

## EXERCISE PREVIEW



## EXERCISE OVERVIEW

In this exercise, you'll learn about a more "illustrative" use of Photoshop. You'll combine photos with digital art and effects created from scratch in Photoshop to design a graphic.

NOTE: This exercise was written for people with some working-knowledge of Photoshop. It is not for total beginners.

## DOWNLOADING THE FILES

1. To download the files you'll use in this exercise, please visit:  
[nobledesktop.com/goodies](http://nobledesktop.com/goodies)
2. Under **Photoshop Illustration Techniques**, click the **Class Files** button to download the zipped files.

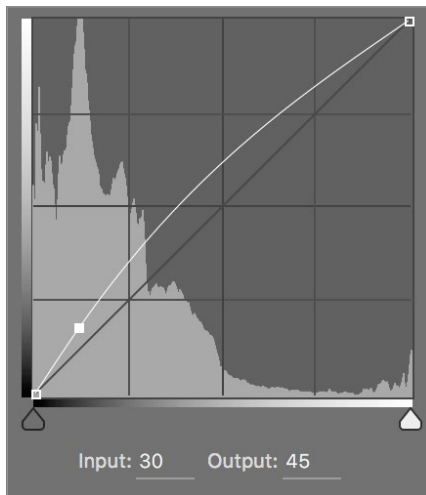
NOTE: These instructions were written for Photoshop CC 2015.5, but things should work the same or similarly in most recent versions of Photoshop.

3. Once the file is downloaded and unzipped, you should have a folder named **car-illustration-files** containing the following three images:
  - **background.png**
  - **car.png**
  - **final-graphic.jpg**
4. In Photoshop, go to **File > Open**.
5. Navigate to the **car-illustration-files** folder you downloaded.
6. In that folder, double-click **final-graphic.jpg** to open it.
7. This is a flattened version of how the finished image will look. Once you've had a good look at the file, close it.

## GETTING STARTED

1. Close any files you may currently have open.

2. In Photoshop, go to **File > Open**.
3. Navigate to the **car-illustration-files** folder, open **background.png**.
4. This photo is a bit dark, so let's lighten it with a non-destructive adjustment layer. Choose **Layer > New Adjustment Layer > Curves**.
5. In the dialog that appears, name it **brighten background**
6. Click **OK**.
7. To create a curve like the one shown below, click on the curve to create a point and drag it up a bit. (If you want to be precise, after you create the point you can type in the **Input** and **Output** values below the curve.)



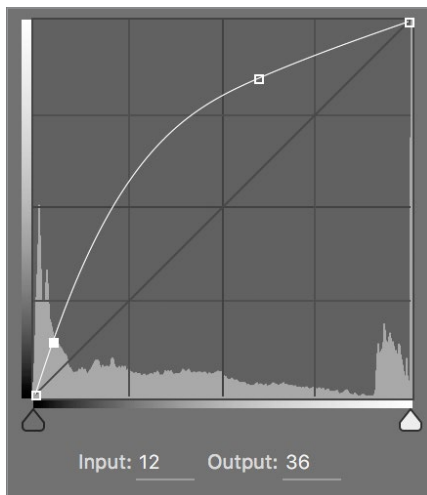
#### PUTTING THE CAR ONTO THE BACKGROUND

1. We want to place the car photo onto this background. Go to **File > Open**.
2. In the **car-illustration-files** folder, open **car.png**.
3. To move this photo into the other file, go into the **Layer** menu and choose **Duplicate Layer**.
4. In the dialog that appears:
  - Next to **As**, type **car**
  - From the **Document** menu choose **background.png**.
5. Click **OK**.
6. Close the current file (**car.png**).
7. In the **Layers** panel, notice we now have the new **car** layer on top of the **brighten background** layer.




