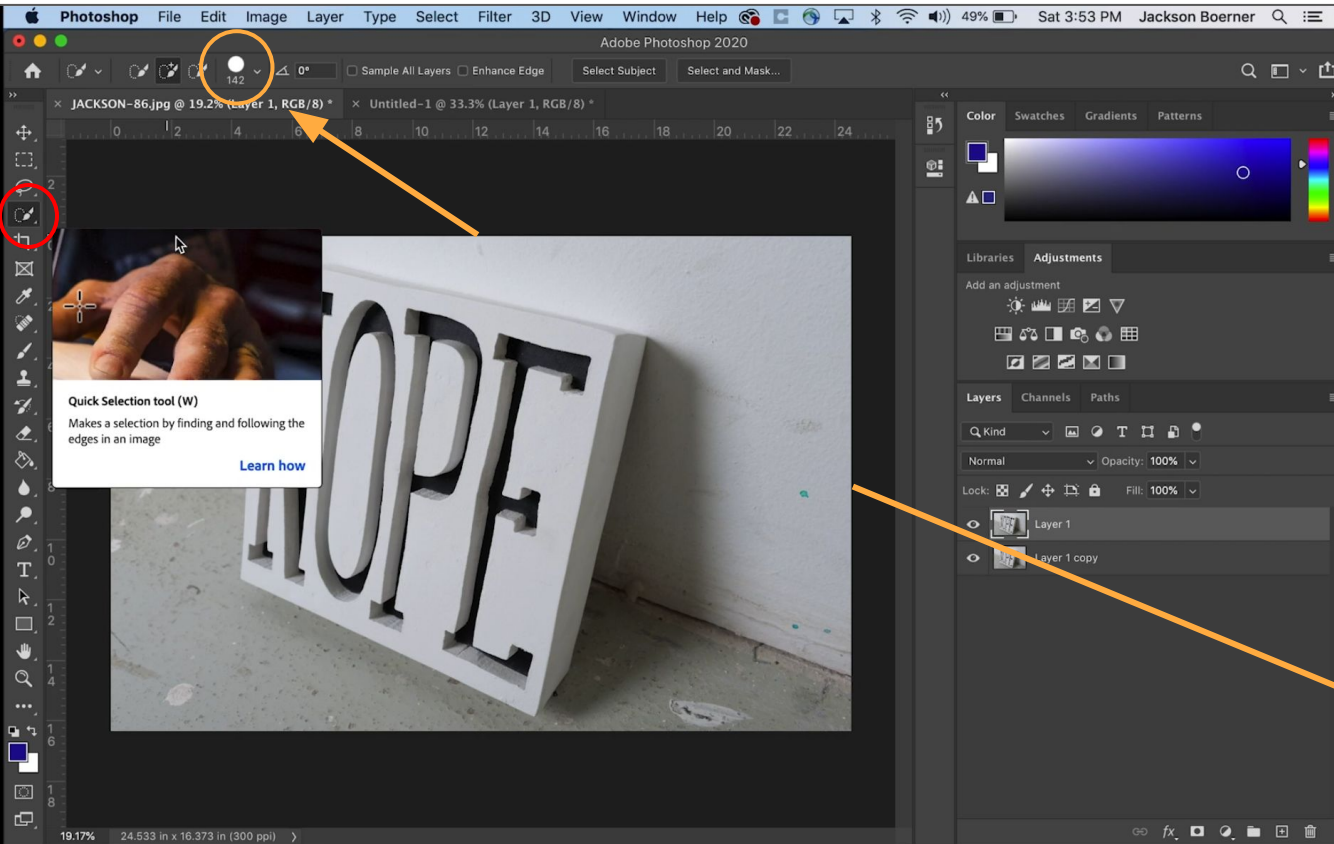
There are a few issues in this photo that I want to clean up in general. I'm going to work specifically on light and color using **Layer Masks**, **Adjustment** layers, and **Clipping Masks**.

# DUPLICATING A LAYER



The first thing I'm going to do is **duplicate** the layer the image is on. I'm going to hold the option (or alt) on my keyboard while I click on the layer, drag it down, and let go. I now have two copies of my image.

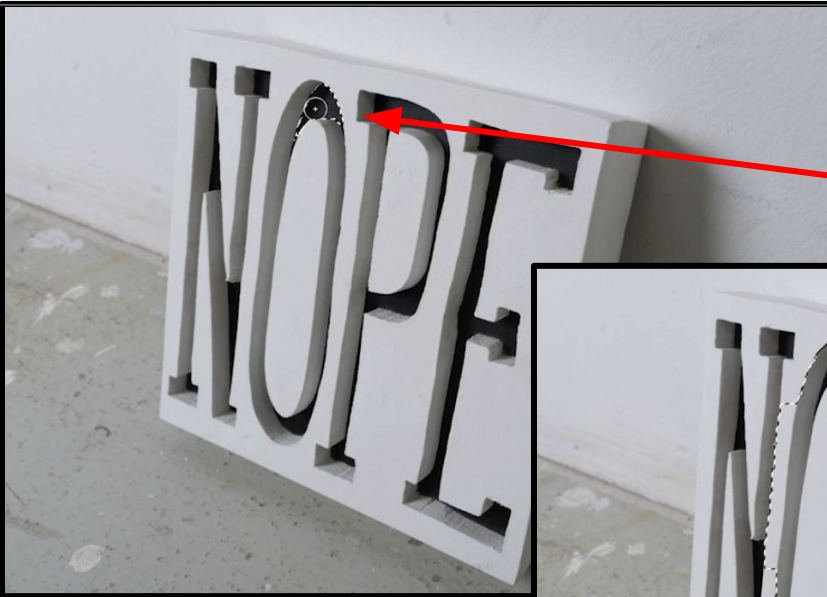
# SELECTING WITH THE QUICK SELECTION TOOL



The next thing I'm going to do is make a selection on my top layer which I renamed Layer 1. I'm going to select the fourth tool on the toolbar called the **Quick Selection** tool which looks like a brush with a dotted circle. My image is a little large so I'm going to increase my brush size in the Options bar.

# SELECTING WITH THE QUICK SELECTION TOOL

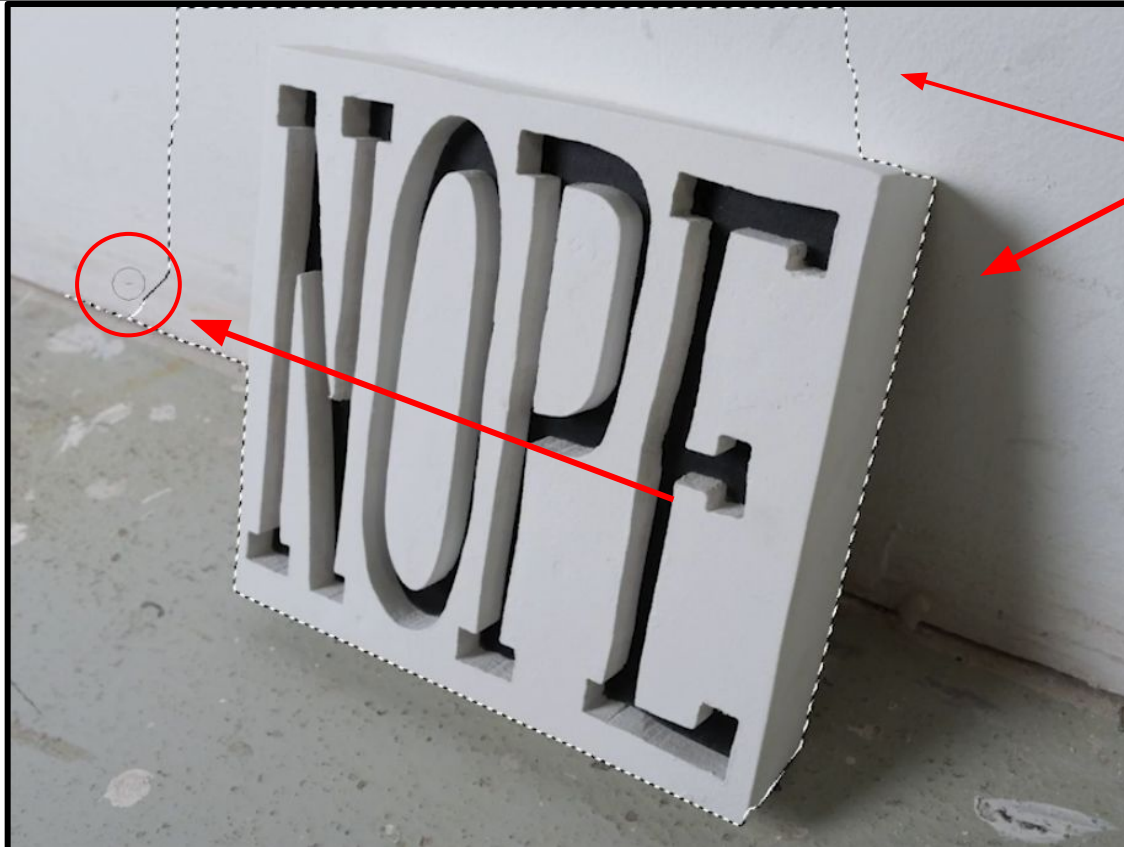
(CONT...)



The **Quick Selection** tool lets you select parts of your image that share similar data, usually color data. I can click on just the black of the letter "O" in my image and only the black will be selected. As I hold the click and move over the shadow of the "O" the entire shadow gets selected.

# SELECTING WITH THE QUICK SELECTION TOOL

(CONT...)



I'm going to select the entire white NOPE block. Where the white of the wall and the white of the block become closer in tone I'll go slower and be more deliberate about my selection. If too much of an element I don't want is selected, the wall for example, I can stop and hold the option key on the keyboard to turn the selection tool negative and take away parts I over selected.

