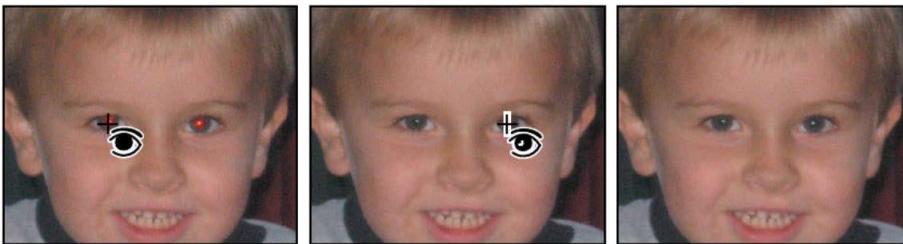
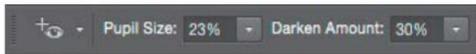


Correcting Red Eye (30 mins)

Red eye occurs when the retina of a subject's eye is reflected by the camera flash. It commonly occurs in photographs taken in a dark room, because the subject's irises are wide open. Not only does red eye make an ordinary person or animal appear sinister, but it can distract from the subject of the image. Fortunately, red eye is easy to fix in Photoshop. In this exercise, you will remove the red eye from the boy's eyes in the portrait.

Try it

1. Start Photoshop, and then immediately hold down Ctrl+Alt+Shift (Windows)) to restore the default preferences.
2. When prompted, click Yes to delete the Adobe Photoshop Settings file.
3. Choose File > Open, and navigate to the folder where you stored the data files for this project.
4. Double-click the 05Boy_Start.jpg file to open it in Photoshop.
5. Choose File > Save As, choose Photoshop for the Format, name the file 05Boy_End_xx.psd, and click Save.
6. Select the Zoom tool. and then drag to zoom in to see the boy's eyes. If Scrubby Zoom isn't selected, drag a marquee around the eyes to zoom in.
7. Select the Red Eye tool. hidden under the Spot Healing Brush tool.
8. In the options bar. reduce the Pupil Size to 23%, and the Darken Amount to 30%. The Darken Amount specifies how dark the pupil should be.
9. Click on the pupil in the boy's left eye. The red reflection disappears.
10. Click on the pupil in the boy's right eye to remove the red reflection there, too.



_ After choosing settings, click each pupil to remove the red reflection.

11. If the red reflection is directly over the pupil, clicking the pupil removes it. However, if the red reflection is slightly off the pupil, try clicking the highlight in the eye first. You may need to try a few different spots. but it's easy to undo and try again.



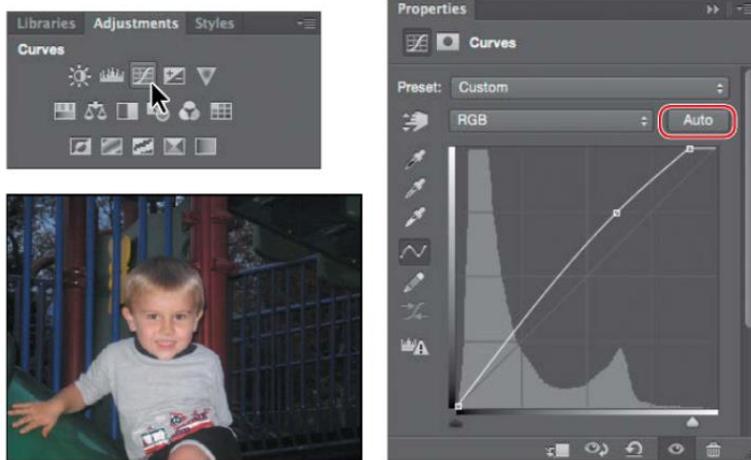
12. Choose View > Fit On Screen to see the entire image.

