

What you'll learn in this lesson:

- Combining images
- Understanding document settings
- Removing backgrounds
- Saving files



Photoshop Basics

In this lesson, you'll learn how to combine images while gaining an understanding of image resolution and file size. You'll also learn about file formats and options for saving your files for use on the Web or in print.

Starting up

Before starting, make sure that your tools and panels are consistent by resetting your preferences. See “Resetting Adobe Photoshop CS6 preferences” in the Starting up section of this book.

You will work with several files from the ps04lessons folder in this lesson. Make sure that you have loaded the pslessons folder onto your hard drive from the supplied DVD. See “Loading lesson files” in the Starting up section of this book.

In this lesson, you'll use multiple images to create a composite image that you will then save for both print and online use. While this lesson covers some basic information about working with files for online distribution, you can learn even more about saving files for the web in Lesson 12, “Creating Images for Web and Video.”



See Lesson 4 in action!

Use the accompanying video to gain a better understanding of how to use some of the features shown in this lesson. You can find the video tutorial for this lesson on the included DVD.

A look at the finished project

In this lesson, you will develop a composite using several images, while addressing issues such as resolution, resizing, and choosing the right file format.

To see the finished document:

- 1 Choose File > Browse in Bridge to bring Adobe Bridge forward. Using Adobe Bridge, navigate to the pslessons folder on your hard drive and open the ps04lessons folder.
- 2 Double-click on the ps04_done.psd file, and the completed image is displayed in Photoshop.



The completed lesson file.

- 3 Make sure that the Layers panel is active by choosing Window > Layers.
- 4 Click on the visibility icon (👁) to the left of the cow layer to hide the layer. Click the box where the visibility icon used to be to make the layer visible again.

Layers allow you to combine different elements into a single file while retaining the ability to move and modify each layer independently of the others. In this chapter, you'll be creating multiple layers in Photoshop just like the ones in this finished file.

- 5 You can keep this file open for reference, or choose File > Close to close the file. If a Photoshop warning box appears, choose Don't Save.

Opening an existing document

Now you will assemble all the images that are part of the final combined image.

- 1 Return to Adobe Bridge by choosing File > Browse in Bridge.
- 2 Navigate to the pslessons folder you copied onto your system, and open the ps04lessons folder.
- 3 From the ps04lessons folder, select the file named ps0401.psd. Hold down the Ctrl key (Windows) or Command key (Mac OS), and also select the ps0402.psd and ps0403.psd files. Choose File > Open or double-click any one of the selected files. All the selected images open in Adobe Photoshop.

If you receive an Embedded Profile Mismatch warning when opening the images, you may have forgotten to reset your preferences using the instructions on page 3. If you receive the warning, choose the Use Embedded Profile option, and then click OK.

Understanding document settings

In this section, you will move images from one file to another to create your mock-up. Before you combine the images, you need to be familiar with each document's unique attributes, such as size, resolution, and color mode. Moving layers between documents that have different resolutions may create unexpected results, such as causing the images to appear out of proportion.

Viewing an image's size and resolution

- 1 Click on the tab of the image of the barn, ps0401.psd, to make it active. Press Alt (Windows) or Option (Mac OS) and click the file information area in the status bar, located in the lower-left corner of the document window. The dimensions of the barn image is displayed as 885 pixels wide by 542 pixels tall and the Resolution is 72 pixels/inch.

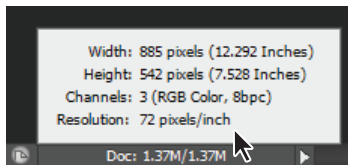


Image size and resolution information.

- 2 If the picture of the rooster, ps0402.psd, is not visible, choose Window > ps0402.psd or click on the tab for that image at the top of the screen to make it the active window. After confirming that this is the active document, select Image > Image Size to open the Image Size dialog box.

The Image Size dialog box appears.