# SELECTING WITH THE QUICK SELECTION TOOL

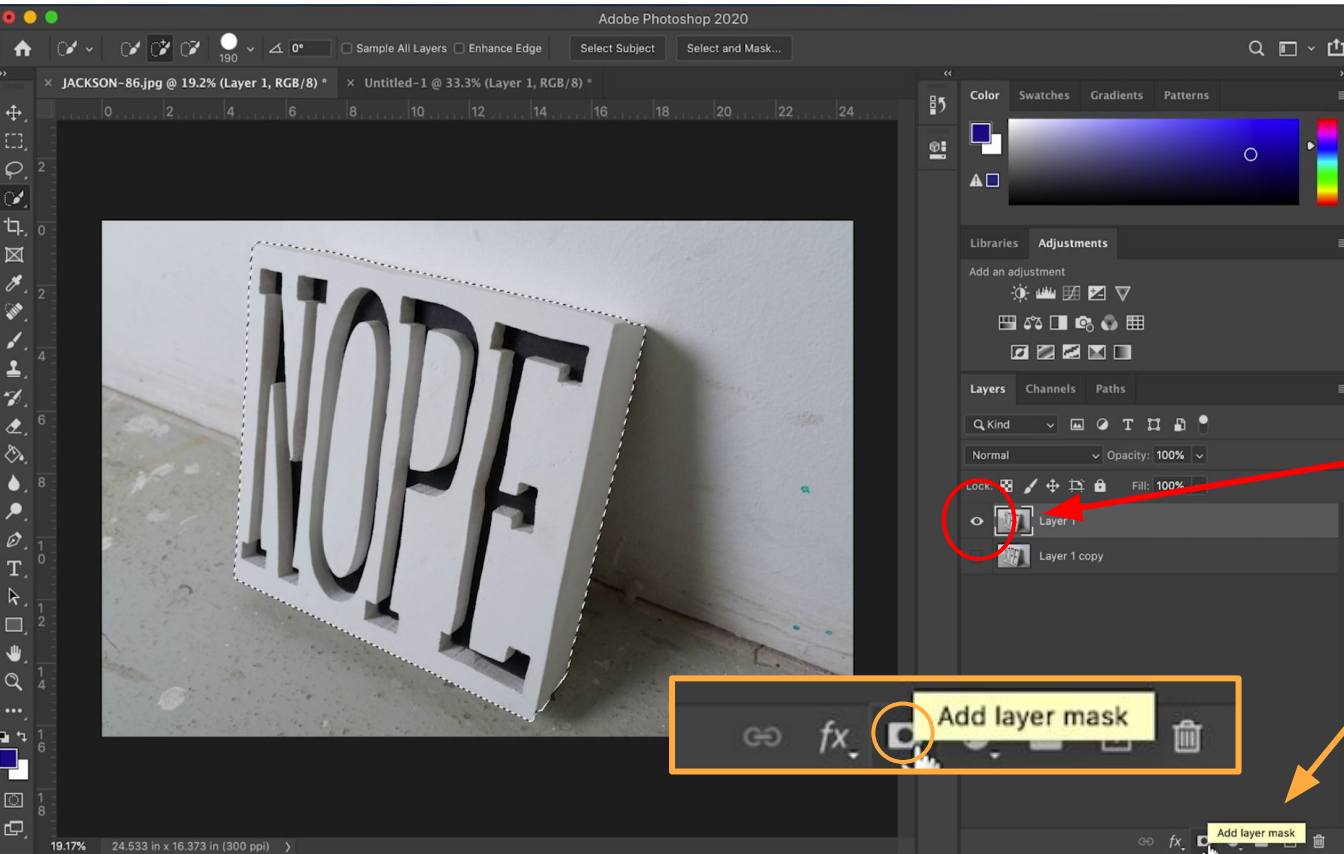
(CONT...)



The quick selection tool is a tool that requires practice. We are entering into a space of dexterity and patience in Photoshop on top of the knowledge of tools, menus, and options.

**Take your time.**

# MAKING A LAYER MASK

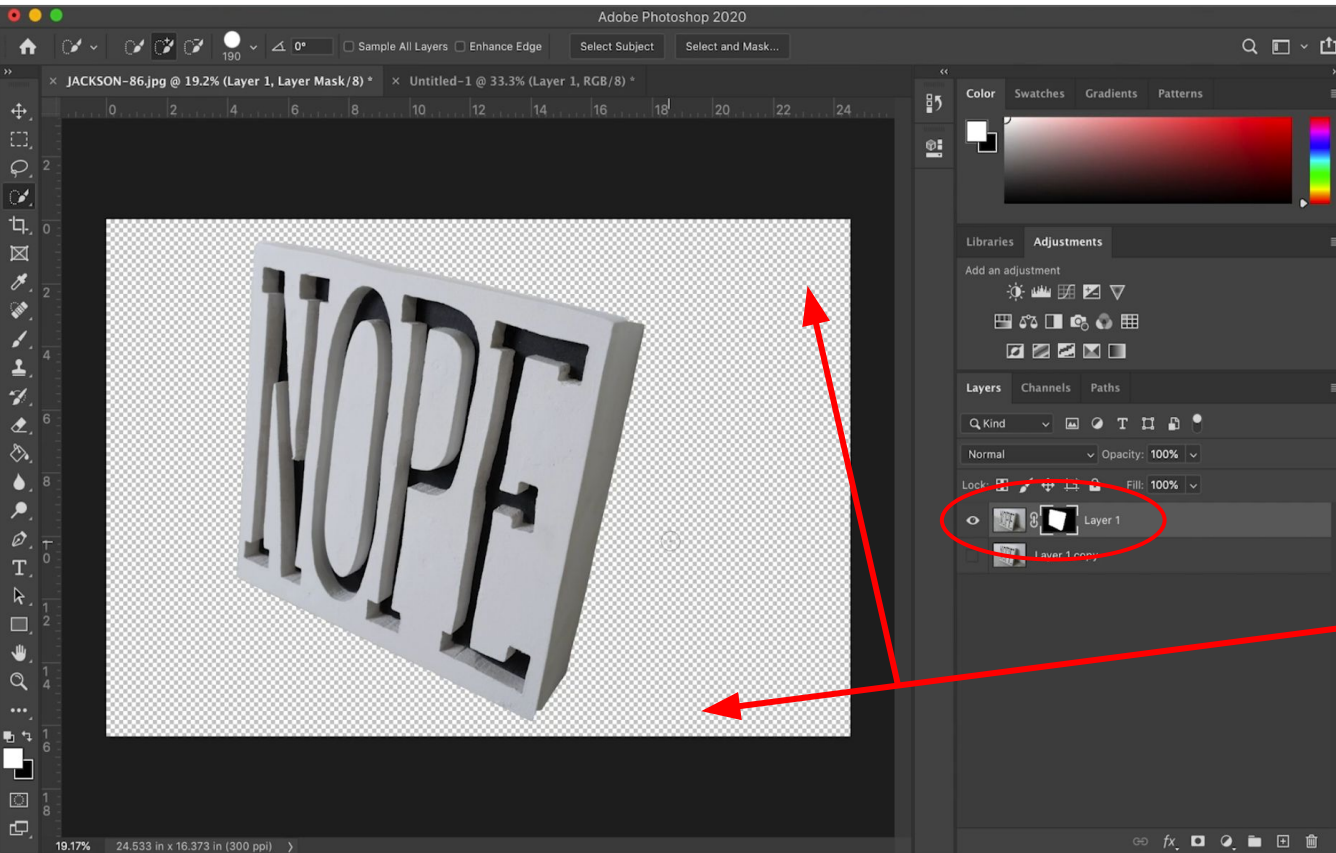


I've finished selecting the NOPE block. I'm now going to make a **Layer Mask** of this selection. Before I do so I'm going to make Layer 1 copy be invisible by clicking on the eye icon next to it. Now I will go down to the bottom of the layers panel and click on the third icon from the left, which looks like a black and white flag of Japan.



# MAKING A LAYER MASK

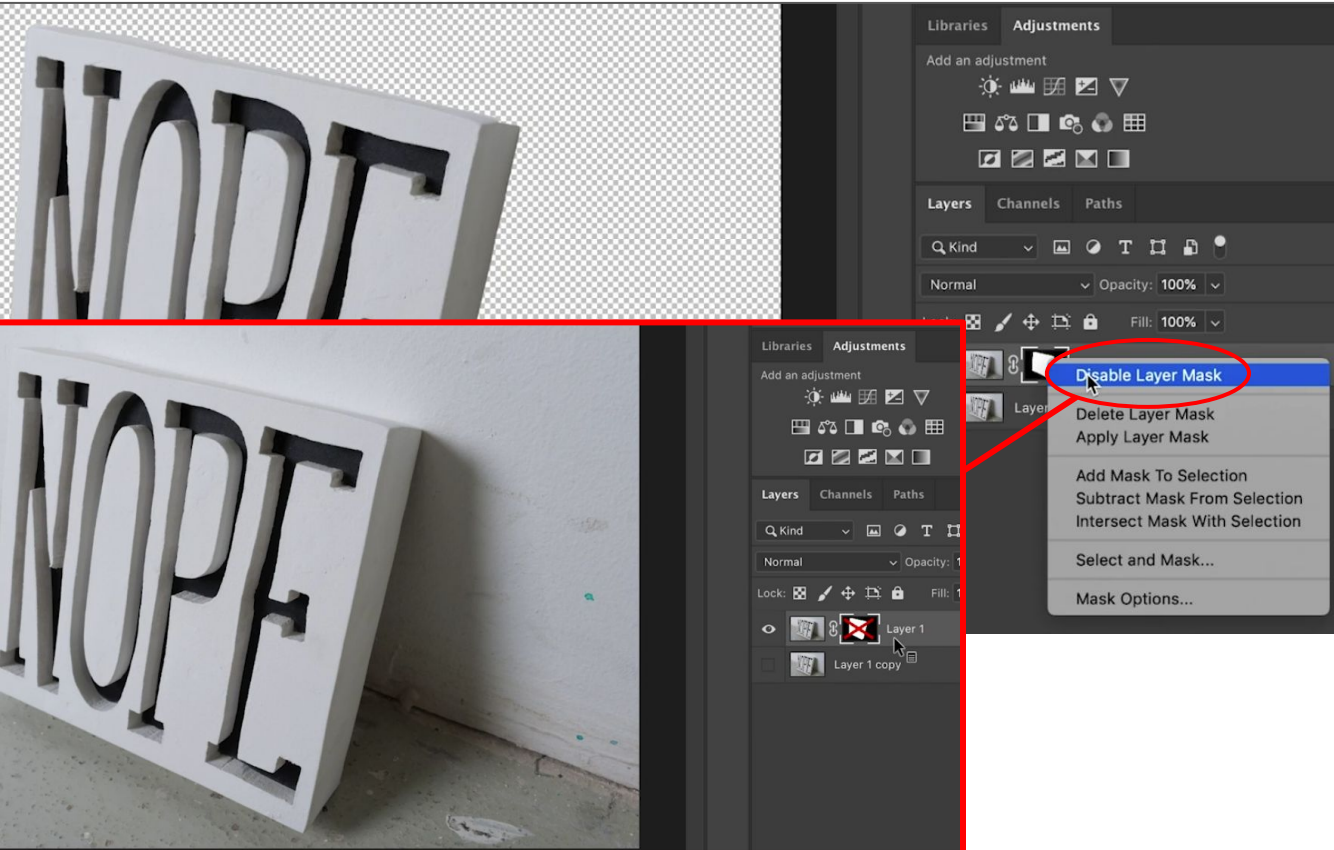
(CONT...)