Brightening an Image (30 mins)

The boy's eyes no longer glow, but the image is a bit dark. In Photoshop, you can brighten an image in several different ways, as you've already seen. Choosing only from adjustment layers, you can try modifying Brightness/Contrast, Levels, Curves, and Exposure. Sometimes the best option is to try them all and see which one you like best. That's easy to do with adjustment layers. But when you're really looking for a quick fix, a Curves adjustment layer is a great way to go

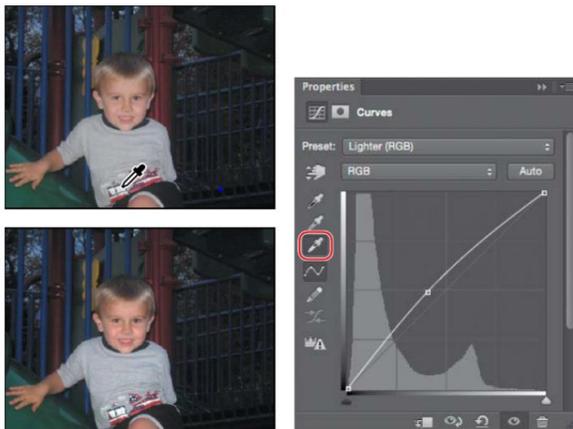
Try It

1. Click Curves in the Adjustments panel.
2. Click Auto to see what Photoshop applies. The image brightens,



Applying a Curves adjustment layer and selecting Auto immediately brightens the image.

3. Choose Lighter from the Preset menu. Photoshop applies some subtle changes.
4. Select the White Point eyedropper in the Curves panel, and then click in the white area of the decal on the child's shirt. That brightens the image nicely, and also improves the contrast.



You can use other tools in the Curves panel, such as the White Point eyedropper, to brighten the image further.

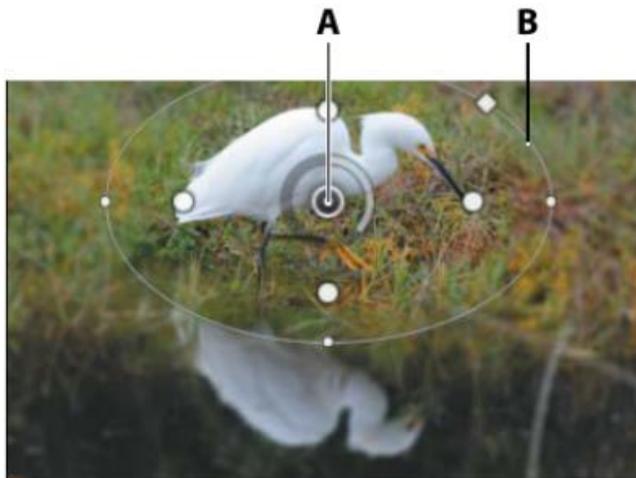
5. If you'd like to continue tweaking the settings, you can move the curve manually, or choose a black or gray point. To see how you've brightened the image, hide the Curves layer and then show it again.

6. Save the file, and then close it. The snapshot is ready to share.

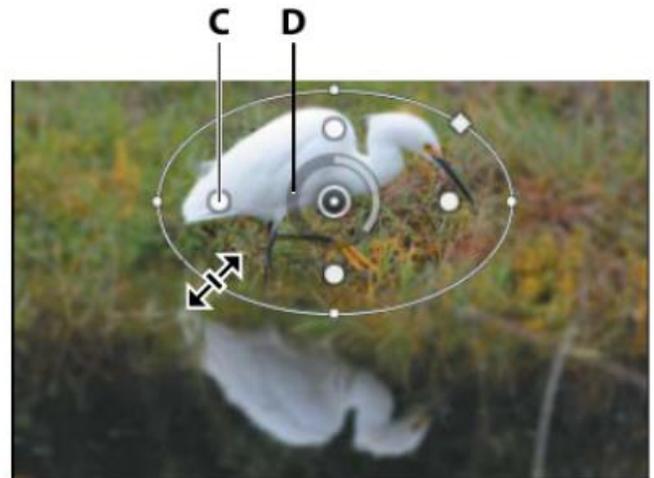
Blurring a Background (30 mins)

The interactive blurs in the Blur Gallery let you customize a blur as you preview it on your image. In the next exercise, you'll use an iris blur to blur the background in an image, focusing the viewer's attention on the egret. You'll apply the blur as a Smart Filter so that you can modify it later if you want to.

