



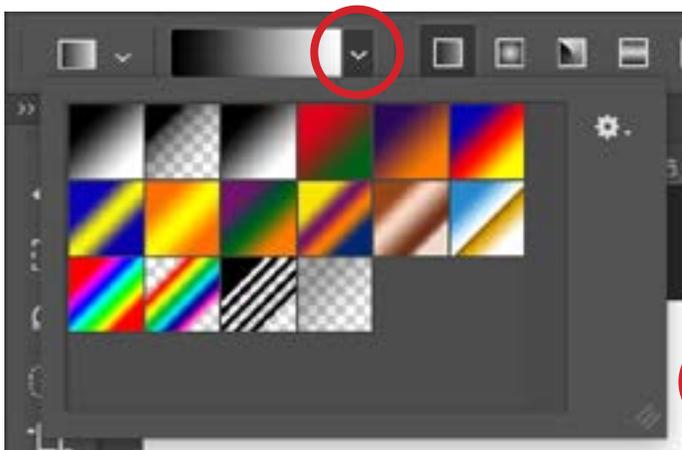
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The Gradient Tool

The Gradient Tool

In this lesson, we're going to look at how you can create gradients in Photoshop. A gradient simply a smooth transition from one color to another and they can be used in several ways.

The Gradient Tool can be found in the Tool Bar on the left side of the interface. When activated, settings relating to the tool will appear in the Options Bar above your image window. On the left side of the Options Bar, you will see a preview of the gradient you're about to create. If you click on the menu to the right of this preview, you will get a list of gradient presets and the first two are the ones you will most commonly use. The first is the Foreground to Background gradient and this is the one that will be active by default. When you choose this, the gradient will start with the foreground color you currently have set and will end with the background color. You can set your foreground and background colors by clicking on the swatches at the bottom of the Tool Bar and selecting the colors from the Color Picker that pops up.

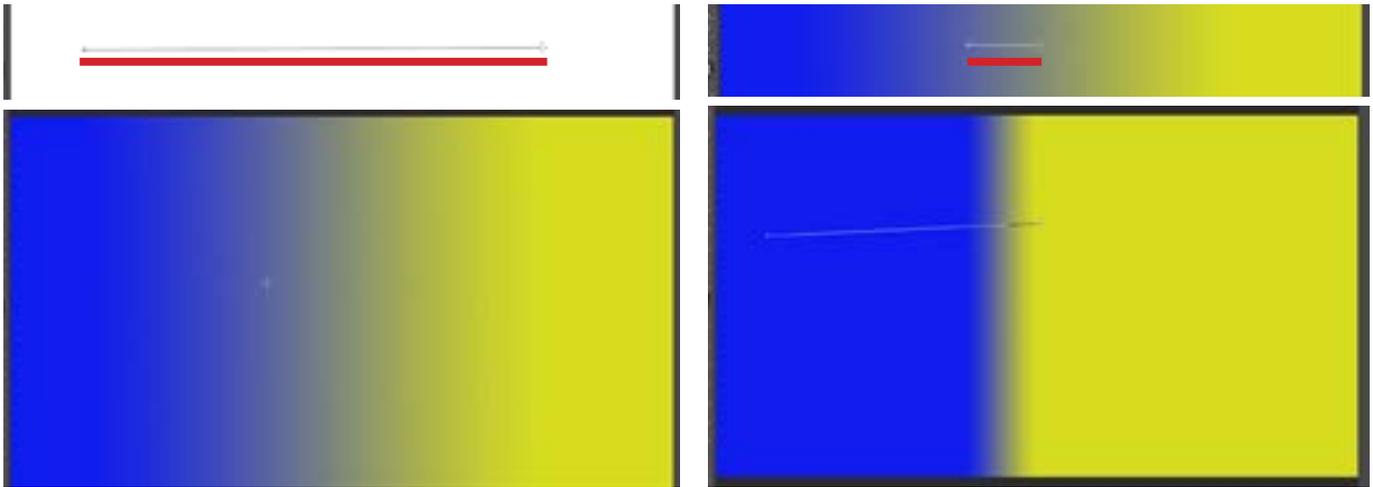


When the Gradient Tool is active, the settings related to it can be found in the Options Bar. Clicking on the gradient preview menu will give you a list of gradient presets.



Three commonly-used gradient presets use the foreground and background colors. Those can be set by clicking on the swatches in the Tool Bar to bring up the color picker.

To create a gradient in your document, simply click in the area you want the gradient to begin and drag your mouse to where you'd like the gradient to end. You will see a gradient line appear as a guide while you drag. If you drag out a short gradient line, then the transition will be more abrupt and anything beyond the ends of the line you draw out will be a solid color. The longer you drag, the



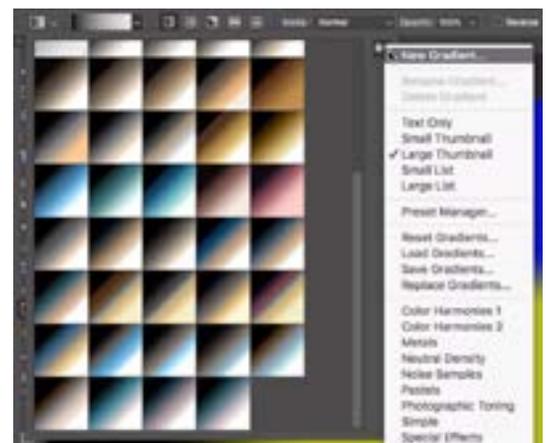
In the screen shots above, we added a red line so you can better see how long of a gradient line we dragged out. With a longer line, you get a smoother gradient. With a shorter line, you get a more abrupt transition.

smoother the gradient will be. If you want your gradient line to be perfectly horizontal or perfectly vertical, then hold down the Shift key as you drag out the gradient line. Otherwise, you can create gradients at any angle.

Usually, the gradient will completely fill your document unless you have a selection active to limit where it happens.

The second Gradient Preset, and the other most commonly-used preset, is Foreground to Transparent. If you use this gradient, it will start with whatever color you have selected as your foreground color and end with transparency, revealing whatever is in the layers below.

Gradient Presets As we mentioned before, clicking on the gradient preview in the Options Bar will give you a menu of gradient presets, or the preset picker. If you don't see a gradient that you'd like to use, you can click on the little gear icon in the upper right corner of the menu to get a list of additional presets that you can load. That menu will also give you options for how to view the preset list. Many find it convenient to choose the "Large Thumbnail" option so the gradients are easier to see.



Clicking on the gear icon in the Gradient Picker will give you a menu of additional gradients and view options for the gradient list.