Once I click this icon the **Layer Mask** will appear in the layers panel next to the thumbnail of Layer 1 and you can see what a layer mask does. It masks the area of the image that was not selected. It might look like the data is gone because it is now transparent, but everything is still there; it is just being hidden, or masked.

# DISABLING AND DRAWING ON A LAYER MASK

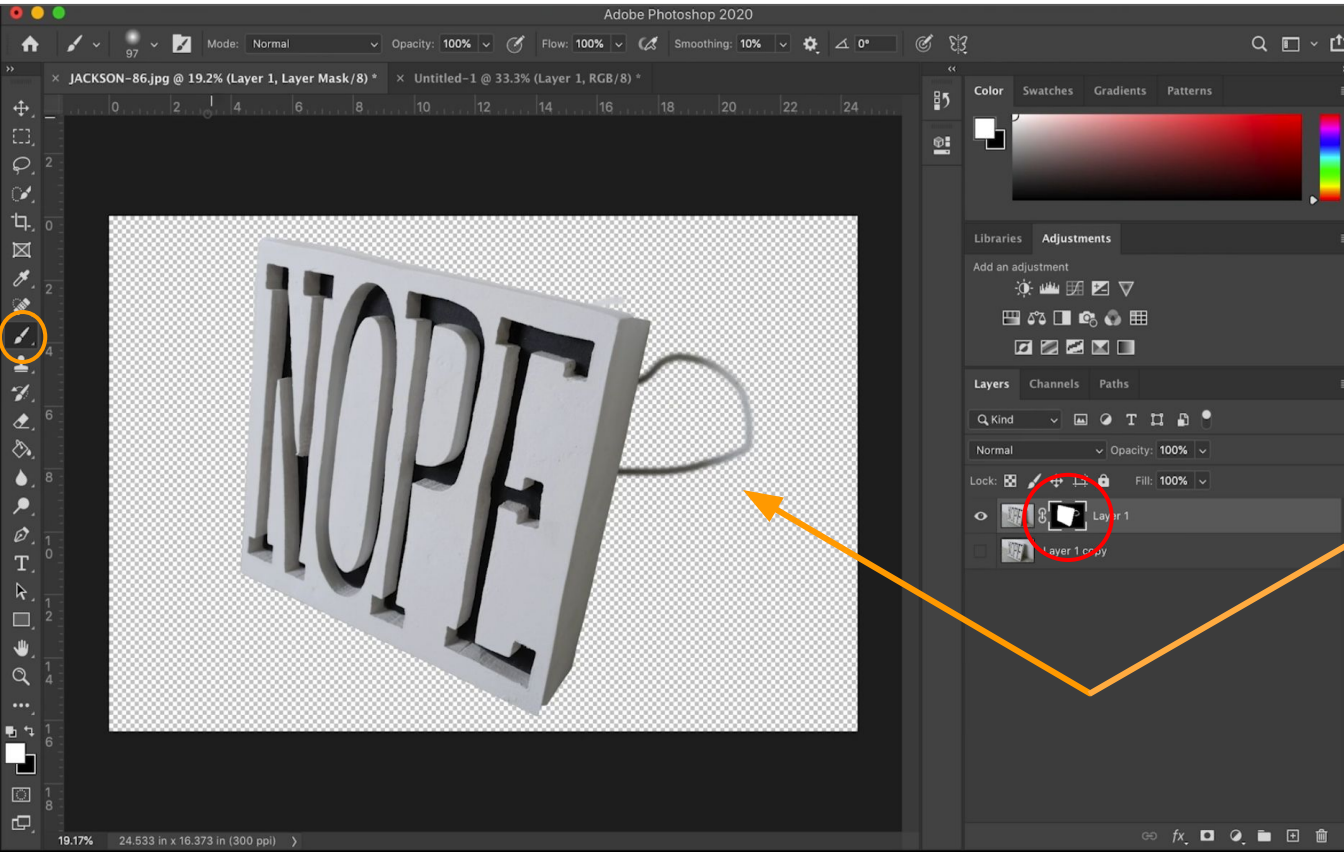
# DISABLING



I can right click or control click on the layer mask in the layers panel and click **Disable** to see all of the data it is masking.

# DISABLING AND DRAWING ON A LAYER MASK

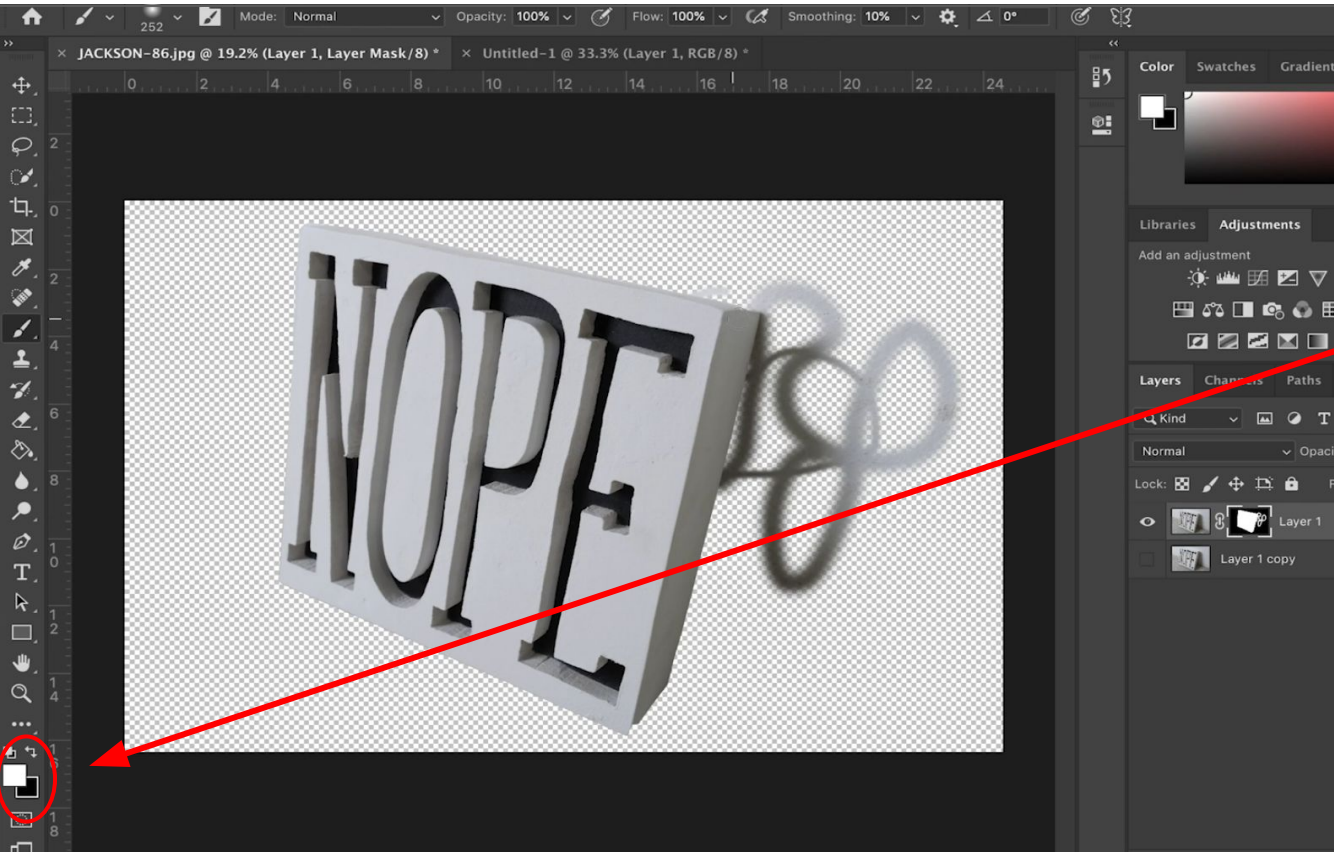
# DRAWING



I can also fine-tune the selection on the Layer Mask with the **Brush** and **Eraser** tools. I'm going to select the **Layer** mask thumbnail so it has highlighted corners. Then I'm going to select the **Brush** tool and draw a line. As I draw on the Layer Mask I can see white lines appear in the thumbnail while my image is revealed.

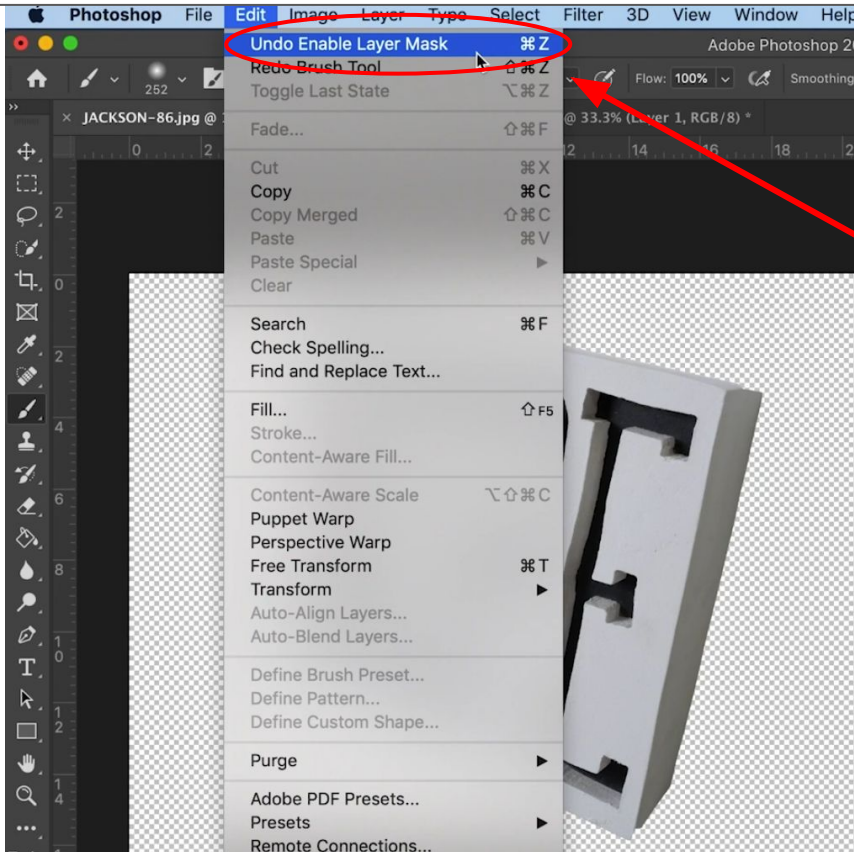
# DISABLING AND DRAWING ON A LAYER MASK

# DRAWING (CONT)



When drawing or erasing on a layer mask you reveal and mask data with white and black from the **Color Selection Squares** respectively. This ability to mask and reveal is incredibly useful and is one of the foundations of *non-destructive editing*, editing where you aren't actually deleting any data.