8. Go to **File > Save As** and set the following:
  - Make sure **Format** (MAC) or **Save as type** (WINDOWS) is set to **Photoshop (.psd)**
  - Navigate into the **car-illustration-files** folder.
  - Name the file **yourname-car graphic.psd**
9. Click **Save**.
10. If a Photoshop Format Options dialog pops up, keep **Maximize Compatibility** checked on. Then check on **Don't show again** and click **OK**.

## REMOVING THE CAR'S BACKGROUND

1. In the **Layers** panel, make sure the **car** layer is still selected.
2. We want to remove the car's background so we can see through to the background photo. To do this we'll need to select the car, but its bottom edges are a bit too dark to see properly. Let's add an adjustment layer to lighten it. Choose **Layer > New Adjustment Layer > Curves**.
3. In the dialog that appears, set the following:
  - Name: **brighten car**
  - Check on **Use Previous Layer to Create Clipping Mask**. (This ensures that the adjustment won't affect the background photo as well).
4. Click **OK**.
5. Create a curve like the one shown below. If you want to be precise:
  - The lower left point is **Input: 12** and **Output: 36**
  - The upper middle point is **Input: 152** and **Output: 216**



6. In the **Layers** panel, select the **car** layer.

7. Zoom in so you'll be able to see the details in the car's edge as you make a selection.
8. In the **Tools** panel, click and hold on the **Lasso** tool (  ) and choose the **Magnetic Lasso** tool (  ).
9. In the **Options** bar at the top of the screen, set the following options:
  - Width: **10 px**
  - Contrast: **10%**
  - Frequency: **100**
10. Hover the cursor close to the car's edge (slightly outside the car) and click **once** to start the lasso selection. (Do not click and hold, just click once.)
11. Move the cursor along the edge of the car. The lasso will lay down points along the path as the cursor moves. Keep in mind the following tips:
  - When you reach the edge of the screen, hold the **Spacebar** and drag to scroll. Release the **Spacebar** to continue making the lasso selection
  - When you reach a corner or tricky place (like near the car's tires), click to manually place a point. If it does not do a perfect job, just do the best you can. You'll have a chance to make corrections later.
  - To back up and remove incorrectly placed points, press **Delete** (MAC) or **Backspace** (WINDOWS).
  - When you come back to your starting point, place the cursor over the first point, so it changes to a  , and click to finish the selection.
12. It's hard for us to know exactly what your selection is like, but most likely you'll need a bit of manual cleanup in specific areas. There may be a bit of a lighter halo around the car. To help fix that a bit, in the **Options** bar at the top of the screen, click the **Select and Mask** button.

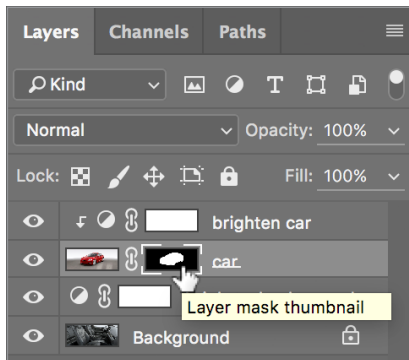
NOTE: **Select and Mask** was new in Photoshop's 2015.5 release. Previously it was called **Refine Edge**, which worked similarly.
13. In the **Properties** panel on the right, click on the thumbnail to the right of **View** and double-click **On Layers**.
14. In the **Output Settings** section, from the **Output To** menu choose **Layer Mask**.
15. In the **Global Refinements** section, drag **Shift Edge** to the left a bit (negative numbers) to contract the selection. Don't go too far that you remove parts of the car you want and the edge can become pixelated.




You probably won't be able to perfect the selection here, but even some improvement can make this useful. We will be able to make more detailed, specific corrections in a moment.

16. When done, click **OK**.

NOTE: The selection has been converted into a layer mask, which hides parts of a layer while showing other parts. This provides more flexibility than deleting the white areas, because a layer mask can easily be modified, disabled, or trashed to recover all or part of the hidden region!