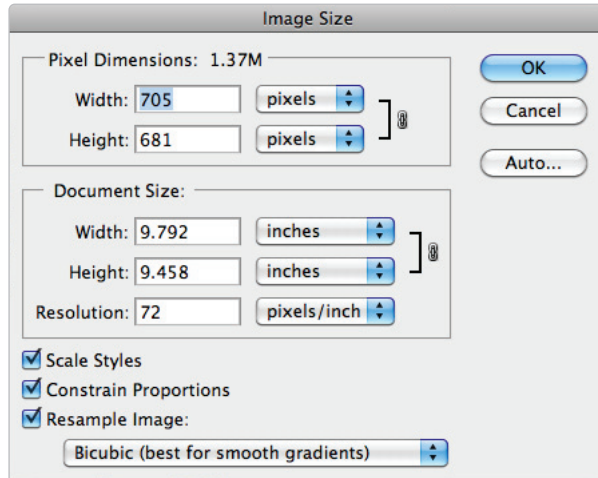


Image size plays an important role when combining images.

The Image Size dialog box is divided into two main areas: Pixel Dimensions and Document Size. Pixel Dimensions shows the number of pixels that make up the image. For web graphics, the pixel dimensions are more relevant than the document's actual printing size. Document Size shows the resolution information, as well as the actual physical size of the image.



The most important factors for size and resolution of web images are the pixel dimensions and the pixels per inch (ppi). If you are designing content for the Web, you should reference the top (Pixel Dimensions) section of the Image Size dialog box. As a print designer, you should reference the bottom (Document Size) section of the Image Size dialog box.

- 3 The image size of the rooster is 705 pixels by 681 pixels. At this size, the rooster is taller than the barn, which would be apparent when you combine the two files. While this might work for an *Attack of the Roosters* horror movie, you're interested in making the rooster smaller.
- 4 Make sure that the Resample Image and Constrain Proportions checkboxes are both selected. In the Image Size dialog box, type **200** pixels for height in the Pixel Dimensions portion at the top half of the dialog box. Press OK to apply the transformation and close the Image Size dialog box.
- 5 The rooster is now an appropriate size to combine with the barn image.

Combining the images

For this project, you'll use several methods to combine the images.

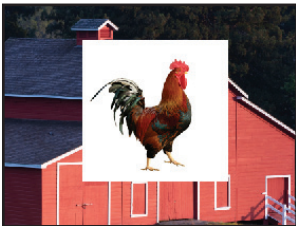
Using Copy and Paste

- 1 If necessary, click the tab of the rooster image, ps0402.psd, to make it active.

You can have many documents open at once in Photoshop, but only one of them is active at any given time.

- 2 Choose Select > All to select the entire image. This creates a selection marquee around the outside edge of the image. You can learn more about selections in Lesson 5, "Making the Best Selections."
- 3 Choose Edit > Copy to copy the selected image area. The image is now in your computer's clipboard, ready to be pasted into another document.
- 4 Select the tab of the barn picture, ps0401.psd, to make it the active document. Choose Edit > Paste to place the image of the rooster into the picture of the barn.

The rooster appears on top of the barn, and the background surrounding the rooster blocks part of the image. Both these items will be addressed in future steps in this lesson.



The image of the rooster is now in the middle of the barn.

- 5 Select the tab of the rooster image, ps0402.psd, and choose File > Close to close the file. Do not save any changes.