1. Choose File > Open As Smart Object, and navigate to the folder where you stored the data files for this chapter.
2. Select the 05Egret_Start.jpg file, and click OK or Open.
Photoshop opens the image. There is one layer in the Layers panel, and it's a Smart Object.
3. Choose File > Save As, choose Photoshop for the Format, name the file 05Egret_End_xx.psd, and click Save. Click OK in the Photoshop Format Options dialog box.
4. Choose Filter > Blur Gallery > Iris Blur. A blur ellipse is centered on your image. You can adjust the location and scope of the blur by moving the center pin, feather handles, and ellipse handles. Photoshop also opens the Blur Gallery, which includes the Blur Tools, Blur Effects, and Motion Blur Effects panels.
5. Drag the center pin so that it's at the bottom of the bird's body.
6. Click the ellipse, and drag inward to tighten the focus around the bird.

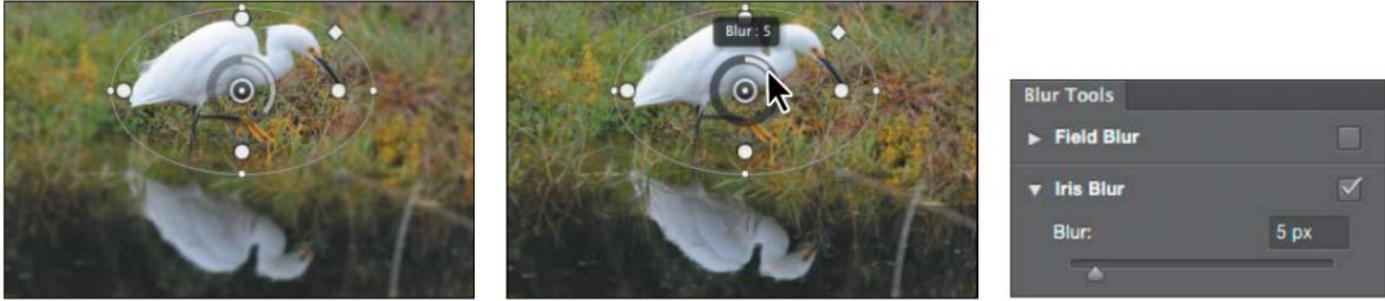


A. Center B. Ellipse



C. Feather handle D. Focus

7. Press Alt (Windows) as you click and drag the feather handles to match those in the first image below. Pressing Alt or Option lets you drag each handle separately.
8. Drag on the focus ring to reduce the amount of blur to 5 px, creating a gradual but noticeable blur. You can also change the amount of blur by moving the Blur slider in the Iris Blur area of the Blur Tools panel.



Dragging on the focus ring adjusts the amount of blur applied by the Iris Blur.

9. Click OK in the options bar to apply the blur. The blur may be a little too subtle. You'll edit the blur to increase it slightly.
10. Double-click the Blur Gallery in the Egret layer in the Layers panel to open it again. Adjust the blur to 6 px, and click OK in the options bar to apply it. Because you applied the filter to a Smart Object, you can hide it or edit it without affecting the original image.
11. Save the file and close it. The egret is accentuated by the subtle blur around it.

BLUR GALLERY

Creating a Panorama (50 mins)

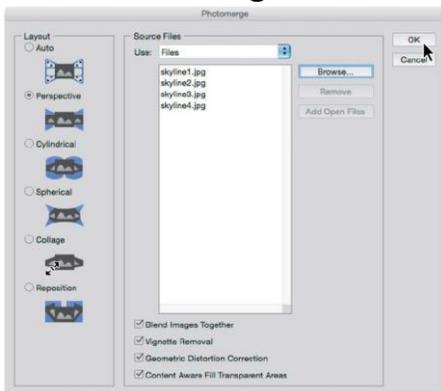
Sometimes a vista is just too large for a single shot. Photoshop makes it easy to combine multiple images into a panorama so that your viewers can get the full effect. In the next exercise, you'll combine four shots of the Seattle skyline into a single wide panorama image so that viewers get a sense of the whole scene. Creating a panorama from multiple images requires only a few clicks. Photoshop does the rest.