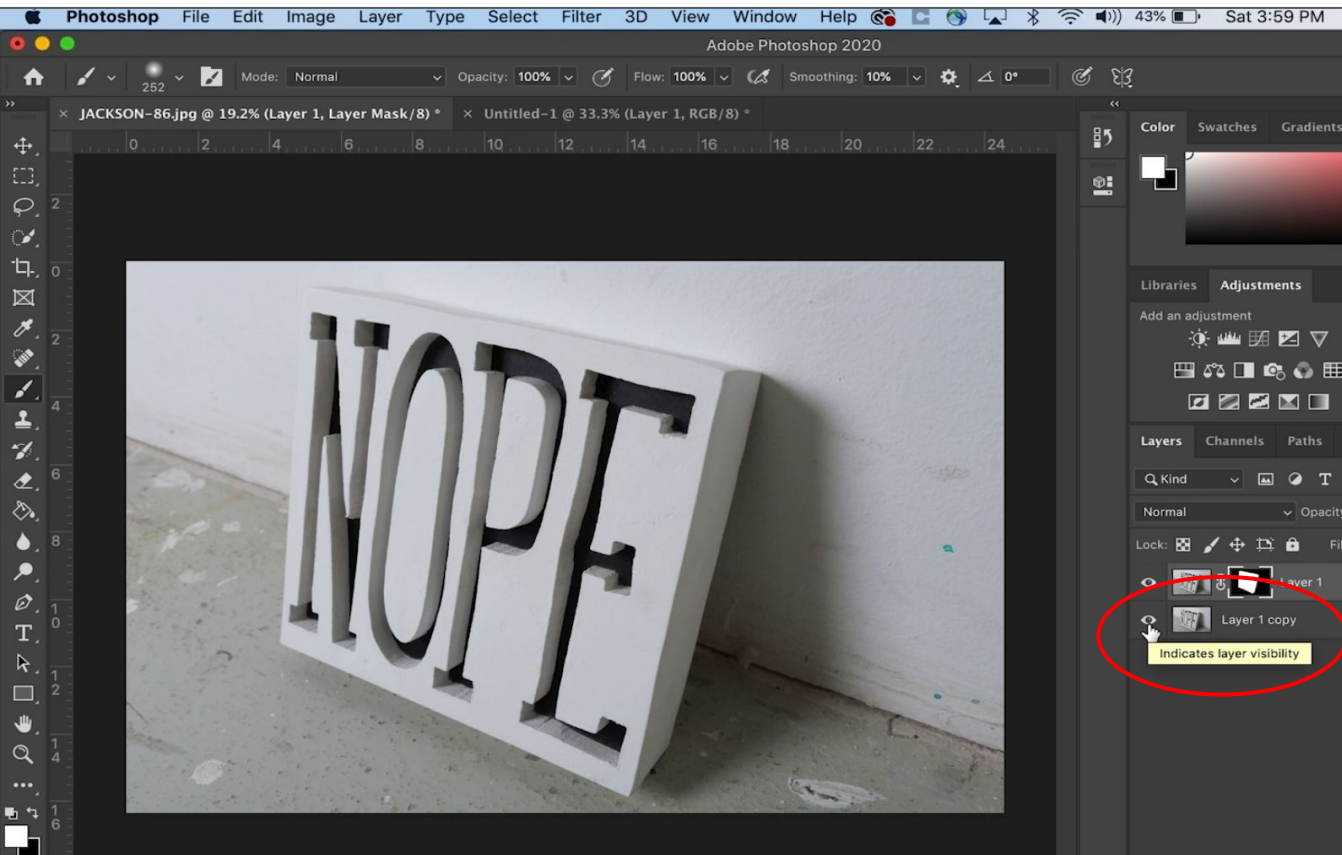
# THE UNDO SHORTCUT COMMAND Z



Another part of non-destructive editing and workflow is being able to undo actions or mistakes. I'm going to undo the brush marks I made on the layer mask by pressing command and Z, the undo shortcut. You can also find the action under the Edit menu.

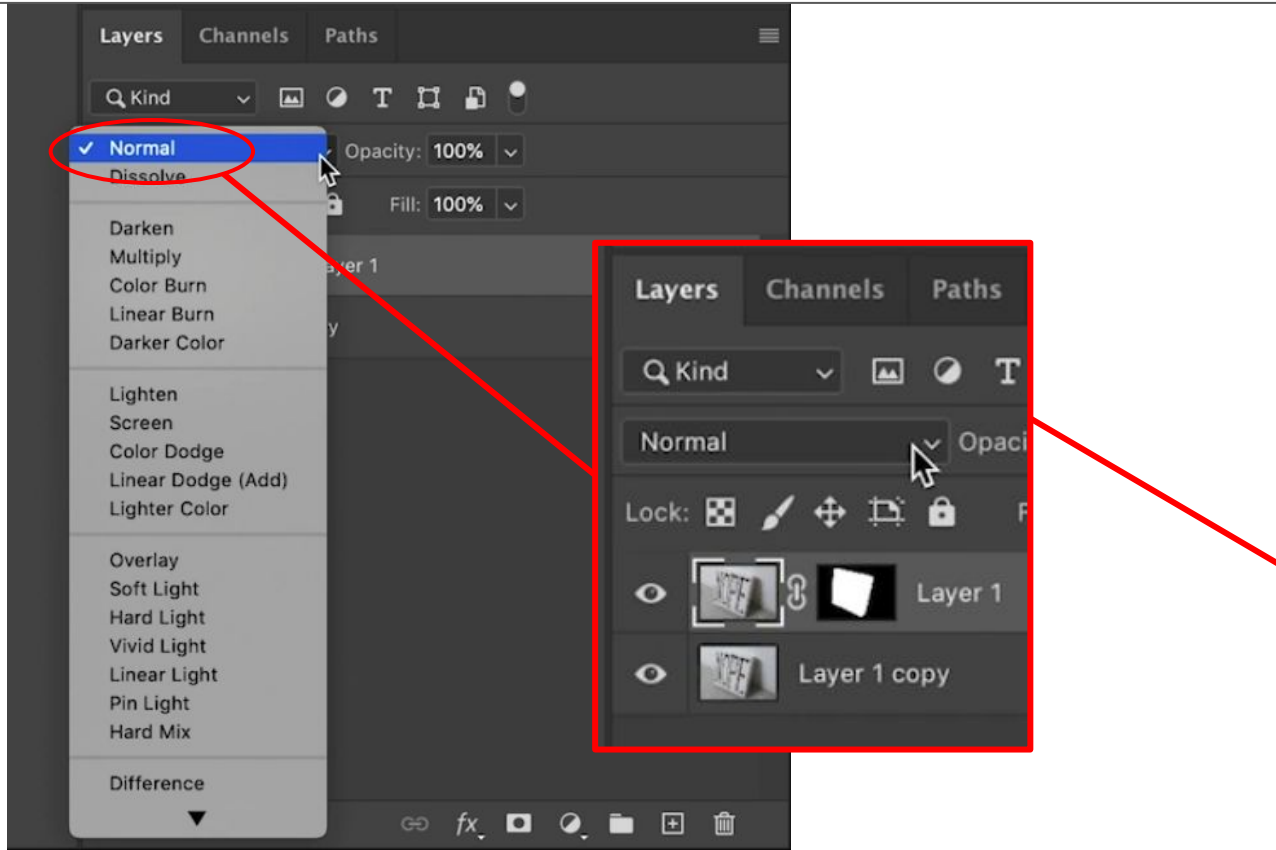
**Command Z** will let you step back through your actions one at a time until you get back to a point where you can fix the mistake you made. You'll need to redo all the actions after that point but it can make recovery and fixes much easier.

# SEEING BOTH LAYERS



I'm going to make **Layer 1 copy** reappear. Once I do this it'll look like all of the data I put under the layer mask has returned and it has in a way but remember it's on a different layer and it's only visible through the transparency of Layer 1. Whatever I do to either layer won't affect the other.

# BLEND OPTIONS AND OPACITY



My original goal was to make the white of the NOPE block and the white of the wall be more distinct and contrasting. I can do this in a number of ways. The first thing I'll try is **Blending**. On the Layers panel there is a box with the selection set to **Normal**. This is the blending mode selection.

# BLEND OPTIONS AND OPACITY

# BLEND OPTIONS



Inside here there are many options to choose from for how pixels on a layer interact with pixels on another layer, usually below. As I scroll through, Photoshop will perform the blend in real time so I can see if any options give my image the contrast I'm seeking. Blends are very specific and because they are changing the way the pixels interact they can be very powerful and very finicky as you might do other edits to your image....



# BLEND OPTIONS AND OPACITY

# BLEND (CONT...)



I'm going to try the **Color Burn** blend for now. It's a little dark, but I think I can adjust it by changing this layer's opacity as well.

# BLEND OPTIONS AND OPACITY

# OPACITY



Right next to the blend selection is the **Opacity** selection. I can change how opaque my layer is from 0 to 100 percent. I'm going to drop Layer 1's opacity down to 50 percent to see how it looks. Since I have an exact copy of this image directly underneath as I'm changing the opacity, I'm just letting more of the original colors and tones come through to help lighten the colorburn. I think this result looks pretty good.