Gradient Options

The settings for the Gradient Tool can be found within the Options Bar at the top of the screen. We'll look at those one by one:

Gradient Styles To the right of the gradient preview are a series of five icons, which represent the different styles of gradients we can use. Let's look at those.



The Gradient Styles

Linear Gradient This is the first icon and the one that is active by default. Using this option will create a gradient in a straight line.



Radial Gradient This is the second icon and it will cause the gradient to radiate out in a circle, the center being the location you started to click and drag.



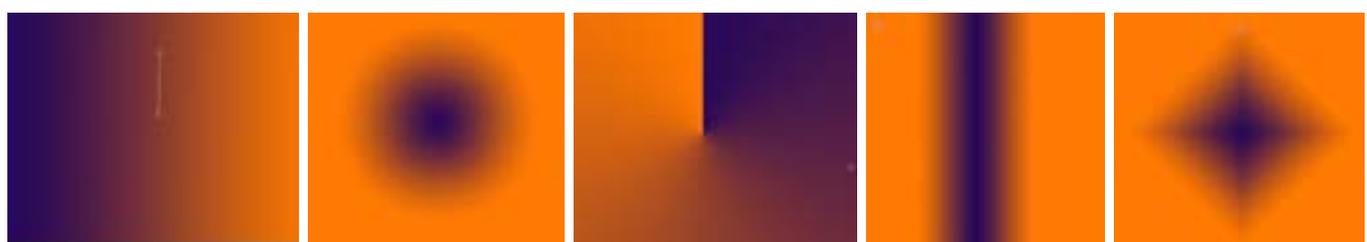
Angle Gradient This gradient sweeps around like a radar image. The line that you drag out will be the edge, or the starting and ending point of the gradient.



Reflected Gradient This is very similar to the linear gradient, but it's happening twice, as if it's being reflected in a mirror.



Diamond Gradient This gradient creates a diamond shape and the line you drag out will create one of the corners of the diamond.



Linear

Radial

Angle

Reflected

Diamond

Blending Mode The Blending Mode menu determines how the gradient we're about to create will interact with the layer we're working on.

Opacity The Opacity setting controls how much you can see through the gradient to what's underneath.

Reverse Turning on the Reverse check box will swap the colors so the gradient goes in the opposite direction.

Dither This is something that you will likely not notice on screen. You might notice this when you print the image and it looks like a banding effect that appears over a gradient. Turning on the Dither check box adds noise to the gradient and makes it so that when you print it, the gradient will look smoother.

Transparency Turning this check box on will tell the Gradient Tool to ignore any transparency that's built into a gradient preset. I usually keep this off, because I want the gradient presets containing transparency to behave the way in which they were designed.

The Gradient Editor

When it comes to gradient styles, we are not limited to the list of presets that you find in the preset picker menu. We can use the Gradient Editor to create our own custom gradients. To access this, we'll have to start by choosing one of the presets that is the closest to what we ultimately want. Then, we'll click directly on the gradient preview in the Options Bar to bring up the Gradient Editor.

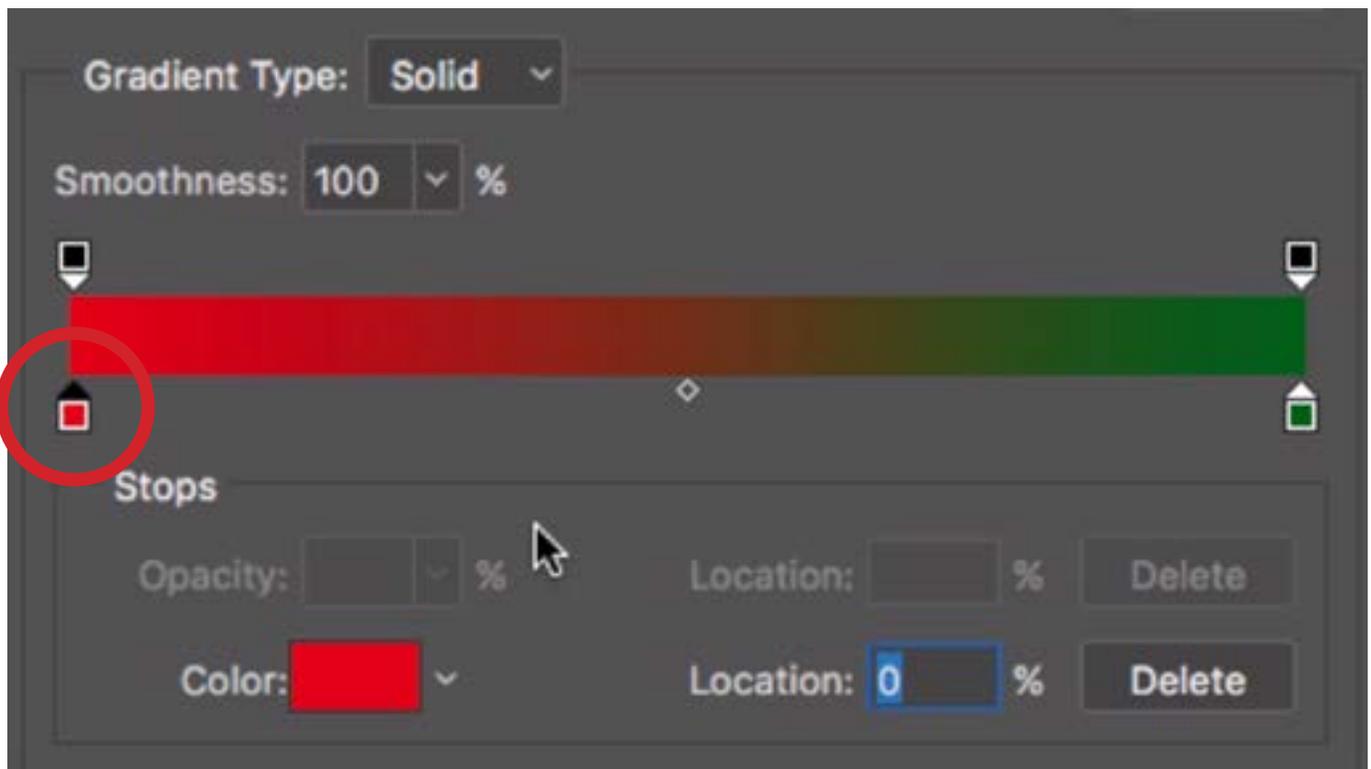
The top area of the Gradient Editor dialog contains the same preset thumbnails that we find in the Options Bar menu. The gradient bar below is where



The Gradient Editor

you make changes to the gradient. There are two sets of controls with this bar. The controls on the bottom determine the colors in the gradient and the controls on the top determine the opacity settings. The Smoothness dropdown menu is a setting that will attempt to reduce banding in the final, printed image. When the Smoothness is set to 0, it gives you a perfectly even gradient. When the Smoothness is set to 100, it makes less of a change near the ends of the gradient. It makes more of the gradient change in the middle. I usually keep this setting at 100.