17. As shown below, in the **Layers** panel, the **Layer mask thumbnail** will already be selected. The extra border around the layer mask thumbnail indicates you are working on the mask, not the image.




- Adding **black** to the mask will **hide** parts of the layer.
  - Adding **white** will **show** parts of the layer.
  - Adding **gray** will **partially show** a portion of the layer, for a translucent effect.
18. In the **Tools** panel, choose the **Brush** tool (  ).
19. In the **Options** bar, select a **hard edged brush** with a size of **5** pixels. Make sure that the brush's opacity is set to **100%**.
20. In the **Tools** panel, click the **Default Colors** icon (  ) (or hit the **D** key) to set the **Foreground color** to **white** and the **Background color** to **black**.
21. Press the **X** key to swap the **Foreground** and **Background** colors, so the **Foreground** is **black**.
22. Correct any problem areas as follows:
- If any of the car's original background is visible (such as a lighter halo), paint over it with **black** to hide it. The car does have natural highlights around some edges, so don't get rid of those!
  - Paint **white** over any other missing portions of the car (to reveal them again).
  - TIP: To draw a straight line, click at one end. Then **Shift-click** at the other end and Photoshop will paint a straight line between the two points you clicked.
23. When you're done fixing the mask, choose the **Move** tool (  ).
24. Go to **View > Fit on Screen** to see the whole image again.

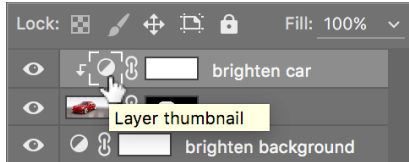
25. We need to make room for a title on the right. Drag the car to the left half of the image, as shown below:



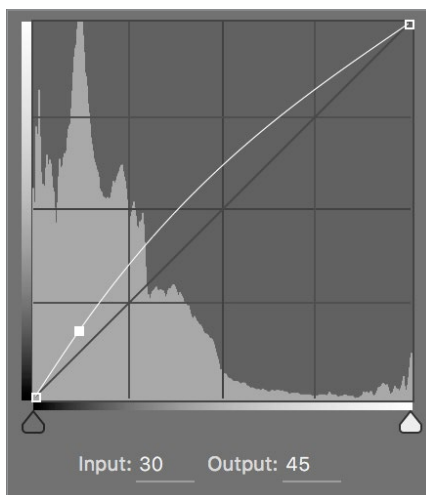
### CHANGING THE CAR'S COLOR

We want to change the car's color. Luckily, the only place the car has color is the red paint. As you'll see in a moment, that will make it easier to change.

1. Before we change the color, let's fix the car's brightness. It was nice being able to see the shadow areas while making a selection, but it's too bright.
2. In the **Layers** panel, select the **brighten car** layer to display the curve adjustment in the **Properties** panel. If the **Properties** panel is not visible, double-click on the **brighten car** layer's thumbnail (  ) to the left of its name to open it.



3. Adjust the curve so you end up with one as shown below. To remove the extra point, drag the point off the curve and it will disappear. (If you want to be precise, use the **Input** and **Output** values below the curve.)

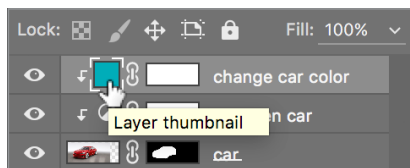


4. Now we can change the color. Choose **Layer > New Fill Layer > Solid Color**.

5. In the dialog that appears, set the following:
  - Name: **change car color**
  - Check on **Use Previous Layer to Create Clipping Mask**. (This ensures the color will only affect the **car** layer).
6. Click **OK**.
7. A color picker dialog will appear and the car will change to a solid color. At the bottom of the window, next to the # type in the color value **008b98**
8. Click **OK**.
9. At the top of the **Layers** panel, the blend mode menu currently says **Normal**. Click on that **Normal** menu and choose **Color**.