Try It

1. With no files open in Photoshop, choose File > Automate > Photomerge.

(Note: You can also open selected images from Bridge directly into Photomerge by choosing Tools > Photoshop > Photomerge.)

2. In the Source Files area, click Browse, and navigate to the 05PanoramaFiles folder within the folder holding the data files for this chapter

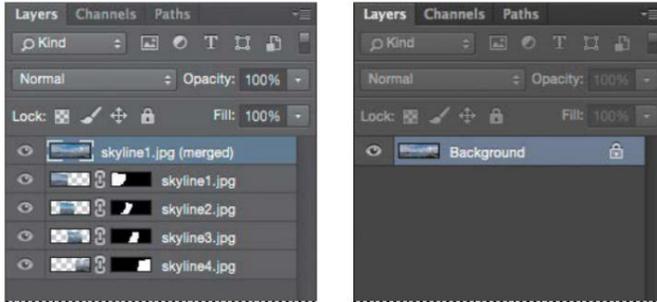


3. Shift-select all the images in the folder, and click OK or Open.
4. In the Layout area of the Photomerge dialog box, select Perspective.
5. At the bottom of the Photomerge dialog box, select Blend Images Together, Vignette Removal, Geometric Distortion Correction, and Content Aware Fill Transparent Areas. Then click OK.

Blend Images Together blends images based on the optimal borders between them, instead of just creating a simple rectangular blend. Vignette Removal performs exposure compensation in images with darkened edges. Geometric Distortion Correction compensates for barrel, pincushion, or fisheye distortion. Content Aware Fill Transparent Areas automatically patches the empty areas between the merged image edges and the sides of the canvas. Photoshop creates the panorama image. It's a complex process, so you may have to wait a few moments while Photoshop works. When it's finished, you'll see the full vista in the image window with five layers in the Layers panel. The bottom four layers are the original four images you selected. Photoshop identified the overlapping areas of the images and matched them, correcting any angular discrepancies. The top layer, containing "(merged)" in the layer name, is a single panorama image blended from all of the

images you selected, combined with formerly empty areas filled in by Content-Aware Fill. Those areas are indicated by the selection.

6. Choose Select > Deselect



The image flattened to one layer.

7. Choose Layer > Flatten Image

8. Choose File > Save As. Choose Photoshop for the Format, and name the file 05Skyline_End_xx.psd. Click Save. The panorama looks great, but it's a little dark. You'll add a Levels adjustment layer to brighten it a little bit.

9. Click the Levels icon in the Adjustments panel to add a Levels adjustment layer.



Using the White Point eyedropper on a Levels adjustment layer to brighten the image.

10. Select the White Point eyedropper, and then click on a white area of the clouds

11. Save your work. Click OK in the Photoshop Format Options dialog box and close the file. It's that easy to create a panorama!

Correcting Distortion (50 mins)

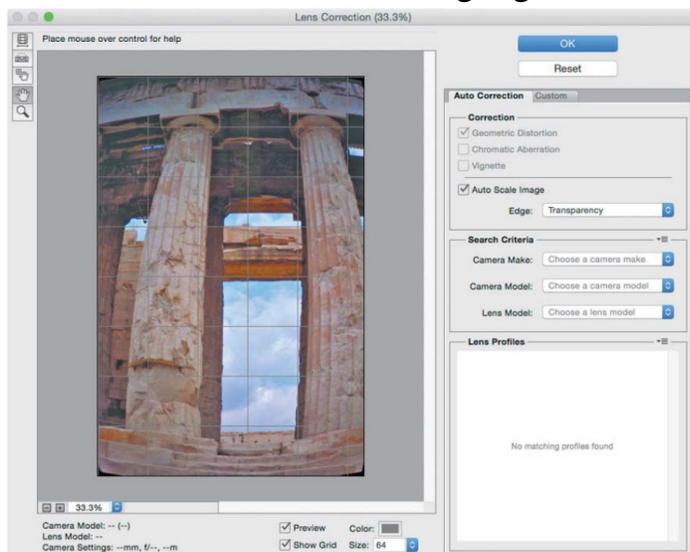
The Lens Correction filter fixes common camera lens flaws, such as barrel and pin-cushion distortion, chromatic aberration, and vignetting. **Barrel distortion** is a lens defect that causes straight lines to bow out toward the edges of the image. **Pin-cushion distortion** is the opposite effect, causing straight lines to bend inward. **Chromatic aberration** appears as a color fringe along the edges of image objects. **Vignetting** occurs when the edges of an image, especially the corners, are darker than the center.