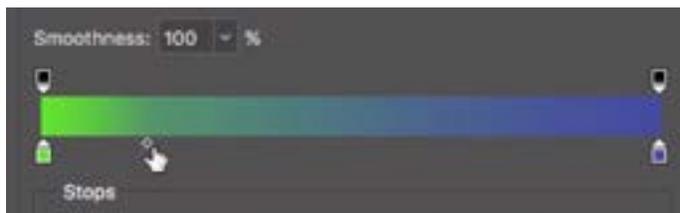
Customizing the gradient You can change what colors make up your gradient by clicking on the little swatch squares attached to the sliders beneath the gradient bar. When you click on one of these squares, the slider arrow becomes black, indicating that it's the one you're working on. Settings for that swatch will appear below the gradient bar. One of those settings is called "Color" and clicking on it will bring up the Color Picker, from which you can choose a different color. If you click on the little down-pointing arrow next to the Color setting, you'll get the options to use the foreground and background colors. The Location setting determines where that color appears across the distance of the gradient. I usually



When you click on one of the slider swatches, it will get a black arrow, indicating that it's active and you can make changes to it using the settings below.

don't enter in numbers for the Location settings. Instead, I drag the color sliders manually and this is much easier. When you move the left-most slider to the right, anything before it will become a solid color in your gradient. Similarly, moving the right slider to the left will make everything after it a solid color.

In the middle of the gradient, you will see a little diamond shape, which marks the mid-way point. You can click and drag on that diamond to move it and therefore change the mid-way point of the gradient. (Note that this diamond might not be visible if you have not clicked on one of the colors.)



Clicking and dragging on the diamond shape will change where the mid-way point is in your gradient.

Your gradients are not limited to two colors (a starting and ending color). You can have as many colors, or stops, as you want. To add another stop, or color, simply click just below the gradient in the place that you want to add the additional color.



We added another stop to this gradient by clicking below the gradient bar in the place we wanted to add the stop.

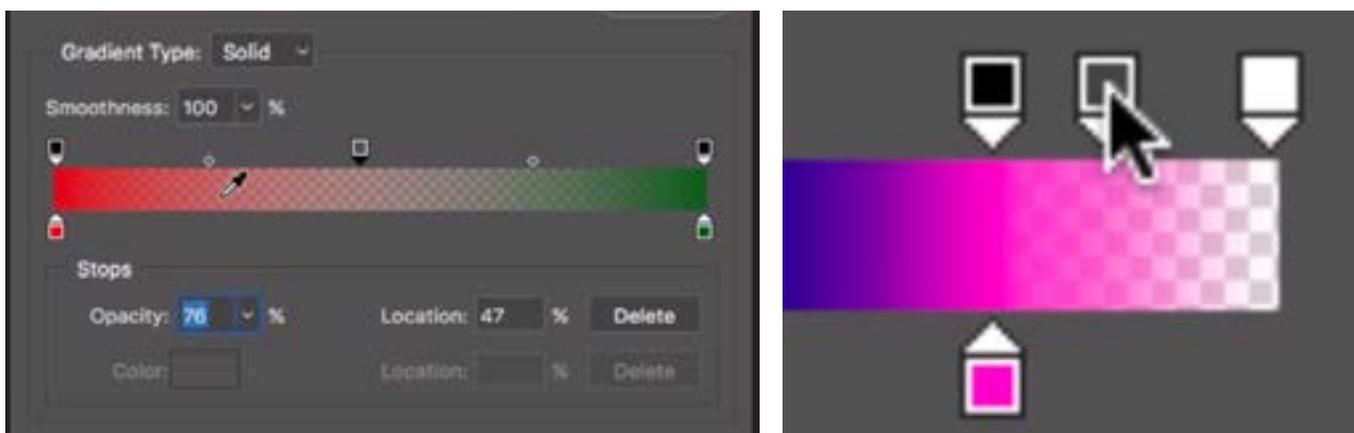
That stop will automatically become active and you can use the Color setting below to specify what color you'd like it to be. Every time you add a stop, a little diamond will be added so that one appears at the half-way point between each color. Note that one of the stops needs to be active in order for the little diamonds to be visible.

Once you have your gradient set up, you can give it a name within the Name field above the gradient bar and save it as a preset by clicking the New button on the right side of the dialog. When you save a preset, it will appear in the gradient preset list.

Adding transparency to a gradient To change the colors in a gradient, we work with the sliders below the gradient bar. To change the transparency in a gradient, we work with the sliders above the bar. If you want part of your gradient to be transparent, click right above the gradient bar in the place you want to add the transparency. You'll see the checkerboard background appear, which indicates transparency. You can then control how transparent the area will be by adjusting the Opacity slider below the gradient bar. (The gradient stop will need to be active in order for the Opacity setting to be available.)

When you have transparency stops in your gradient, the sliders will be black, white or gray. A black slider represents an area that you can't see through at all. White represents an area that is completely transparent and gray represents an area that is partially transparent.

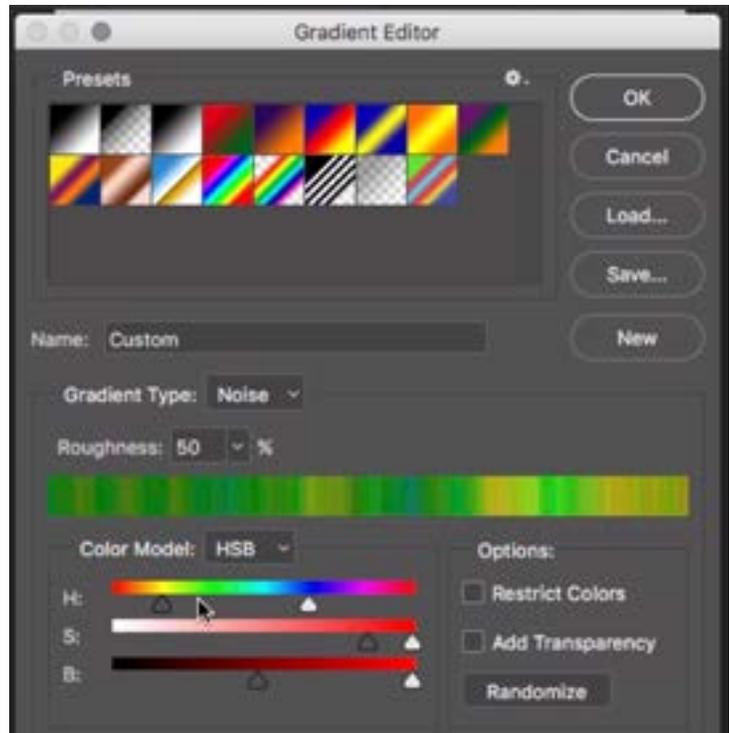
To remove a stop from the gradient, whether it be a color stop or a transparency stop, simply click and drag them away from the gradient.