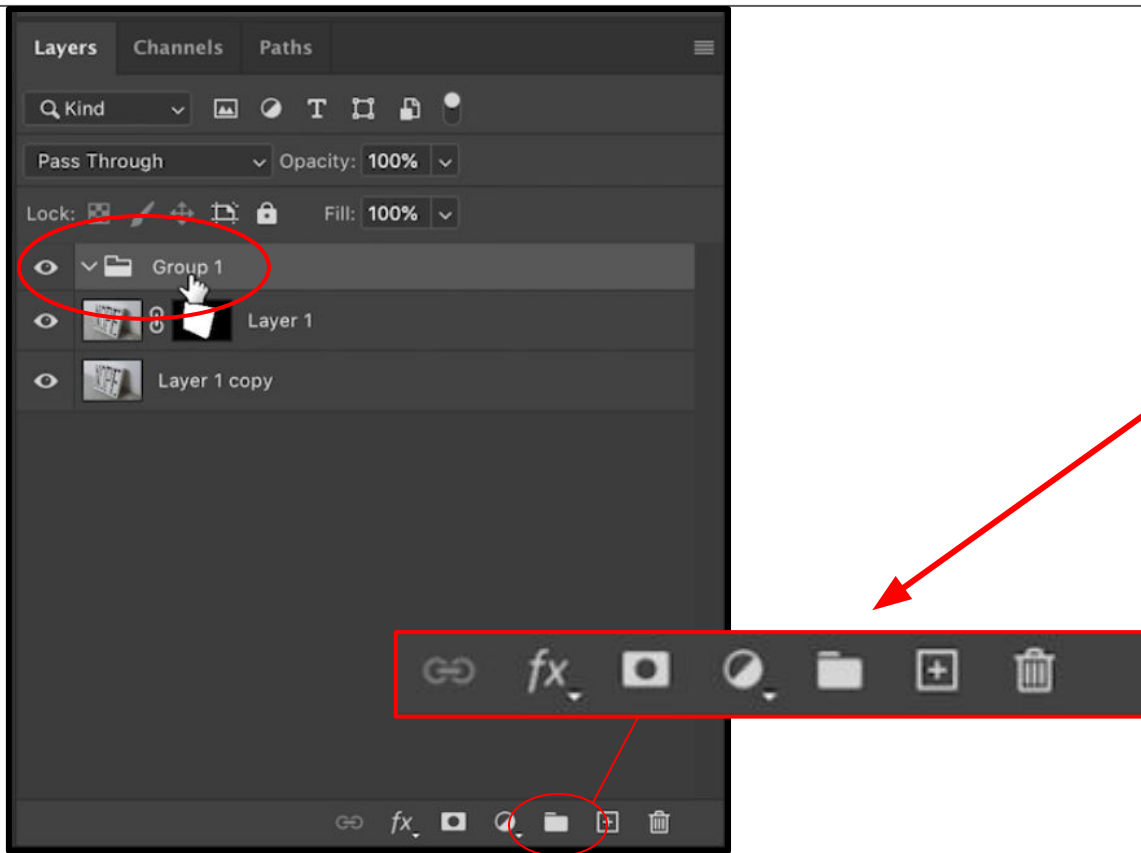
# BLEND OPTIONS AND OPACITY

(CONT...)



I can compare it to my original by just making Layer 1 disappear with its *eye icon*. Let's hold onto this and try some other ways to get a similar result.

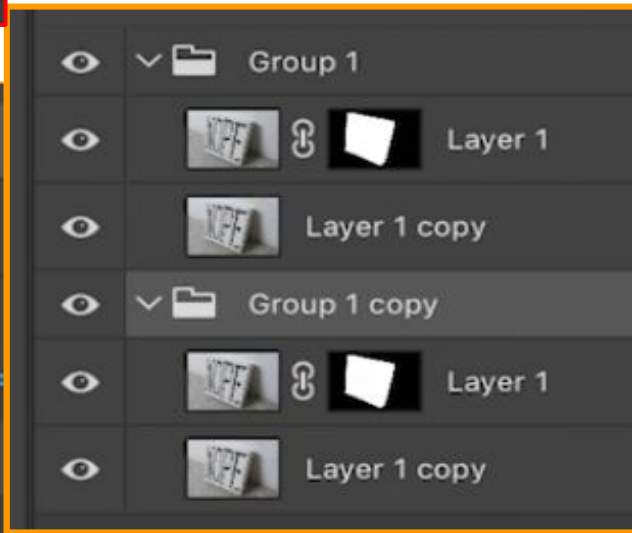
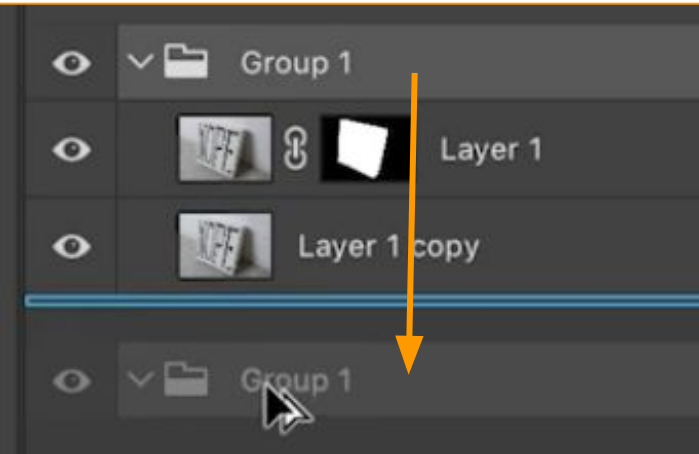
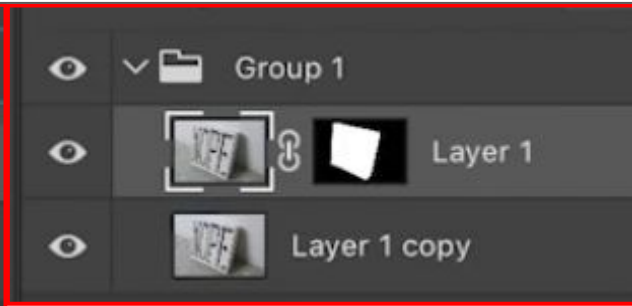
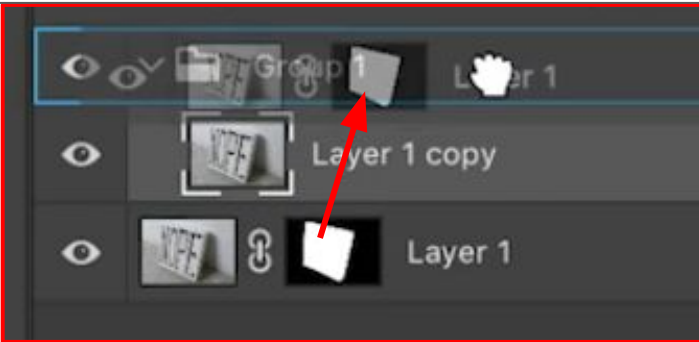
# MAKING A LAYER GROUP



I'm going to put these layers into a group and then I'm going to copy that group so I can try this process with different tools. If you go down to the bottom of the Layers panel you can click on the third icon from the right that looks like a file folder. This icon will create a group in your layers panel. It will be called Group 1 by default; it can be renamed by double clicking on the name.

# MAKING A LAYER GROUP

(CONT...)

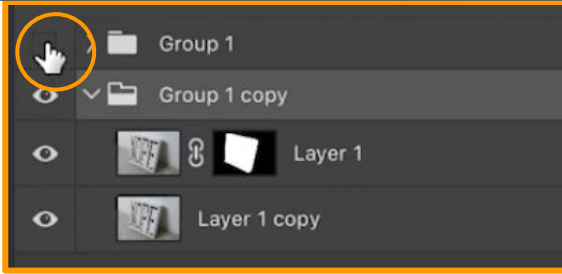


I'm going to move these two layers into the Group one at a time starting with the bottom layer by dragging the layers over the group.

Now that they're in the Group I'm going to copy the group. While holding the option key I will click and drag the group down.

# MAKING A LAYER GROUP

(CONT...)

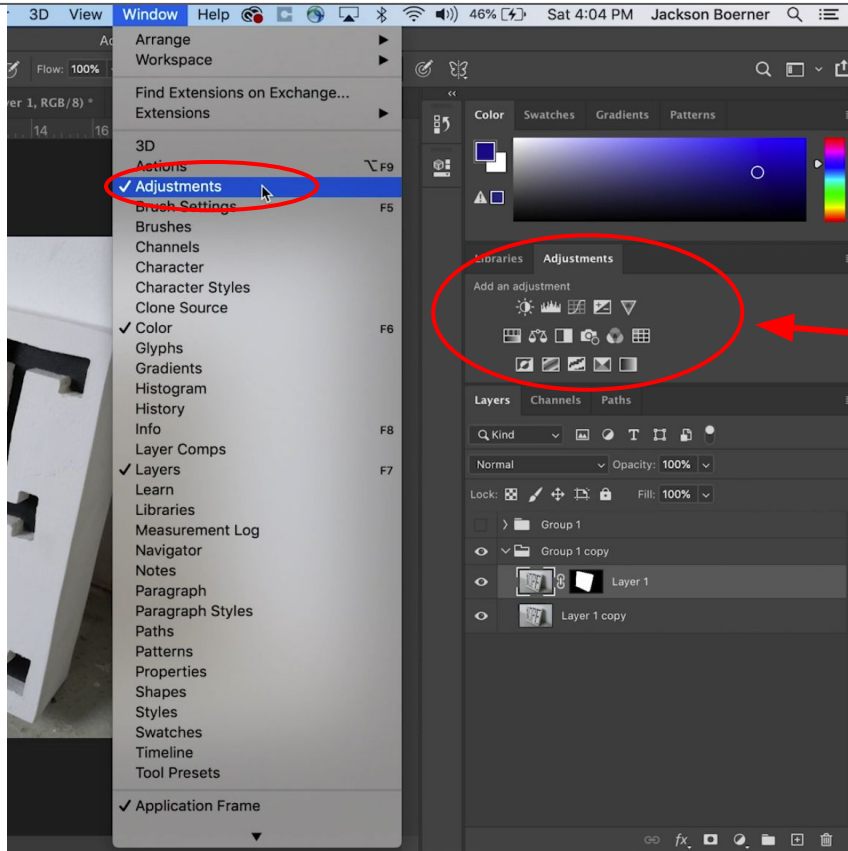


I now have a copy of the **Group** and everything in it. I'm going to close the first group by clicking on the arrow pointing down and make it invisible by clicking the *eye icon*.



Lastly I'm going to return the **Opacity** and **Blend** selections of the top **Layer** back to normal.