Some lenses exhibit these defects depending on the focal length or the f-stop used. The Lens Correction filter can apply settings based on the camera, lens, and focal length that were used to make the image. The filter can also rotate an image or fix image perspective caused by tilting a camera vertically or horizontally. The filter's image grid makes it easier and more accurate to make these adjustments than using the Transform command.

In the next exercise, you'll use a Lens Correction filter to correct an image of a Greek temple. In this case, the original image of a Greek temple is distorted, with the columns appearing to be bowed. This photo was shot at a range that was too close with a wide-angle lens. You'll quickly correct the lens barrel distortion.

Try it

1. Choose File > Open, and navigate to the folder that holds the data files for this chapter.
2. Double-click the 05Columns_Start.psd file to open it in Photoshop.
3. Choose File > Save As. In the Save As dialog box, name the file 05Columns_End_xx.psd, and click Save. Click OK if the Photoshop Format Options dialog box appears.
4. Choose Filter > Lens Correction. The Lens Correction dialog box opens.
5. Select Show Grid at the bottom of the dialog box, if it's not already selected. An alignment grid overlays the image, next to options for removing distortion, correcting chromatic aberration, removing vignettes, and transforming perspective.



Use the Lens Correction filter to remove the distortion in the columns.

The Lens Correction dialog box includes auto-correction options. You'll adjust one setting in the Auto Correction tab and then customize the settings.

6. In the Correction area of the Auto Correction tab, make sure Auto Scale Image is selected, and that Transparency is selected from the Edge menu.
7. Select the Custom tab.
8. In the Custom tab, drag the Remove Distortion slider to about **+52.00** to remove the barrel distortion in the image. Alternatively, you could select the Remove Distortion tool and drag in the image preview area until the columns are straight. The adjustment causes the image borders to bow inward. However, because you selected Auto Scale Image, the Lens Correction filter automatically scales the image to adjust the borders.
9. Click OK to apply your changes and close the Lens Correction dialog box. The curving distortion caused by the wide-angle lens and low shooting angle is eliminated.
- 10.(Optional) To see the effect of your change in the main image window, press Ctrl+Z (Windows) or Command+Z (Mac OS) twice to undo and redo the filter.
- 11.Choose File > Save to save your changes, click OK if the Photoshop Format Options dialog box appears, and then close the image.



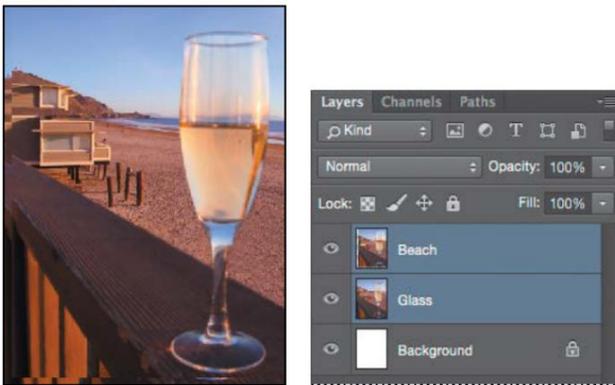
The temple looks much more stable now!

Adding Depth of Field (30 mins)

When you're shooting a photo, you often have to choose to focus either the background or the foreground. If you want the entire image to be in focus, you can take two photos—one with the background in focus and one with the foreground in focus—and then merge the two in Photoshop. Because you'll need to align the images exactly, it's helpful to use a tripod to keep the camera steady. Even with a handheld camera, though, you can get some amazing results. You'll add depth of field to an image of a wine glass in front of a beach.