In the left screen shot, we added a transparency stop by clicking above the gradient bar in the place we wanted to add the stop. In the screen shot at right, you can see the different types of transparency stops. The black represents an area that is solid color, the white represents an area that is totally transparent and the gray represents an area that is partially transparent.

Noise Gradients Up until now, we have been creating Solid Gradients. There is another type of gradient and that is a noise gradient. You can switch to this type of gradient by using the “Gradient Type” dropdown menu in the middle of the Gradient Editor dialog. Instead of having a simple transition from one color

to another, we have transitions that are a bit more random in how they appear. There are three ways of limiting how the gradient appears and those can be changed via the Color Mode menu below the gradient bar. I usually choose the HSB setting. The sliders below the Color Mode menu determine how much the gradient can vary between each of the different controls. When using the HSB setting, the H sliders determine how wide of a color range the gradient can use. The S slider determines how much the saturation can vary and the B slider determines how much the brightness can vary.



Here, we are creating a noise gradient using the HSB Color Mode.

To the right of the sliders is a Randomize button. Clicking on it will give you a different result based on the same settings you specified. You can click this button repeatedly until you have a result that you like.

There are a few more settings to consider when creating a noise gradient and those are as follows:

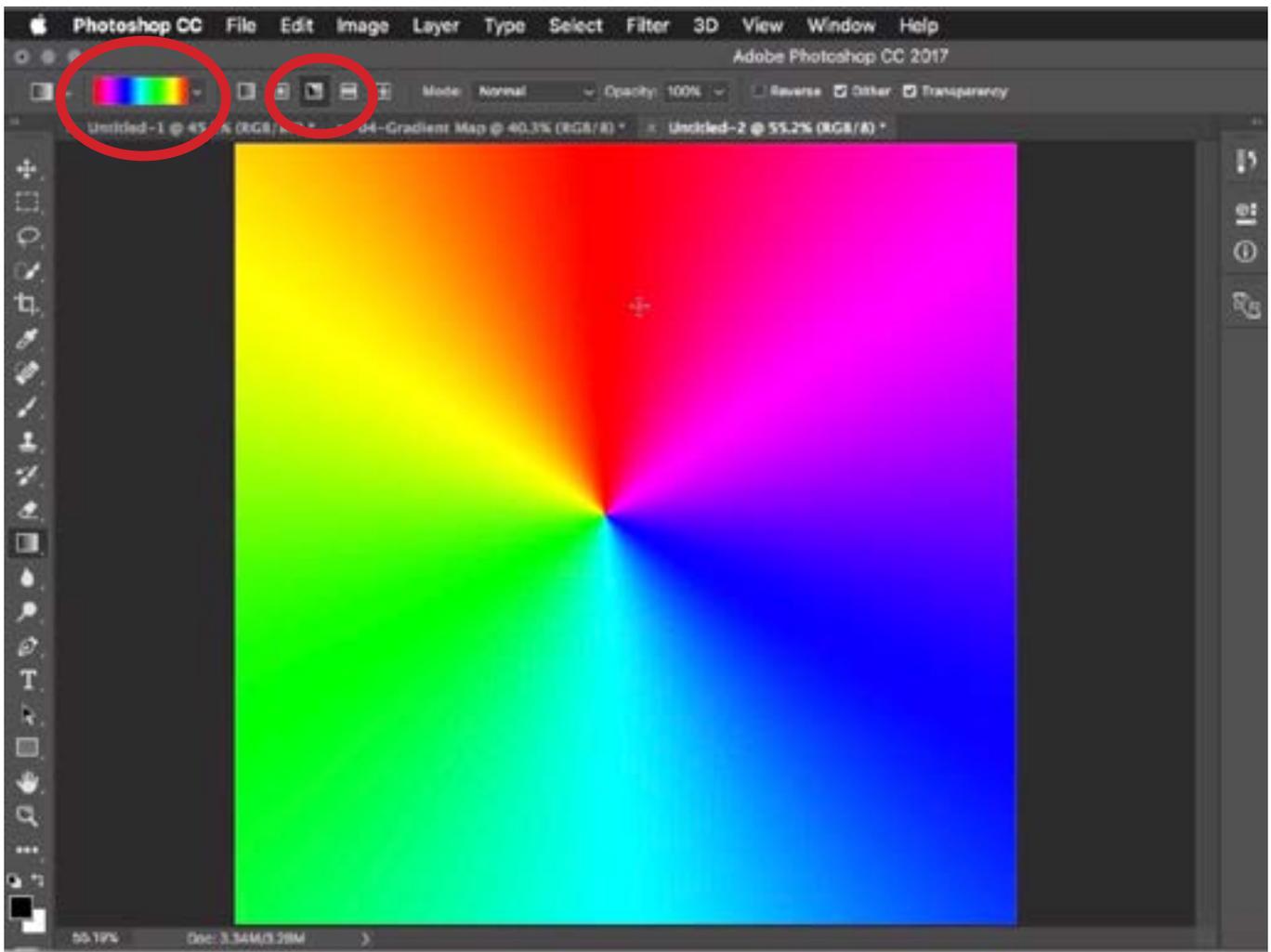
- The Restrict Colors check box will restrict how much of a saturation change it's going to have.
- The Add Transparency check box will incorporate random transparency into the gradient.
- The Roughness dropdown menu allows you to determine how abrupt or smooth are the changes in colors are.

If you create a gradient or gradient set that you'd like to share with someone else, click the Save button. You will be prompted to give the set of gradients a name and then they will be saved as a file on your hard drive.

Different Uses for Gradients

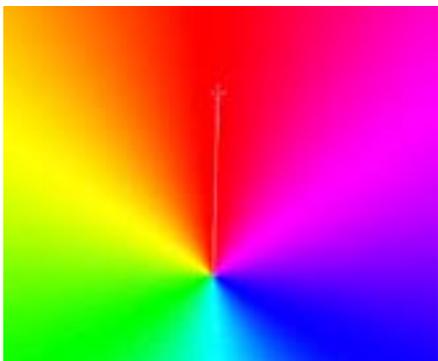
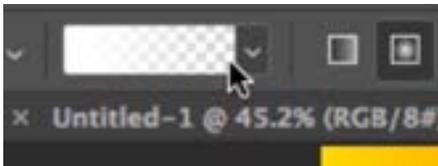
Create a color wheel We're going to create a color wheel where the inside gradually becomes white and the outside gradually becomes dark. What this will give us is the complete spectrum of colors and tones.