That kind of worked, but the color is now in places that didn't previously have color, such as the windshield and wheels. We need to do better for this to look correct.

10. At the top of the **Layers** panel, the blend mode menu currently says **Color**. Click on that menu and choose **Hue**.
11. Notice the car's new color is only where it used to be red. Exactly what we want!
12. Let's change the color to a more royal blue. In the **Layers** panel, double-click the **change car color** layer's thumbnail, as shown below:



13. At the bottom of the window, next to the # type in the color value **4f82d5**
14. Click **OK**.
15. We'd like the blue to be more saturated. In the **Layers** panel make sure the **change car color** layer is selected.
16. Choose **Layer > New Adjustment Layer > Vibrance**.
 


NOTE: We could also use Hue/Saturation but it only offers one method of saturation and Vibrance offers two, making it easier to experiment.
17. In the dialog that appears, set the following:
  - Name: **saturate car**
  - Check on **Use Previous Layer to Create Clipping Mask**. (This ensures the adjustment will only affect the **car** layer).
18. Click **OK**.

### 19. Set Saturation to 55

NOTE: We used **Saturation** instead of **Vibrance**, because Vibrance is more subtle. Vibrance is great for people because it preserves skin tones well, but that's not an issue here. We still like using the Vibrance adjustment layer because it offers both options, whereas a **Hue/Saturation** adjustment layer only offers Saturation.

#### CREATING A GRID PATTERN

Now we're ready to add some abstract, "illustrative" elements. We'll start by putting a grid pattern over the background photo.

1. First we must create the grid pattern. We need a transparent background so we'll be able to see through to the background photo, so we'll create a new file. Go to **File > New** and set:
  - Width and Height: **40 pixels** (make sure you don't choose 40 inches!)
  - Resolution: **72 Pixels/Inch**
  - Color Mode: **RGB Color (8 bit)**
  - Background Contents: **Transparent**
2. Click **OK**.
3. Choose **View > Fit on Screen** to zoom in.
4. Hit **Cmd-A** (MAC) or **Ctrl-A** (WINDOWS) to select the entire image.
5. Choose the **Rectangular Marquee** tool (  ).
6. On the keyboard:
  - Tap the **Down Arrow** key once.
  - Tap the **Right Arrow** key once.
7. Choose **Select > Inverse** and you should end up with the a row of pixels selected along the left and top sides.
8. Choose **Edit > Fill**.
9. In the dialog that opens, set the **Contents** menu to **White**.
10. Click **OK**.
11. Go to **Select > Deselect**.
12. Go to **Edit > Define Pattern**.
13. Name it **white grid** and click **OK**.
14. Close the document without saving changes.




## ADDING THE GRID PATTERN


1. You should be back in **yourname-car graphic.psd**.
2. In the **Layers** panel, select the **brighten background** layer.
3. Go to **Layer > New Fill Layer > Pattern**.
4. Name it **grid** and click **OK**.
5. The **white grid** pattern you just created should already be selected so click **OK**.
6. The lines are too pronounced, so in the **Layers** panel, reduce the **Opacity** to **25%**.

## CREATING A SCANLINE PATTERN

For the bottom half of the image we want an even more detailed pattern, with lines on every other pixel.



1. Go to **File > New** and set:
  - Width: **1 Pixels** (don't use inches!)
  - Height: **2 Pixels**
  - Resolution: **72 Pixels/Inch**
  - Color Mode: **RGB Color (8 bit)**
  - Background Contents: **Transparent**
2. Click **OK**.
3. Choose **View > Fit on Screen** to zoom in.
4. Use the **Rectangular Marquee** tool (  ) to select the top half of the image (it's only one pixel).
5. Choose **Edit > Fill**.
6. In the dialog that opens, set the **Contents** menu to **White**.
7. Click **OK**.
8. Go to **Select > Deselect**.
9. Go to **Edit > Define Pattern**.
10. Name it **white scanlines** and click **OK**.
11. Close the document without saving changes. You should now be back in **yourname-car graphic.psd**.


