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#### PHOTOSHOP FEATURES

## How to apply a perspective warp in Adobe Photoshop.

Learn how to use the Perspective Warp feature to remove photo distortions — or completely shift perspective.

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### Understand perspective, distortion, and warping.

In photography, [perspective](#) refers to the relationship between a camera's location in space and the scene being photographed. Depending on the vantage point (the camera angle and camera distance from those elements), objects may appear smaller or larger in a photo than they do to the naked eye. Lines that should be straight may bend a little near the edges of the photo. This is called perspective distortion, and you can fix it with a little photo manipulation using Perspective Warp.

### What you can do with Perspective Warp.

Make your photos look more like what you see with your eyes, and add objects that blend seamlessly with the elements of the original photo.



Straighten bent buildings.



To make [architectural photos](#) look more accurate, adjust the perspective of a building by reversing the warp that appears at the edges.

### Align objects in the frame.

Whether you're shooting a series of objects for a [product shoot](#) or you just want the elements in your shot to look perfectly equidistant, you can line them up just right.



### Correct for lens distortion.

Turn a [telephoto](#) shot into a wide-angle shot by extending the corners outward, or give a distant mountain the mass it deserves without affecting the rest of the image.

### Match perspective in a composite.

When [combining images](#) to create a composite, you may find the perspectives don't match. Use Perspective Warp to line them up so they look real.



## How to change the perspective of an image with Perspective Warp.

Follow this Photoshop Perspective Warp tutorial to adjust the perspective in photos.

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### 1. Open and prep the image.

Once you have the file open in Photoshop, select the layer you want to adjust. If your image is the background layer, copy it to another layer so none of your edits will permanently erase pixels in the original image, and you always have the option to go back. Click Layer > Duplicate Layer in the top menu.

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### 2. Select and mask the object you want to shift.

If you want to use Perspective Warp on the entire image, go right to Step 4. To shift a single object in the image, continue with Step 2. If you want to make sure your edits affect only one object in the frame, draw a mask around it with one of the [Selection tools](#) in Photoshop. Then click Select and Mask in the options bar.

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### 3. Create a Smart Object.

Turn the layer mask into a [Smart Object](#) to ensure that any edits you make will be nondestructive and reversible. First, select the layer mask in the Layers panel. Then, in the top menu, select Layer > Smart Object > Create Smart Object.

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### 4. Open the Perspective Warp tool.

Select Edit > Perspective Warp from the top menu. If the feature isn't accessible, you need to enable the graphics processor first so the program has enough memory to function. In the top menu click Photoshop > Preferences > Performance, and select Use Graphics Processor in the Graphics Processor Settings.

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### 5. Define the planes of your image.

Click and drag to draw quads (four-sided shapes) along the planes of the architecture or other objects you want to shift. Keep the edges parallel to the straight lines in the image, and note that when you drag a corner close to another corner, they will snap together.

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### 6. Adjust the planes.

In the options bar, switch from Layout to Warp mode. Now you can move the object and change perspective. You can use the automatic buttons in the options bar to level the horizontal lines in your grid, straighten the vertical lines, or do both at once. You can also move the corners of the quads to where you want them. For example, you might want to shift the perspective of a building so it looks like you photographed it from the exact corner. Just shorten one side or lengthen the other to make it work.

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### 7. Keep it straight.