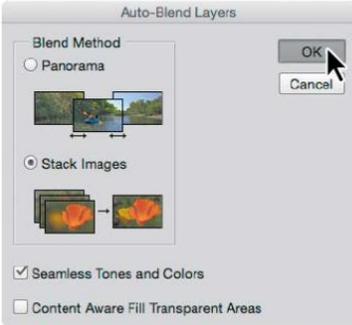
Try it

1. Choose File > Open, and navigate to the folder that holds the data files for this chapter.
2. Double-click the 05Glass_Start.psd file to open it.
3. Choose File > Save As. Name the file 05Glass_End_xx.psd, and click Save. Click OK if the Photoshop Format Options dialog box appears.
4. In the Layers panel, hide the Beach layer, so that only the Glass layer is visible. The glass is in focus, but the background is blurred. Then, show the Beach layer and hide the Glass layer. Now the beach is in focus, but the glass is blurred. You'll merge the layers, using the part of each layer that is in focus. First, you need to align the layers
5. Show both layers again, and then Shift-click to select both of them.



Select the layers so you can align them.

6. Choose Edit > Auto-Align Layers. Because these images were shot from the same angle, Auto will work just fine
7. Select Auto, if it isn't already selected. Make sure neither Vignette Removal nor Geometric Distortion is selected. Then click OK to align the layers. Now that the layers are perfectly aligned, you're ready to blend them.
8. Make sure both layers are still selected in the Layers panel. Then choose Edit > Auto-Blend Layers.
9. Select Stack Images and Seamless Tones And Colors, if they aren't already selected. Make sure Content Aware Fill Transparent Areas is not selected, and then click OK



Both the wine glass and the beach behind it are in focus.

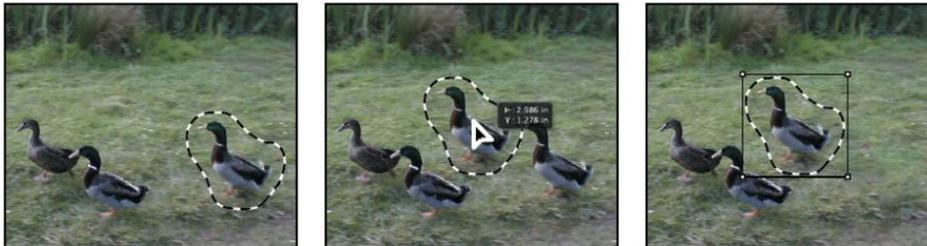
10. Save your work, and close the file

Moving Objects with Content-Aware Move Tool (30 mins)

You've used the content-aware features in some pretty impressive ways in earlier lessons, and to fill in the sky in the panorama project in this lesson. Now you'll use the Content-Aware Move tool to move something in an image (in this case, a duck) and have Photoshop convincingly fill in the area where the item you moved used to be. You can also use the Content-Aware Move tool to extend a portion of an image, such as a stand of trees or fenceposts, seamlessly.

Try It!

1. Choose File > Open, and navigate to the folder that holds the data files for this chapter.
2. Double-click the 05Ducks_Start.jpg file to open it in Photoshop.
3. Choose File > Save As, choose Photoshop for the format type, and name the new file 05Ducks_End_xx.psd. Click Save.
4. Select the Content-Aware Move tool (), which is hidden beneath the Red Eye Removal tool ().
5. In the options bar, choose Move from the Mode menu, and enter 3 in the Structure field.
6. Draw a selection marquee around the third duck, with a margin large enough to include the grass and dirt around it.
7. Drag the selection to the left, slightly above the second duck, so that the ducks are clustered.



The Content-Aware Move tool fills the area where the third duck used to appear.

When you release the mouse, the dragged duck appears with a transformation rectangle and handles. These transformation controls give you an opportunity to rotate and scale the content, but you don't need to do that in this step.