### ADDING THE SCANLINE PATTERN

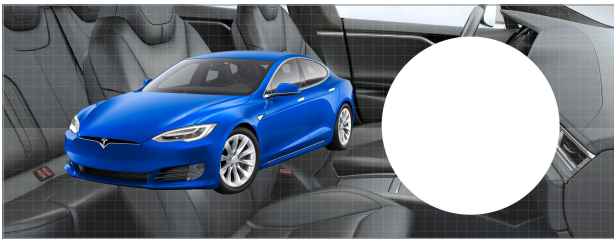
1. Use the **Rectangular Marquee** tool (  ) to select the bottom half of the file. Start on one of the grid lines around the middle, and select from that to the bottom of the file.
2. With the bottom half of the file selected, go to **Layer > New Fill Layer > Pattern**.
3. Name it **scanlines** and click **OK**.
4. The **white scanlines** pattern you just created should already be selected so click **OK**.  
  
NOTE: The pattern only shows up in the selection, because the selection was automatically turned into a mask for the new pattern fill layer!
5. The lines are too pronounced, so in the **Layers** panel, reduce the **Opacity** to **25%**.

### CREATING A CIRCLE FOR THE CAR NAME

On the right side of the photo, we want to add the car name, sitting inside a circle. We'll start by creating the circle.

1. In the **Layers** panel, make sure the the **scanlines** layer is selected.
2. So that we can easily add a stroke and fill, we want to use a vector tool to create the circle. Closer to the bottom of the **Tools** panel, choose the **Ellipse** tool (  ). You'll probably need to click and hold on the **Rectangle** tool (  ) to find it.
3. In the **Options** bar:
  - At the far left, make sure the menu says **Shape** (it may currently say **Path** or **Pixels**).
  - Click on the **Fill** color swatch and choose white.
  - Click on the **Stroke** color swatch and choose white. (Wonder why we're adding a white fill and stroke? In a moment we're going to make the fill partially transparent, while keeping the stroke completely opaque.)
  - To the right of **Stroke**, set the thickness to **1 px**
4. To create a circle we'd typically drag out a circle (while holding Shift), but to make it easier for you to make it the correct size, let's create it numerically. Click once in the space to the right of the car (exact position isn't important right now).

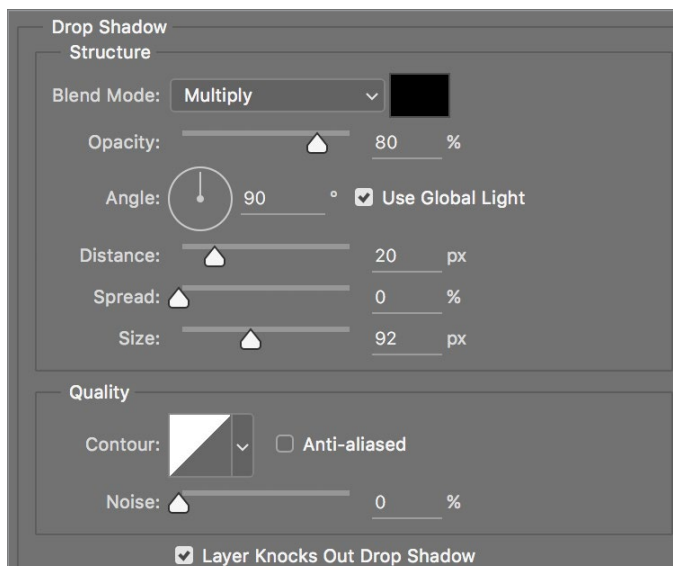
5. In the dialog that appears, set the following:
  - Width: **690 px**
  - Height: **690 px**
6. Click **OK**.
7. Choose the **Move** tool (  ).
8. Drag the circle into position as shown below (it will snap to the vertical center):



9. Let's make the fill transparent. At the top right of the **Layers** panel, there are two types of opacity. Set **Fill** to **25%**.