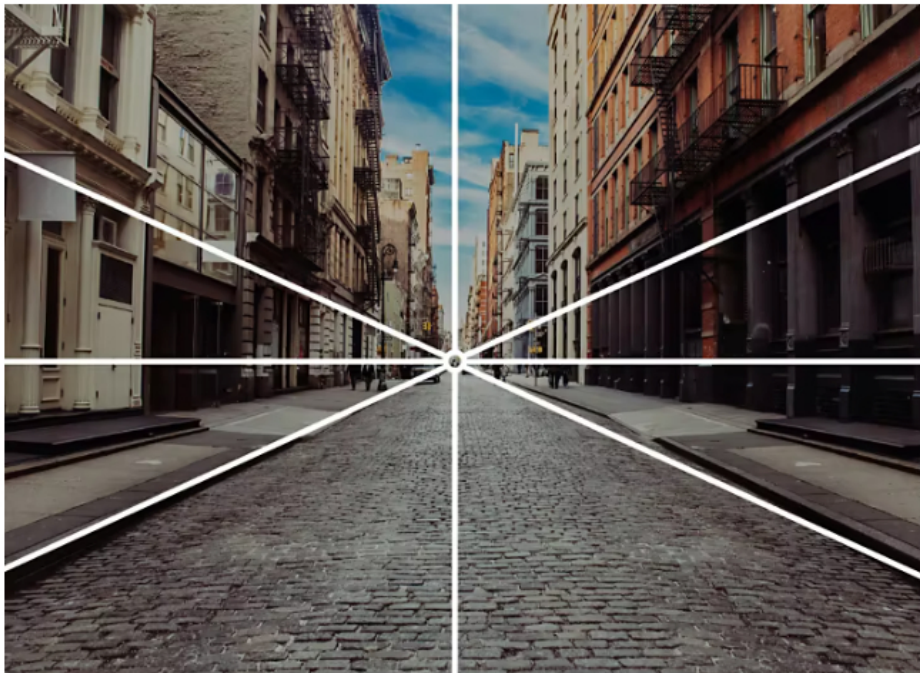
Shift-click (hold down the shift key while you click) to make a line vertical and move a whole side instead of just a corner. You can Shift-click multiple lines at once to keep all of the lines straight as you move your mouse. When you're happy with your changes, click the checkmark in the options bar to close the Perspective Warp feature.

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### 8. Crop the image or fill in the background.

Perspective Warp may cause a loss of pixels at the edges of your frame. Fix this by selecting the Crop tool and shrinking your frame. Or use the Healing Brush tool or the Clone Stamp tool to fill in the missing pixels. For both tools, Option-click (Mac) or Alt-click (Windows) to select an area you want to copy, and then click on the area with missing pixels to fill it with the pixels you copied. (Make sure the Select All Layers option is checked in the option bar.)

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### Get the perspective right by finding the vanishing point.

If you have a photograph of a city street, you can draw lines from the foreground to the background that run along the tops and bottoms of doors and windows, the roofs of buildings, the street or sidewalk, and the horizon. The point where all these lines meet is the vanishing point.

To place an object realistically in a scene, follow this technique common in perspective drawing.

#### 1. Select the Line tool.

Select the Line tool from the toolbar or press the U key.

## 2. Draw lines along the objects in your scene.

Start in the foreground and work toward the background.

## 3. Draw the horizon line.

Draw a horizontal line through the intersection of the lines you drew in Step 2.

## 4. Line up your object.

Use the Perspective Warp tools to make sure that if you extended the lines of your object they would also converge at the horizon line.



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## Broaden your perspective with Photoshop tutorials.

Discover new ways to build your photography and image compositing skills.



### Fix perspective in a composite.

Watch this short video tutorial to learn how to use Perspective Warp and create realistic shadows for an object you've transferred from one photo to another.

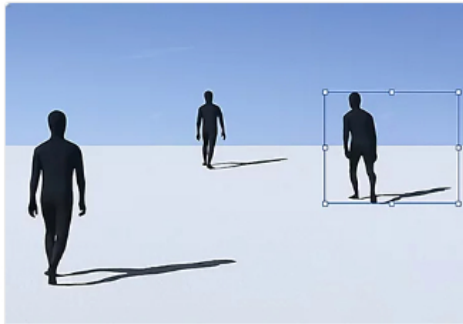
[Create a simple composite](#)



### Draw focus with intention.

Learn how to use natural or human-made lines to lead the viewer's eyes through your photos.

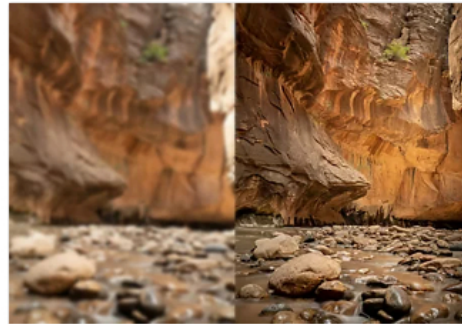
[Try leading lines](#)



### Make elemental changes.

Try more graphic design. Learn how to seamlessly add objects or remove them from your photos.

[Add or remove objects](#)



### Sharpen images.

Watch this Adobe Photoshop Lightroom tutorial to get tips on how to edit for high-quality photographs.

[Start image sharpening](#)

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