8. Click the Commit Transform button in the options bar.
9. Change the Structure setting to 5, which requires stricter adherence to the pattern, and observe how the image changes. Then change the Structure setting to 1, which results in a much looser adaptation. You can also experiment with different Color settings, from 0 to 10. Now that you've committed to the move, Photoshop fills in the area the duck left behind. How it creates the area depends on the Structure and Color settings in the options bar. You can try different options while the selection remains active.
10. Choose the Structure and Color options you think look best. Then choose Select > Deselect. Save the file and close it.



The three ducks are in a tighter formation now, and you can't tell that the third duck used to be in a different position.

Adjusting Perspective in an Image (30 mins)

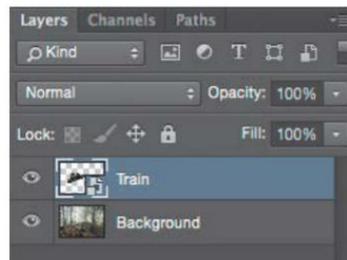
The Perspective Warp feature lets you adjust the way objects in your image relate to the scene. You can correct distortions, change the angle from which an object appears to be viewed, or shift the perspective of an object so that it merges smoothly with a new background. Using the Perspective Warp feature is a two-step process: defining the planes and adjusting them. You start in Layout mode, drawing quads to define two or more planes; it's a good idea to align the edges of the quads so that they are parallel with the lines of the original object. Then you switch to Warp mode, and manipulate the planes you defined. You'll use Perspective Warp to merge images with different perspective.

Try It!

1. Choose File > Open, and navigate to the folder that holds the data files for this chapter.
2. Double-click the 05Bridge_Start.psd file to open it in Photoshop.

In the 05Bridge_Start.psd file, the image of the train has been combined with the image of a trestle bridge, but their perspectives don't match. If you're illustrating a story about a flying train that is making a landing on a trestle bridge, this might be perfect. But if you want a more realistic image, you'll need to adjust the perspective of the train to put it firmly on the tracks. You'll use Perspective Warp to do just that.

3. Choose File > Save As, and rename the file 05Bridge_End_xx.psd. Click OK in the Photoshop Format Options dialog box.
4. Select the Train Layer.



The tracks are on the Background layer. The train is on the Train layer.

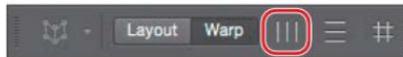
5. Choose Edit > Perspective Warp. A small animated tutorial appears, showing you how to draw a quad, which defines a plane.
6. Watch the animation, and then close it. In the first step of the process, you want to enclose the object in quads that represent the current planes of the object
7. Draw the quad for the side of the train: Click above the top of the smokestack, drag down to the railroad tie below the front wheel, and then drag across to the end of the caboose. The plane is currently a rectangle
8. Drag a second quad for the front of the train, dragging across the cowcatcher at the bottom and into the trees at the top. Drag it to the right until it attaches to the left edge of the first quad.
9. Drag the corners of the planes to match the angles of the train. The bottom line of the side plane should run along the bottom of the train wheels; the top edge should border the top

of the caboose. The front plane should mirror the lines of the cowcatcher and the top of the light.



Make sure the planes align with the shape of the train.

10. Click Warp in the options bar. Close the tutorial box that shows you how to warp the plane.
11. Click the Automatically Straighten Near Vertical Lines button, next to Warp in the options bar. This makes the train appear properly vertical, making it easier to adjust the perspective accurately



The Automatically Straighten Near Vertical Lines button.

12. Drag the handles to manipulate the planes, moving the back end of the train down and into perspective with the tracks. Exaggerate the perspective toward the caboose for a more dramatic result.
13. Warp other parts of the train as needed. You may need to adjust the front of the train. Pay attention to the wheels; make sure you don't distort them as you warp the perspective.
14. When you're satisfied with the perspective, click the Commit Perspective Warp button in the options bar.
15. To compare the changed image with the original, hide the Perspective Warp filter in the Layers panel. Then show the filter again. If you want to make further adjustments, double-click the Perspective Warp filter in the Layers panel. You can continue to adjust the existing planes, or click Layout in the options bar to reshape them.
16. Choose File > Save to save your work, and then close the file.