NOTE: While **Opacity** affects the opacity fill, strokes, and effects (such as shadows), **Fill** only affects the opacity of the fill, leaving strokes and effects unchanged.

10. In the **Layers** panel, double-click on **Ellipse 1** and rename it to **circle**.
11. To make the circle stand out more, let's add a drop shadow. Go to **Layer > Layer Style > Drop Shadow**.
12. Set the following options:



13. Click **OK**.

### ADDING THE CAR NAME

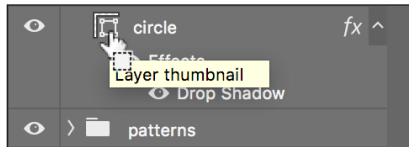
1. Choose the **Type** tool (  ).
2. In the **Options** bar, set the following:
  - Choose a bold sans-serif font such as **Helvetica Bold**, **Arial Bold**, or similar.
  - Size: **80 px**
  - Click on **Center text** (  ).
  - If the color swatch to the right of text alignment is not currently set to white, click the color swatch, choose **white**, and click **OK**.
3. Make sure the **circle** layer is still selected (so the type will be placed on top of it).
4. Photoshop may try to use the vector shape when creating the text. To prevent that, hold **Shift** and click in the middle of the circle.
5. Type: **Tesla Model S**
6. Choose the **Move** tool (  ).
7. Let's center the text within the circle. Make sure the type is completely contained within the circle, and not hanging outside (so the type will move, but the circle won't).
8. In the **Layers** panel, the **Tesla Model S** type layer should still be selected, so hold **Shift** and click on the **circle** layer just below it (so only the type and circle layers are selected).
9. In the **Options** bar:
  - Click **Align vertical centers** (  ).
  - Click **Align horizontal centers** (  ).
10. To keep our layers organized, while both layers are still selected, choose **Layer > Group Layers**.
11. In the **Layers** panel, double-click on the **Group 1** name and rename it **title**.
12. If you want to, move the circle and/or the car so the layout looks good to you.

### HIDING THE PATTERNS BEHIND THE CIRCLE

The patterns behind the text are distracting. Let's hide them within the circle.

1. The patterns are made up of two layers. We want both to have the same mask, so let's group them. In the **Layers** panel, select the **grid** layer.
2. Hold **Shift** and click on the **scanlines** layer so both pattern layers are selected.
3. Go to **Layer > Group Layers** (or hit **Cmd-G** (MAC) or **Ctrl-G** (WINDOWS)).

4. In the **Layers** panel, double-click on the **Group 1** name and rename it **patterns**.
5. We can turn the circle into a selection. Expand the **title** group so you can see the **circle** layer inside.
6. As shown below, in the **Layers** panel, hold **Cmd** (MAC) or **Ctrl** (WINDOWS) and click on the **Layer thumbnail** for the **circle** layer.



You should now have a marquee selection in the shape of the circle.


NOTE: This is a quick technique for making selections from layers, channels, or paths!

7. In the **Layers** panel, select the **patterns** group.
8. Go to **Layer > Layer Mask > Hide Selection**.

That's cleaner!

## ADDING A SHADOW BELOW THE CAR

The bottom edge of the car would look better with a soft shadow below it. Photoshop's drop shadow effect won't give us as much control as we'd like, so we'll manually create a shadow.

1. In the **Layers** panel, select the **title** layer group (which should be the layer just below **car** layer).
2. Go to **Layer > New > Layer**.
3. Name it **car shadow** and click **OK**.
4. The **car shadow** layer was put into the title group, but we don't want it there. Drag it so it's just below the **car** layer.
5. Choose the **Brush** tool (  ).
6. In the **Options** bar, choose a **large, soft-edged brush**. We recommend:
  - Size: **175 px**
  - Hardness: **0%**
7. Set the **Foreground** color to **black**. You can do this quickly by pressing the **D** key.
8. Paint along the bottom of the car, so the shadow protrudes just slightly from beneath the car.