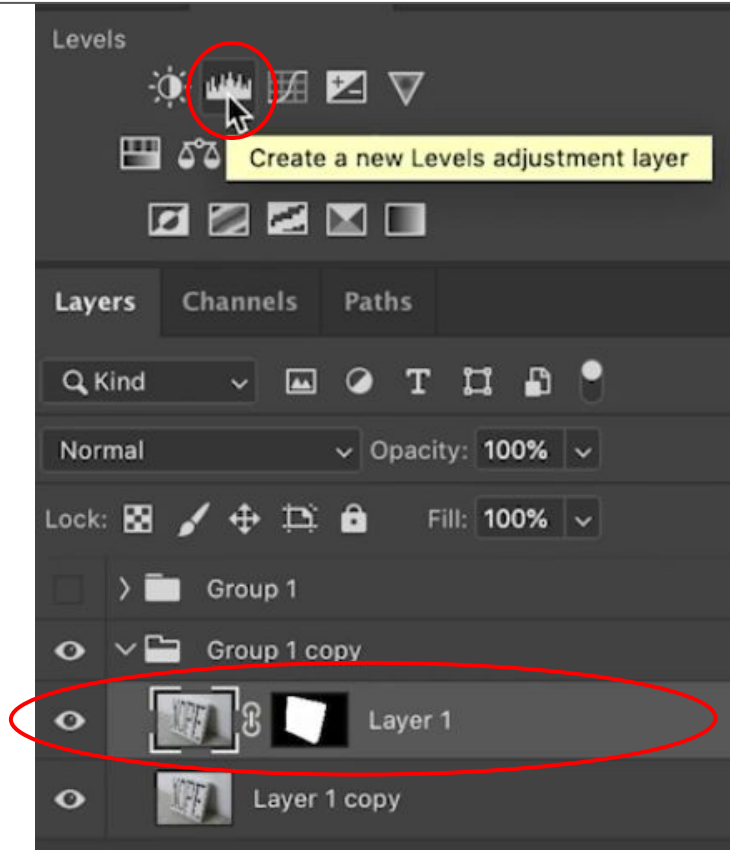
# ADJUSTMENT LAYERS



For my next attempt I'm going to use an **Adjustment Layer**. I'm going to go up to **Window > Adjustments**. A menu of icons will appear above the Layers panel. These are the adjustment layers. Each one performs a different type of edit including changing hue or inverting colors.

# ADJUSTMENT LAYERS

(CONT...)

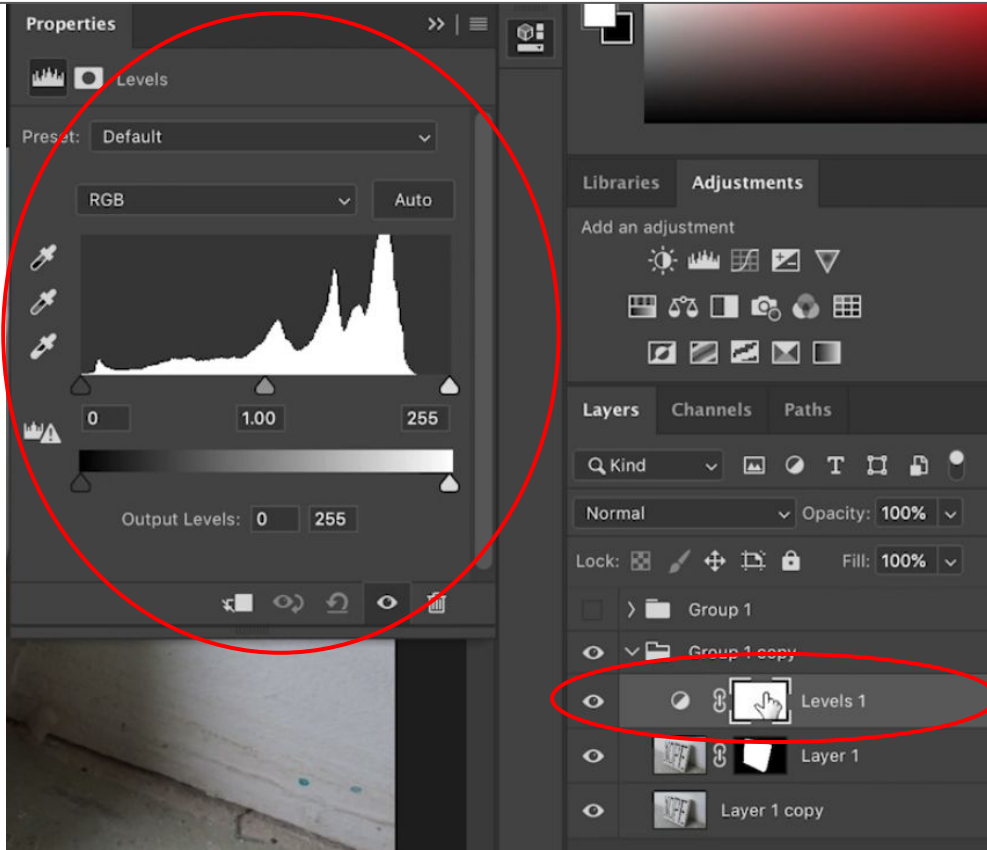


While I have **Layer 1** selected I'm going to click on the second icon in the adjustment layers that looks like a bar graph. This is the **Levels** adjustment.



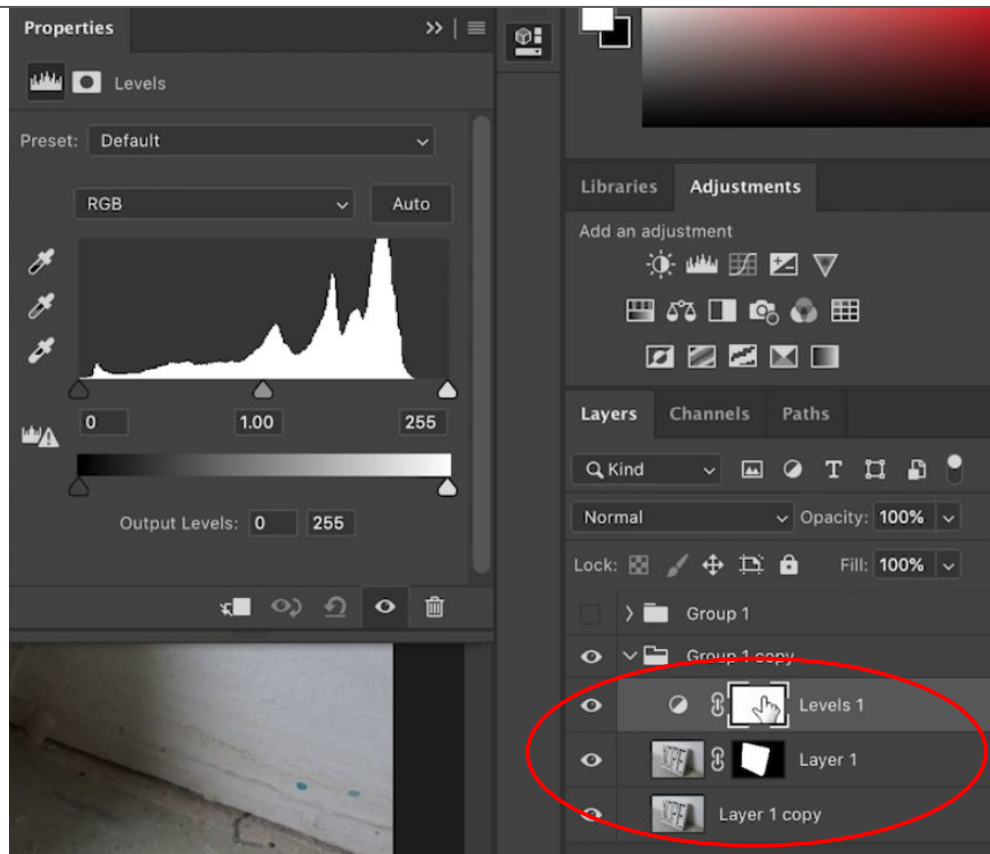
# ADJUSTMENT LAYERS

(CONT...)



A new panel will appear with a Histogram and a **new layer** will appear in the layer panel above Layer 1.

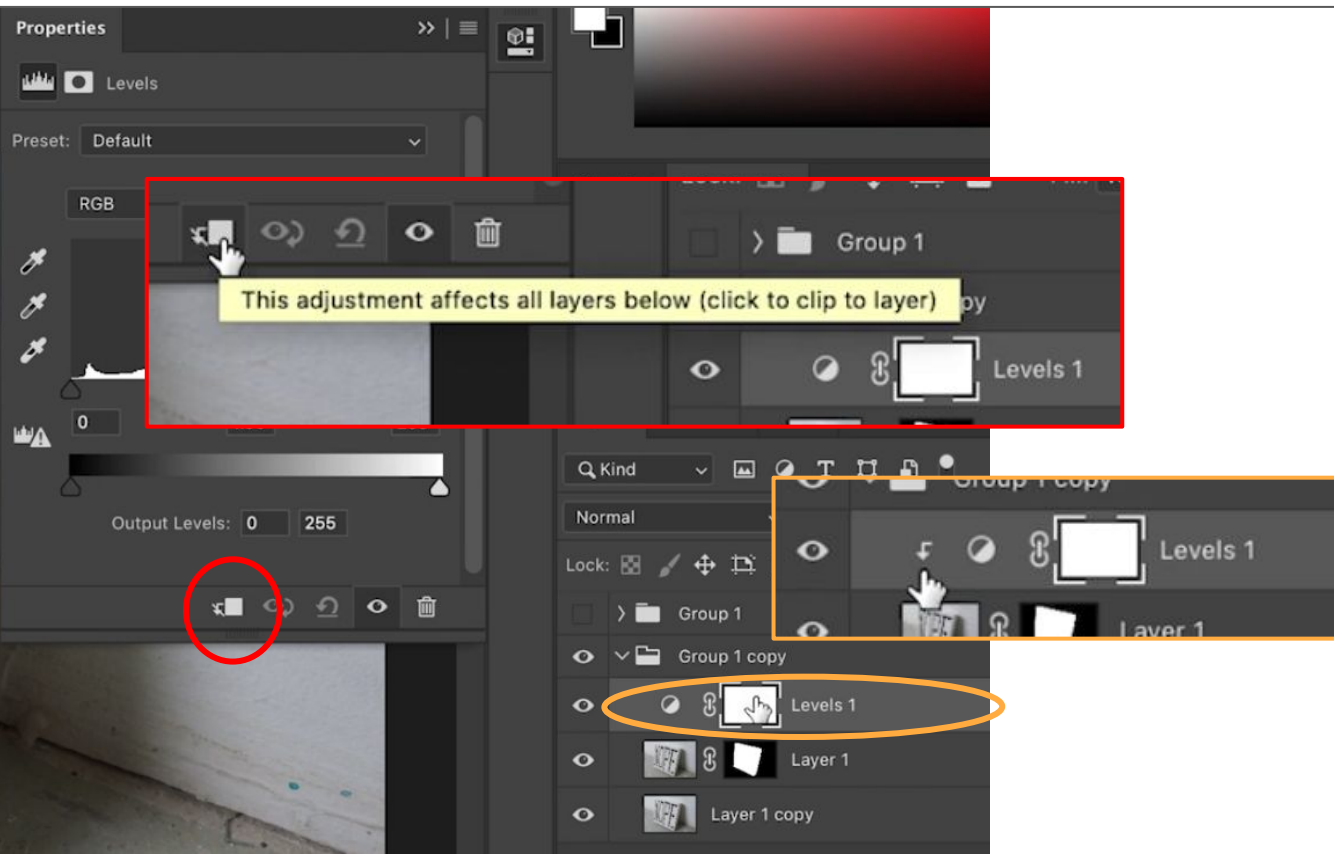
# CLIPPING MASK



Before I edit it's important to understand that an **Adjustment** layer affects any layer below it in the layers panel. So this Adjustment layer will affect my Layer 1 and Layer 1 copy unless I tell it to only affect the layer directly below it. I can do that by making it a **Clipping Mask**.