To start, we'll create an empty, square document. Then, we'll use the gradient picker dropdown menu and select the rainbow gradient. We'll set the gradient style to the Angle Gradient and then start in the center of the document and drag a straight line outward. Because the rainbow gradient starts and ends with the same color, you'll have a seamless color wheel.

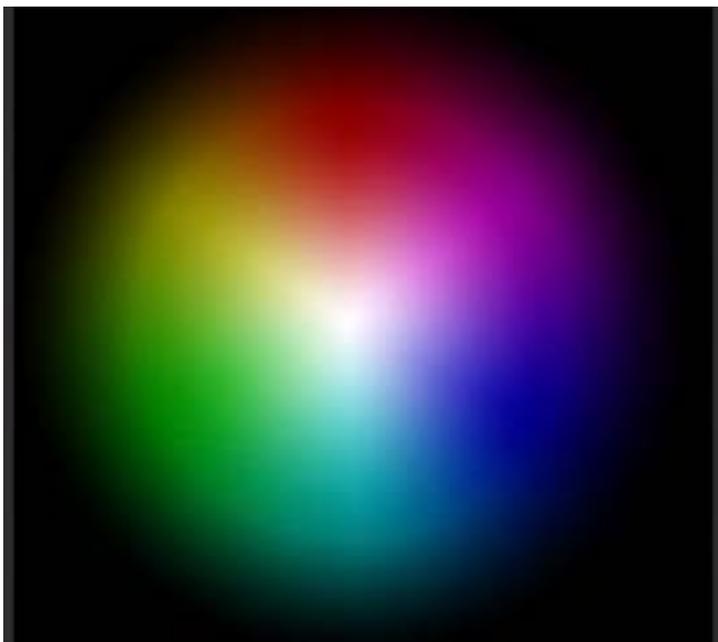


We created a seamless color wheel by choosing the rainbow gradient preset and using the Angle gradient style.

Next, we want to make the colors fade to white in the center, so we'll choose the Radial Gradient style and then choose the Foreground to Transparent preset. We'll use the foreground/background swatches in the bottom of the Tool Bar to change the foreground color to white. We'll start in the center of the document and drag the gradient line toward the edge of the document. This will make the center bright.



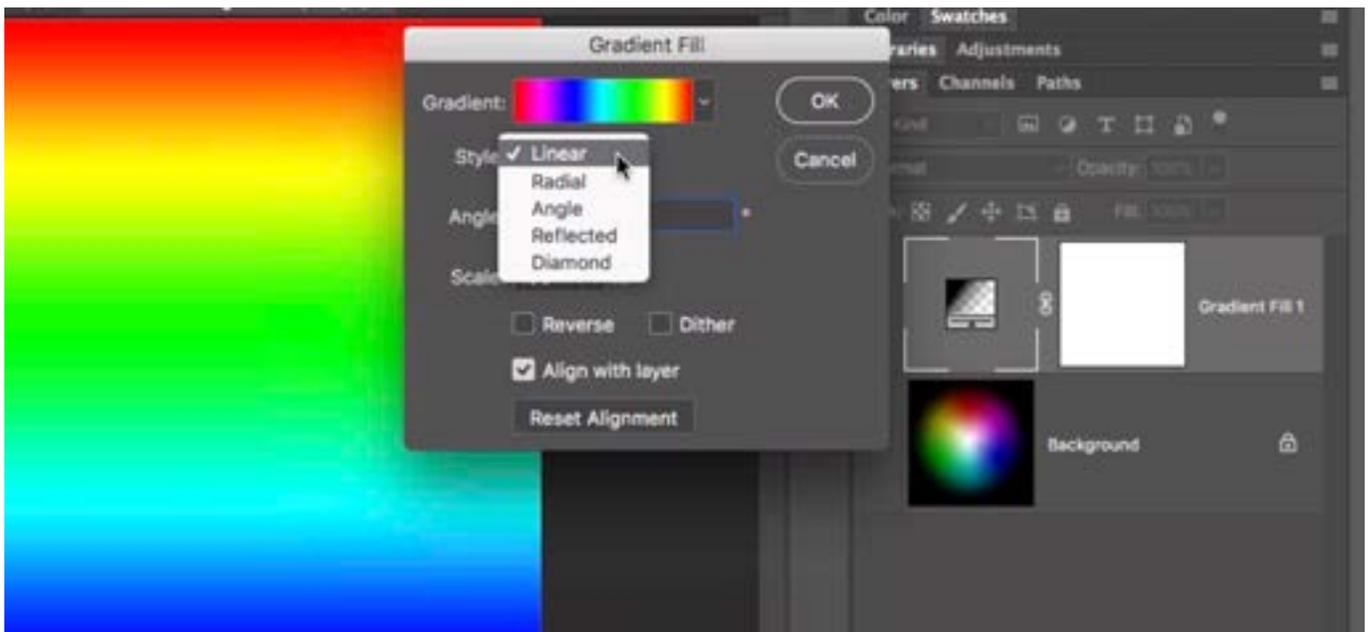
Upper far left: We selected the Foreground to Transparent preset (with the foreground set to white) and the Radial Gradient style. Lower far left: We dragged out a gradient line from the center. Directly left: The resulting gradient, with white in the center.



The resulting wheel, after adding the black gradient on the edges.

Now we need to make the outer edges to gradually get darker until they are black. Switch foreground color to black and turn on the Reverse check box in the Options Bar. (This reverses the beginning and ending colors). Click in center again and drag a straight line all the way to the edge of the document. Note that if the fade-out isn't exactly how you'd like it, you can always adjust it in the Gradient Editor. The result should be a complete color wheel.

Creating a gradient layer You can create a new layer that is a gradient layer by doing one of two things. You can click on the Adjustment Layer icon at the bottom of the Layers panel (which looks like a circle that is half white, half black) and choose Gradient from the pop-up menu or you can go to the Layer menu and choose New Fill Layer > Gradient. When you choose one of those two things, the Gradient Fill dialog will appear, from which you can choose a gradient preset. You can also specify the type of gradient from the Style menu as well as some of the other settings relating to gradients.



When you create a Gradient Fill layer, this dialog will prompt you to choose a gradient preset and specify the gradient style.