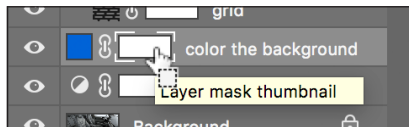
### COLORIZING THE BACKGROUND


Let's add some color to the background.

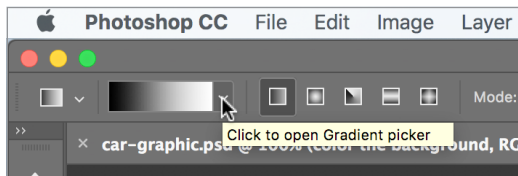
1. In the **Layers** panel, select the **brighten background** layer.
1. Choose **Layer > New Fill Layer > Solid Color**.
2. In the dialog that opens set the following two options:
  - Name it **color the background**.
  - Under **Mode** change Normal to **Color**.
3. Click **OK**.
4. With the **Color Picker** dialog open, click on the car to pick up its blue color.
5. Click **OK**.

NOTE: Earlier in this exercise, when we colored the car we used the **Hue** blend mode to swap out existing color with our new color. Because the background photo does not have color, the **Hue** blend mode would not work. We must use the **Color** blend mode to add color, even where color did not previously exist!

6. We only want the color on the right side of the image, so let's use the mask to hide the color where we don't want it. As shown below, in the **Layers** panel, select the layer mask thumbnail for the **color the background** layer.




7. Choose the **Gradient** tool (  ).
8. As shown below, in the **Options** bar click the down arrow to open the **Gradient Picker**.




9. We want the **Black, White** gradient, so double-click on the third preset thumbnail (it's a black to white gradient) to choose it.
10. Hold **Shift**, and drag from the middle of the photo to the far right side.
11. When you release, the left side should be the original black and white photo, and the right side should fade into the blue color.

## DARKENING THE BRIGHT AREAS AT THE TOP RIGHT

The top right of the background is pretty bright and a bit distracting. Let's darken it.

1. In the **Layers** panel, select the **brighten background** layer.
2. Go to **Layer > New > Layer**.
3. Name it **darken edges** and click **OK**.
4. At the top of the **Layers** panel, set **Opacity** to **40%**.
5. Choose the **Brush** tool (  ).
6. In the **Options** bar, choose a **large, soft-edged brush**. We recommend:
  - Size: **400 px**
  - Hardness: **0%**
7. Set the **Foreground** color to **black**. You can do this quickly by pressing the **D** key.
8. We only want the soft edge of the brush to enter the canvas, so position the brush mostly outside the canvas, and paint over the bright areas at the top right corner.
9. If desired, adjust the opacity of the layer to darken or lighten.
10. Save the file and you're done!

### MASKING TIPS

- When creating a mask, select the parts of a layer you want to see. Then, when you click the **Add Layer Mask** (  ) button in the **Layers** panel, you'll see what was selected and everything else will be masked out (or hidden).
- **Shift-click** a mask thumbnail to disable it without throwing it away.
- **Option-click** (MAC) or **Alt-click** (WINDOWS) a mask thumbnail to view only the mask, not the image.
- **Option-Shift-click** (MAC) or **Alt-Shift-click** (WINDOWS) a mask thumbnail to view it as a shaded color overlay, much like a Quick Mask.
- Remove a mask by dragging the mask thumbnail to the trash. Photoshop will ask if you want to **Apply mask to layer before removing**. If you click **Apply**, Photoshop will delete the areas of the layer that had been hidden by the mask. In most cases, you'll simply want to choose **Delete**, to throw away the mask without affecting the image layer.