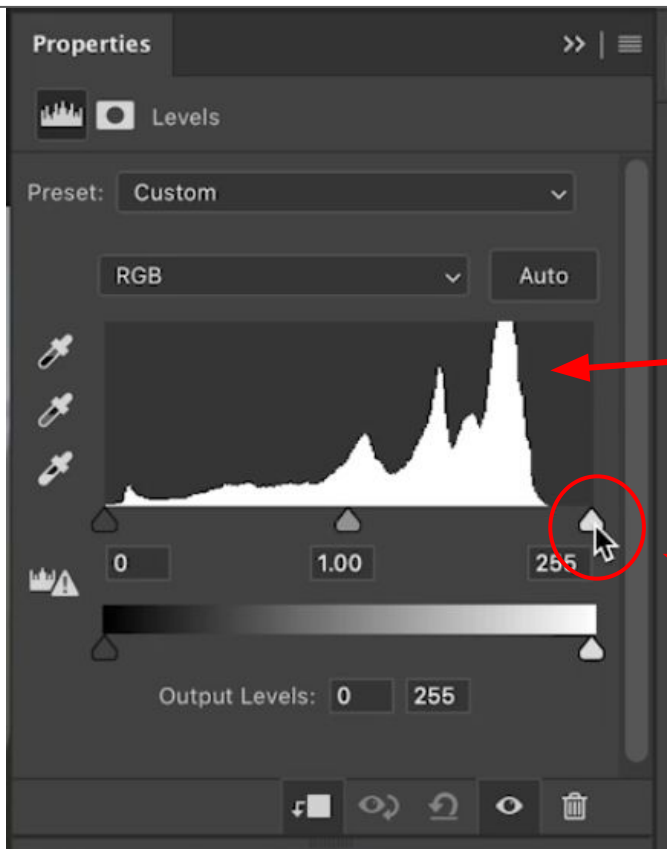
# CLIPPING MASK

# (CONT...)



I will go to the bottom of the Histogram panel and click on the left most icon, *a square with a crossed out arrow*. The icon will change to a *non-crossed out arrow* and a *90 degree arrow* will appear next to the Adjustment layer in the Layers panel. Now anything I do in this level's adjustment will only affect the layer right below it, my Layer 1. If I move Layer 1 the Clipping Mask will turn off and the Adjustment layer will affect everything below it again.

# LEVELS



The **Levels adjustment** lets you adjust the shadows, midtones, and highlights of an image. It shows you a **Histogram** of the total amounts for blacks, grays, and whites by default. On the right side of the histogram I can see a white slider. This is the *Highlights slider*.

# LEVELS

# (CONT...)



You can see that there is a large peak of tone and then a valley of no data before it reaches the slider. I can move this slider back toward the peak. My image on Layer 1 will become more white and brighter because I'm effectively telling Photoshop to turn these very light gray tones at the end of this peak into white or lighter tones instead. You can see that the *Mid-tone Gray slider* also moves when I move the *Highlight slider*. **All of the tones are being adjusted at once.**

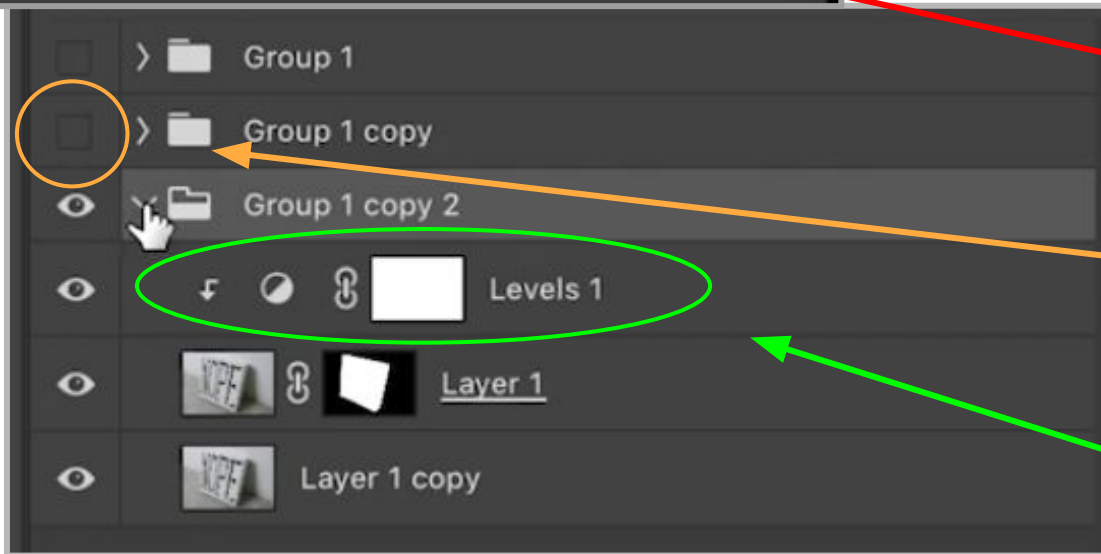
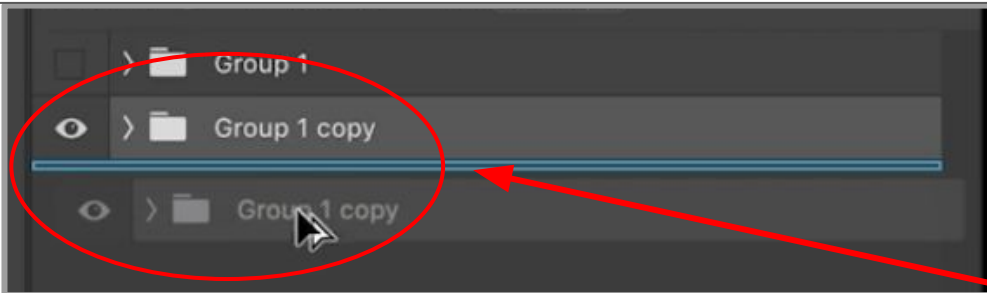
# LEVELS

# (CONT...)



Having a dynamic tonal range from black to white is very useful in photography or media; it gives you the room to create contrast and elegant transitions in tone.

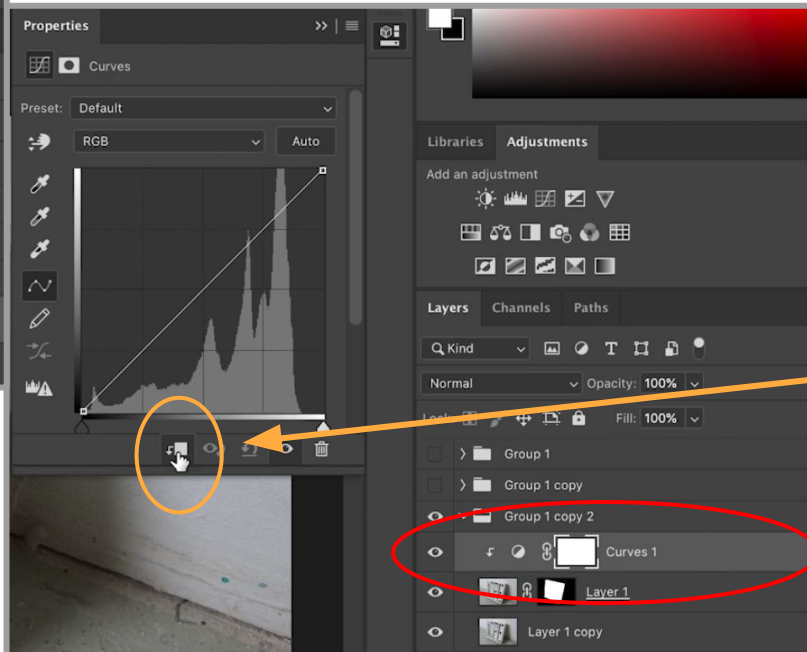
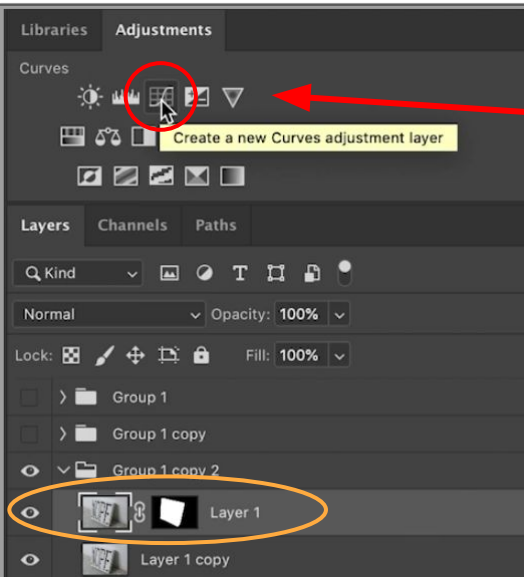
# CURVES



I'm going to show one last way to change tone or contrast called **Curves**. It's very similar to Levels but lets you have a lot more control. I'm going to close my **Group** and copy it again using option-click drag and then make the Group disappear with the eye icon. I'm going to select the **Levels adjustment layer** and click Delete on my keyboard.

# CURVES

(CONT...)