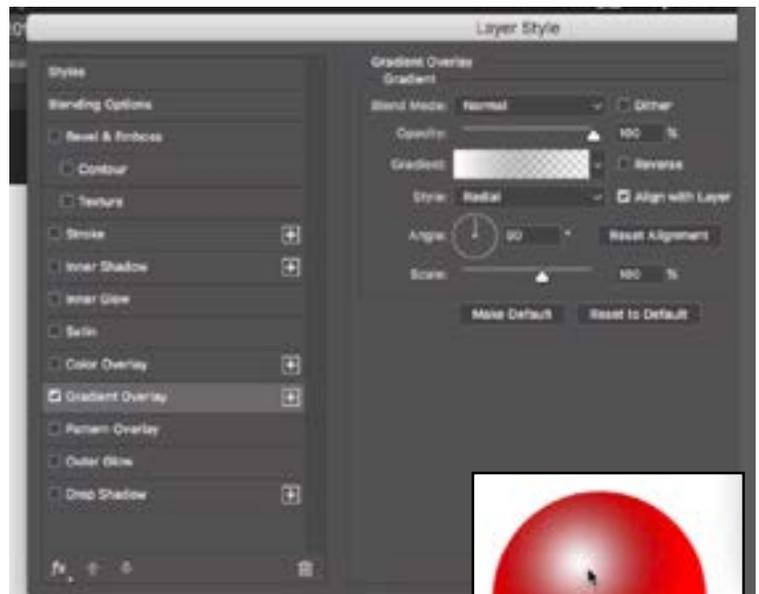
Layer styles A layer style is a setting that's attached to the layer and where it applies is based on the shape of the layer. One of the types of layer styles we can apply is a gradient overlay and we will use that to add dimension to a shape.

We'll first choose the Ellipse Tool and in the Options Bar, specify that we want to create a Shape Layer. We can also choose the fill color in the Options Bar.

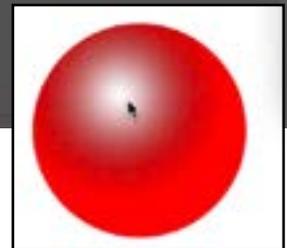
Then, we'll click and drag out an ellipse in the document, holding Shift to constrain the shape to a perfect circle. This will create a new shape layer that you can see in the Layers panel. To add a layer style, click the FX icon at the bottom of the

Layers panel and choose Gradient Overlay from the pop-up menu. Alternatively, you can go to the Layer menu and choose Layer Styles > Gradient Overlay. The Layer Styles dialog will appear and the gradient overlay settings will be visible.

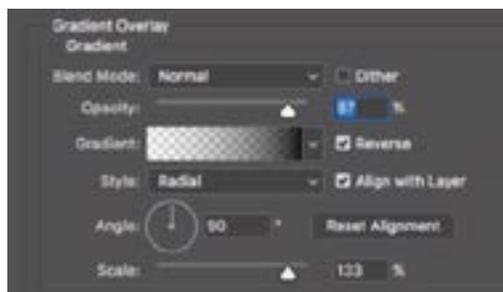
We want to use a gradient overlay that will add a highlight to our shape. This would be a gradient that starts with white and then fades to transparent. To do this, we'll click on the gradient preview menu and choose the Foreground to Transparent preset. If our foreground was already set to white, then we're all set. If it wasn't, then we'll have to use the Gradient Editor (by clicking directly on the gradient preview) to change the foreground color to white. Then, we'll use the Style menu to choose Radial. If we move the Layer Style dialog so that it's not covering the document, we can see the gradient appearing over the shape layer and we can literally click and drag over our shape to position the gradient exactly where we want. We're going to place it in the upper left portion of the circle and then use the Scale slider to adjust the size.



A Gradient Overlay is being applied to create a white highlight on the shape.



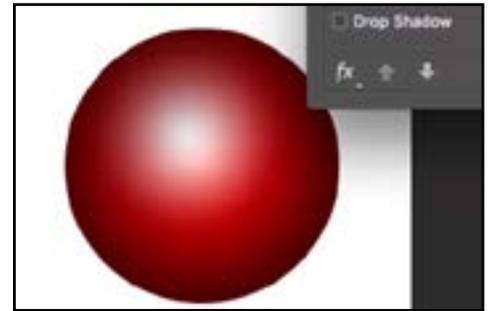
Next, we want to add an outer gradient that's darker and we will do this within the same area of the Layer Style dialog. We want to add another Gradient Overlay but use different settings, so we'll click on the little plus icon next to the name "Gradient Overlay" on the left side of the dialog. Now we can work with the settings to create a new gradient.



The Gradient Overlay settings for the dark, outer gradient.

We want this one to be dark, so we'll click on the gradient preset preview and use the Gradient Editor to make the gradient black to transparent. (In our case, we used the Foreground to Transparent

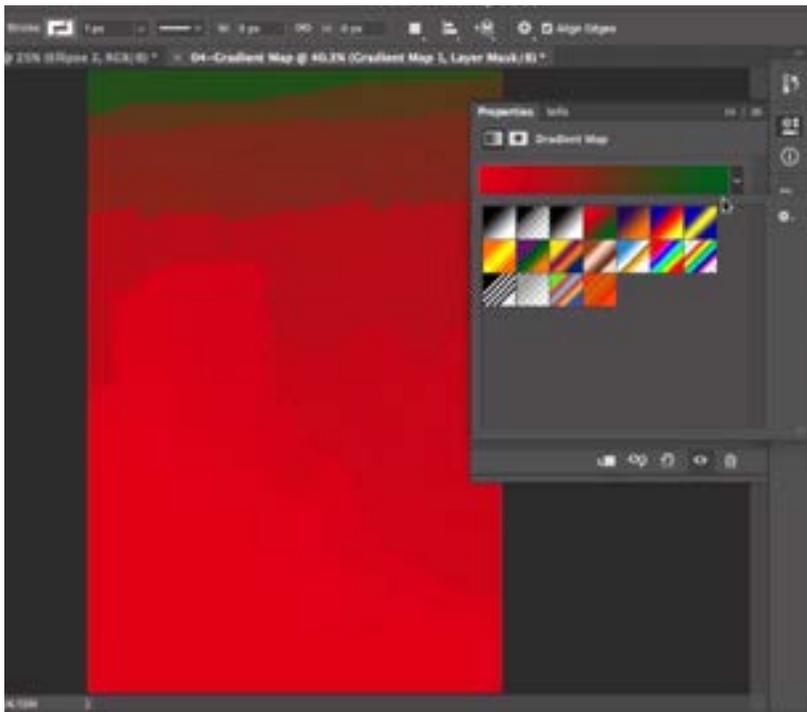
ent preset because our foreground color was set to black.) The location of the gradient is in the center of the orb by default and we want the opposite, so we'll turn on the Reverse checkbox, which will put the dark gradient on the outside of the orb. We'll then use the Scale and Opacity sliders to fine-tune the gradient and make the orb appear three-dimensional.



The resulting orb

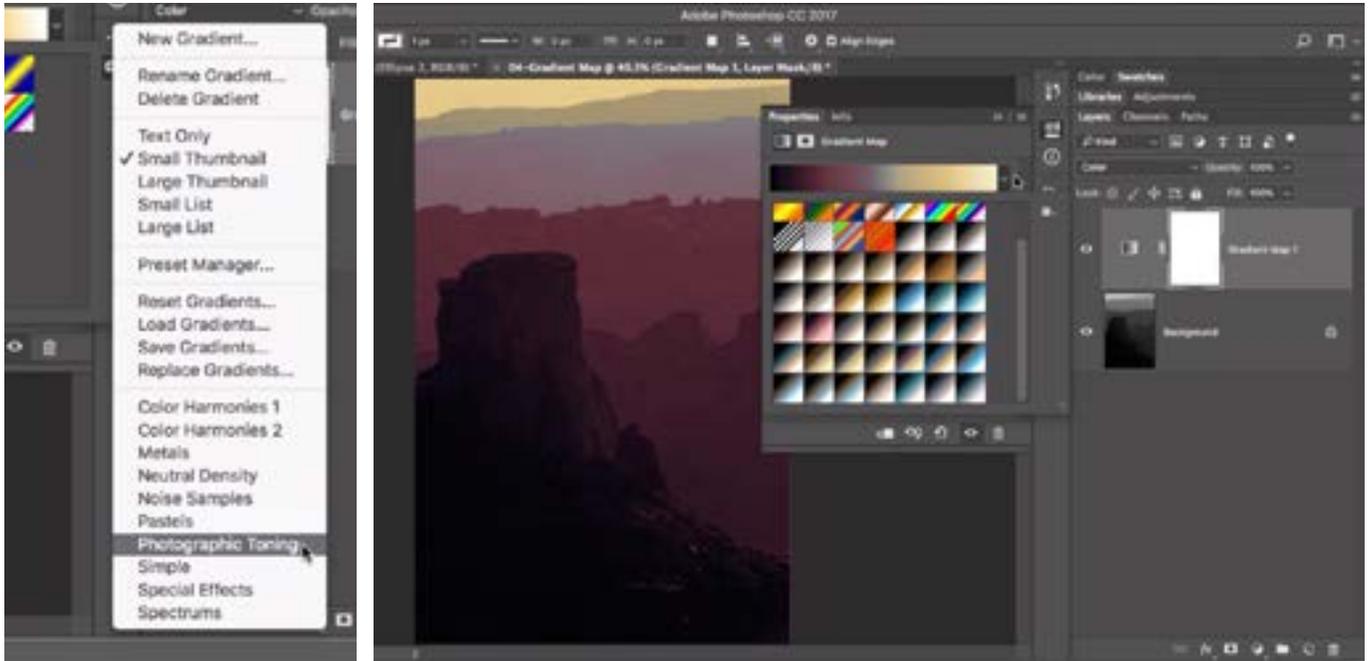
Using a gradient to add color to a grayscale image If you want to add color to a grayscale image by any means, you will first need to make sure that the color space is not set to grayscale. I usually use the RGB color mode and that can be changed by going to the Image menu and choosing Color Space.

Click the Adjustment Layer icon at the bottom of the Layers panel and choose Gradient Map from the menu that appears. (Alternatively, you can go to the main menu and choose Layer > New Adjustment Layer > Gradient Map.) The Properties panel will appear, inside of



A Gradient Map adjustment layer was added and we are browsing the list of gradient presets in the menu to the right of the gradient bar.

which you will see a gradient preview. A Gradient Map converts your image to black and white (if it wasn't black and white already) and then replaces whatever was black in your picture with the color on the left side of the gradient and replaces whatever was white in the picture with the color on the right side of the gradient. If you click on the arrow to the right of the gradient, you will get the list of gradient presets and you can choose whichever one you'd like. The main prob-



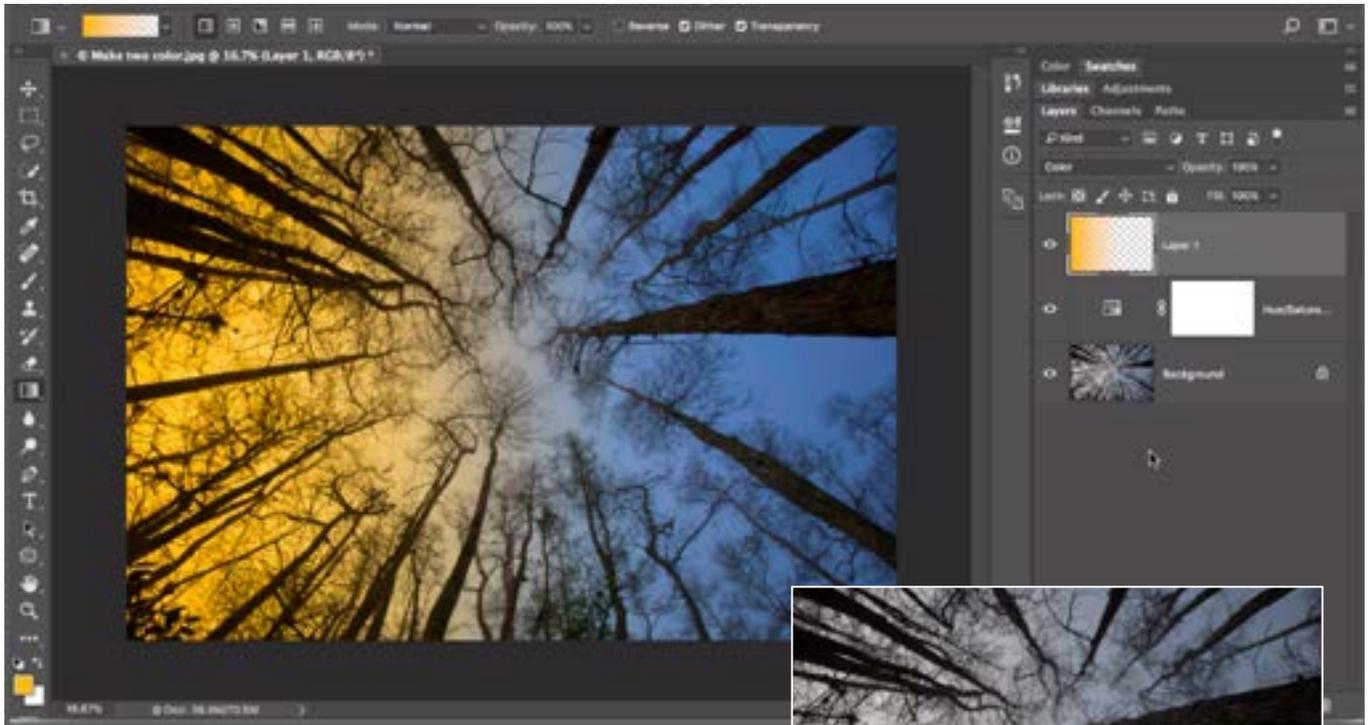
Left: You can choose between different sets of gradient presets by clicking the menu in the upper right of the Properties panel. Right: We chose one of the presets from the Photographic Toning set.

lem with this type of adjustment is that it doesn't try to maintain the brightness of your picture, so it will initially look very harsh. You can fix this by using the Blending Mode dropdown menu at the top of the Layers panel and choosing Color. The Color mode makes it so that it can only change the color of the layer, but not the brightness.