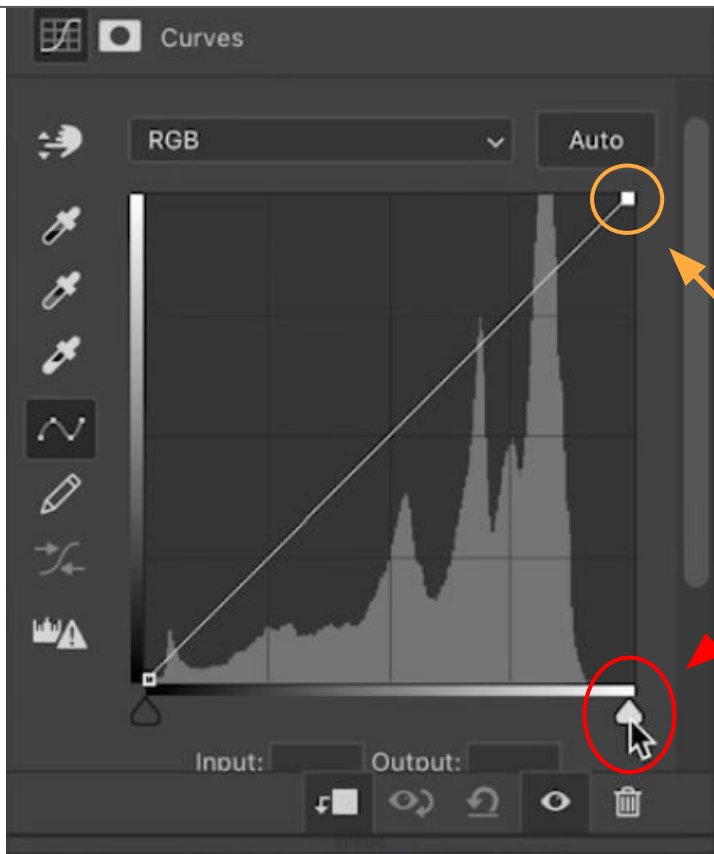


I'm going to select the third **Adjustment layer** icon that looks like a graph with a S shaped line in it. This is the **Curves adjustment layer**. I'm going to click the **Clipping Mask** square icon again to have it only affect Layer 1.



# CURVES

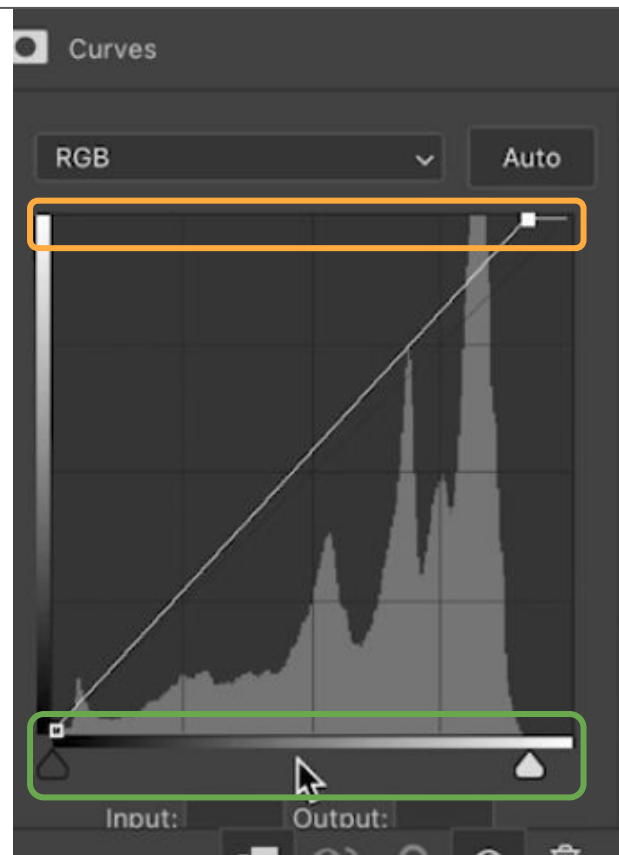
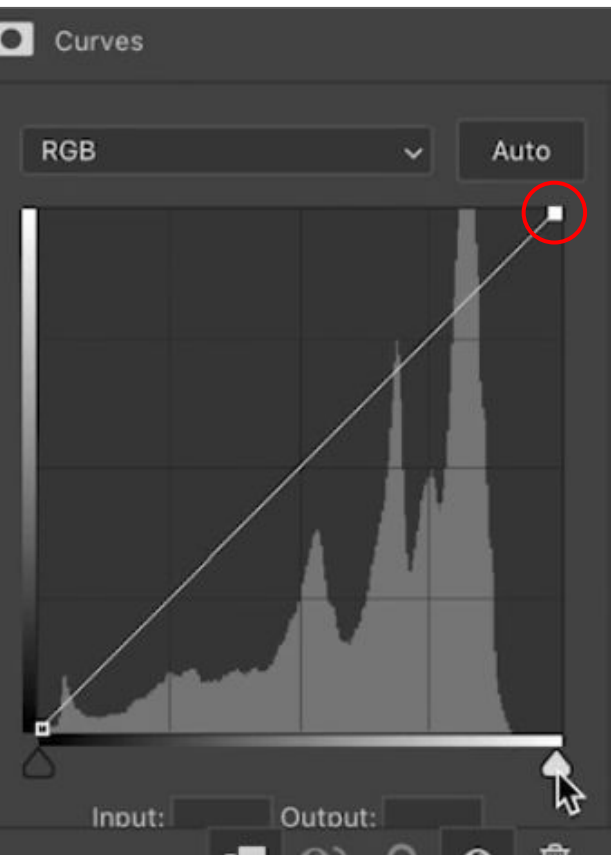
(CONT...)



Curves is a more powerful version of the **Levels adjustment layer**. We can move the *Highlight slider* on the horizontal in the same way to make my light grays brighter, but now I have a vertical element or an output.

# CURVES

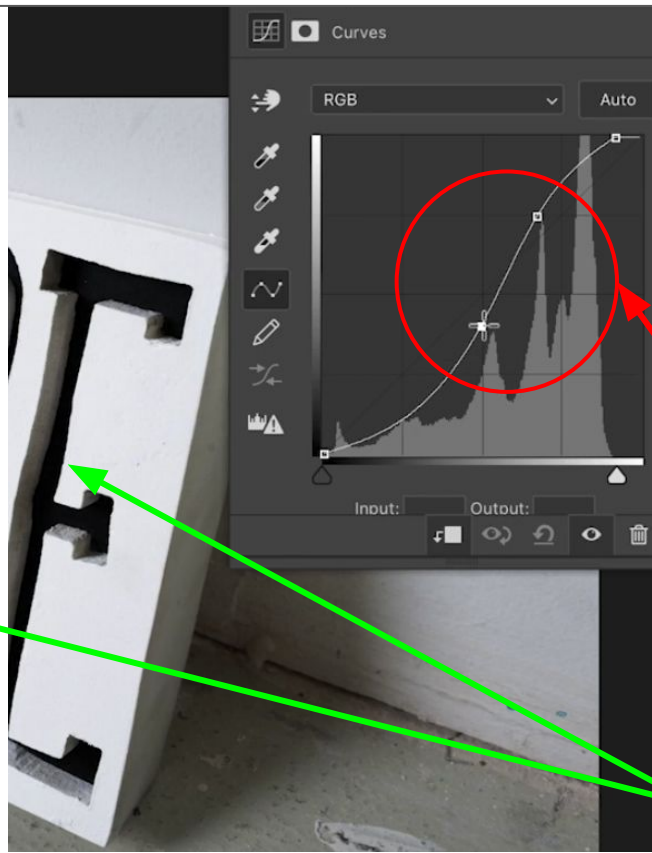
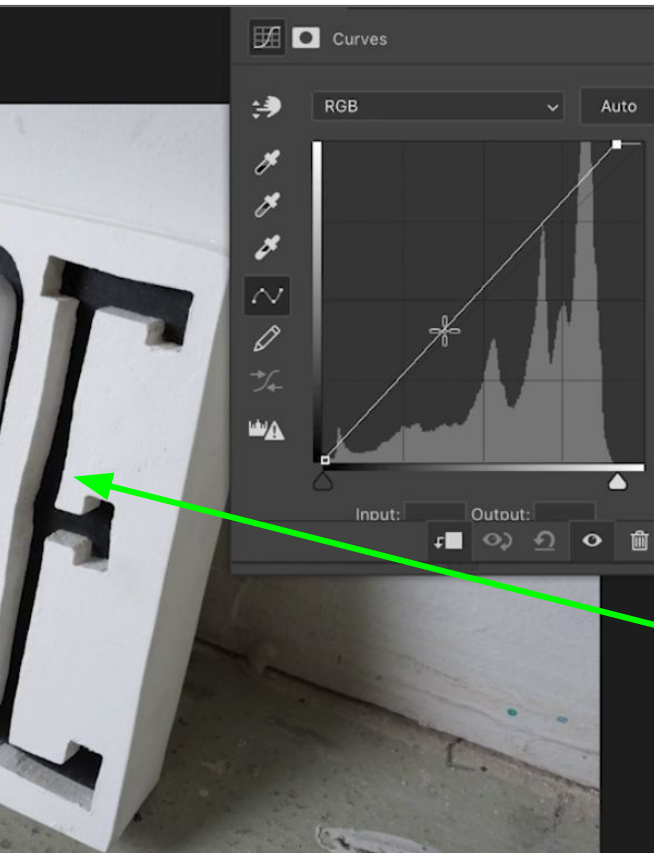
(CONT...)



As I slide the highlights I can see a square on the diagonal line move as well. On the vertical the square is still in the white tones, where on the horizontal it's in the light grays. This is a more analytical example of how **Levels** works. I am asking Photoshop to turn one tone—light grey—into a new tone—white.

# CURVES

# (CONT...)



But notice in **Curves** that I don't have a mid-tone slider... the graph does change slightly as I move the highlights... but I can move it more. I can hover over the diagonal line and click to add an **anchor point**. With that point I can ask Photoshop to change any tone to any other tone by dragging it around the **Histogram**. You can add as many anchor points as you would like. The curve will try to stay as smooth as possible between anchors. **The Curves Adjustment** is really good for adjusting individual elements of the image to gain *incredible contrast or subtle differences*.

# COMPARING GROUPS



Now that I've adjusted my photo in all these different ways I can compare them by simply making the Groups above appear or disappear with the *eye icons*. I can repeat this entire process from Layer Masks to Groups for any part of my image to make shadows, highlights or even just blues pop or recede. Keep in mind that a good photo to work from is still the best!

# THANKS FOR WATCHING!

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Thanks for watching this video. I have another 2 videos, one giving a quick summary of the toolbar tools and one on importing images including Camera Raw files.