The default presets may not produce the most desirable effects, so you can use the little dropdown menu in the upper right of the Properties panel and choose a different set of presets. The Photographic Toning presets can work very nicely, as they are much more subtle.

Real World Examples

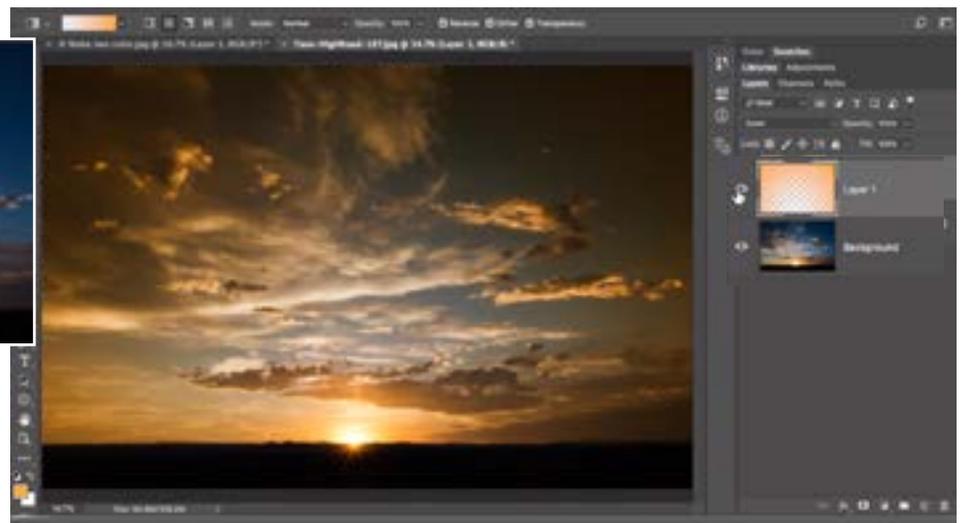
Here are a few real world examples of how gradients were used to enhance some images:



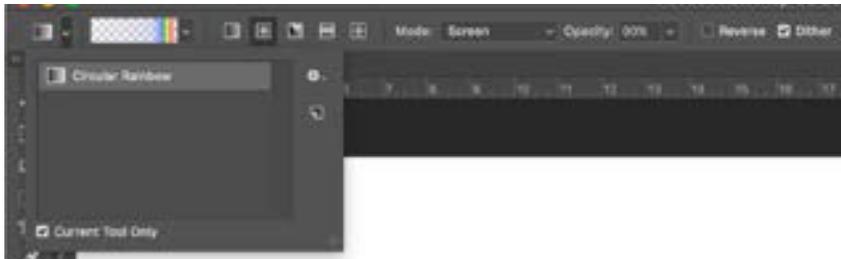
The original image is shown at right. I wanted to make it more colorful so I added a Foreground to Transparent gradient on an empty layer (with the foreground set to a yellow) and then set the blending mode to Color.



The original image is shown above. A Radial gradient was used (set to Reverse) to add more yellow to the outer portion of the frame.



Creating a rainbow using gradients When you activate a tool in Photoshop, any presets related to that tool can be found in the Tool Preset Picker, which is the icon on the very left side of the Options Bar. By default, there is only one preset



The rainbow gradient was selected using the preset menu in the far left side of the Options Bar and then applied to this image in the Overlay blending mode.

available when you activate the Gradient Tool and that is the rainbow gradient. When you select this preset, you will see that all of the settings in the Options Bar are adjusted for that preset. The Radial gradient is automatically selected, so you can drag out a gradient line to create the arc of a rainbow. I recommend that you do this on a new, empty layer. You can then change the opacity and blending mode of the rainbow layer so that it looks more realistic.

Applying colors from one image to use in another In this example, we want to apply the colors of the sunset in one image and apply them to another image by use of a gradient.



We used the Eyedropper to sample a handful of colors from an image and they appear in the top bar of the Swatches panel.

First of all, we want to open the Swatches panel. If it's not already visible in the interface, you can access it by going to the Window menu and choosing Swatches. In this panel, your most recently-selected colors will appear within the bar at the top. Knowing this, we will open the image we want to steal the colors from and activate the Eyedropper Tool, clicking on the desired colors to add them to this top bar in the Swatches panel.

Next, we will open the image that we want to apply the colors to. We will click on the Adjustment Layer icon at the bottom of the Layers panel and choose to add a Gradient Map. We will then change the blending mode of this adjustment layer to Color. In the Properties panel, we will choose a preset that has a few colors in it and then click on the gradient bar to open the Gradient Editor. Instead of using the colors in the original preset, we're going to use the colors that we added to the Swatches panel. When we click to add and adjust the various stops in the gradient, we can click on the colors in the Swatches panel to apply them. We'll continue to adjust the gradient, moving the sliders around, so that the look of the current images matches the look of the image we sampled the colors from.

Note that you can drag an adjustment layer between documents in order to apply the same settings.



A Gradient Map adjustment layer was added to this document and we clicked on the gradient bar within the Properties panel to open the Gradient Editor. We then used the colors we sampled from the first image to create a gradient for the current image.

Quick Tips

- When using the gradient tool with a Linear gradient, it's easy to get the angle off just a bit. To avoid this, hold down the Shift key to constrain the angle to a 45-degree increment. This means that the gradient will either be perfectly horizontal, vertical or at a 45-degree angle.
- If you want to change your foreground color quickly, hold down the Option key to access the Eyedropper Tool. Click to sample somewhere in your image and then let go of the Option key. If you would like to quickly switch between the foreground and background colors, hit the X key on your keyboard.
- If your gradient settings ever look a bit odd and you can't figure out why, you can reset all of the tool settings. Right-click on icon in the far left of the Options Bar and choose Reset Tool from the menu that appears. This will reset all of the tool options to their default settings.
- If you'd like to save a preset that includes not only the gradient colors, but also the settings in the Options Bar, go to the icon at the far left of the Options Bar and click on the little triangle to the right of it. A menu will appear and you can click on the little New icon on the right side to save a new Tool Preset.