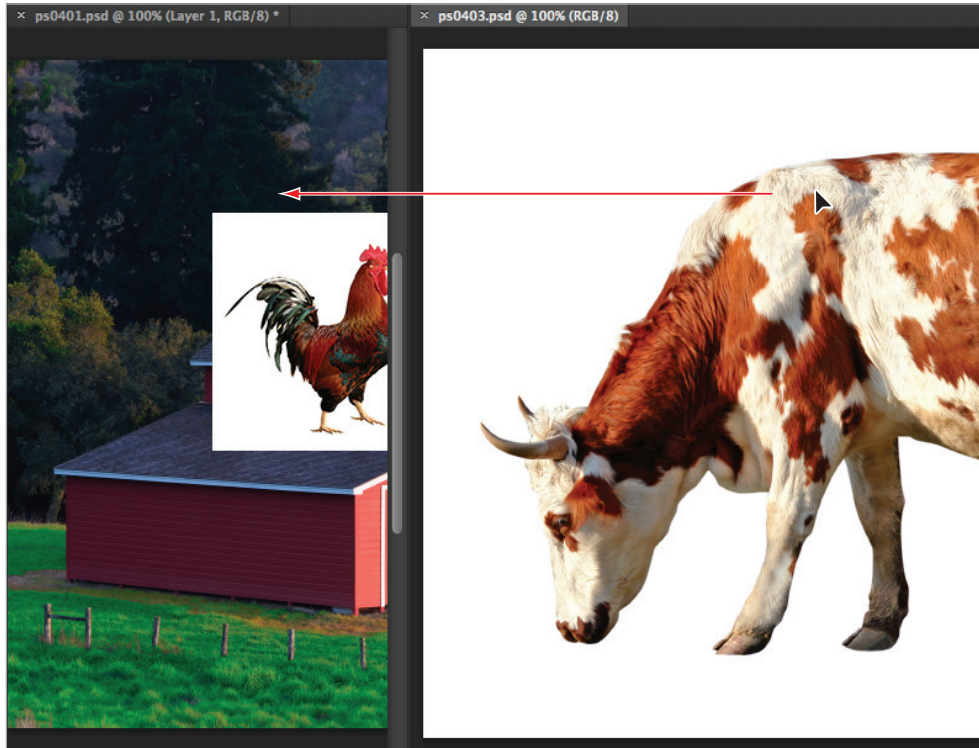
Dragging and dropping to copy an image

In this section, you'll drag and drop one image into another.

- 1 Choose Window > Arrange > 2-up Vertical to view both the cow (ps0403.psd) and the barn (ps0401.psd) pictures at the same time. The Arrange features allow you to determine how windows are displayed on your monitor. The Tile features allow you to see all the open images.

- 2 Select the Move tool (⇧+), and then select the picture of the cow, which is the ps0403.psd image. Click and drag the cow image over to the barn image. When your cursor is positioned over the picture of the barn, release your mouse. The cow picture is placed into the barn picture on a new layer.

Like using the Copy and Paste command, you can use the Move tool to copy images from one document to another.



Click and drag the cow image into the picture of the barn.



You do not have to position images beside each other to move them from one image file to another. You can also drag and drop an image to the document tab of another image, and then drag down into the image area.

- 3 Select the tab of ps0403.psd and choose File > Close to close the file containing the picture of the cow. Do not save any changes to the file.

- 4 With the composite image of the barn, rooster, and cow active, choose View > Fit on Screen, or use the keyboard shortcut Ctrl+0 (zero) (Windows) or Command+0 (zero) (Mac OS). This fits the entire image into your document window. You can also see that you have three layers in this document.



The barn picture combined with the other images. The images are now layers.

- 5 Choose File > Save As to save this file. When the Save As dialog box appears, navigate to the ps04lessons folder and type **ps0401_work** in the Name text field. Choose Photoshop from the format drop-down menu and press Save. If the Photoshop Format Options dialog box appears, press OK.

Transforming and editing combined images

Although you have combined three images together, they still require some work. The background remains in the two imported images, and the picture of the cow is out of proportion when compared with the barn.



In order to use the transform options, the affected area must reside on a layer. Layers act as clear overlays on your image and can be used in many ways. Find out more about layers in Lesson 8, “Getting to Know Layers,” and Lesson 9, “Taking Layers to the Max.”

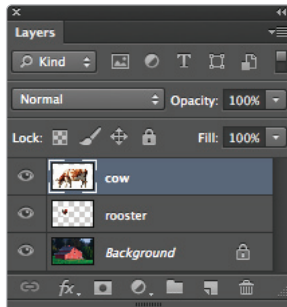
In this section, you will do the following:

- View the stacking order of the layers that were automatically created when you combined the images;
- Remove the background from the copied images;
- Refine the edges of the combined images;
- Name the layers to organize them.

Changing the size of a placed image

While you could have adjusted the image size prior to dragging and dropping it into the barn picture, you can also make adjustments to layers and the objects that reside on the layers. Here you will adjust the size and position of the placed images.

- 1 Make sure the Layers panel is visible. If you do not see the Layers panel, choose Window > Layers.
- 2 Double-click the words Layer 1, to the right of the image thumbnail of the rooster in the Layers panel. When the text field becomes highlighted, type **rooster**, and then press Enter (Windows) or Return (Mac OS) to accept the change. Repeat this process to rename Layer 2, typing the name **cow**.



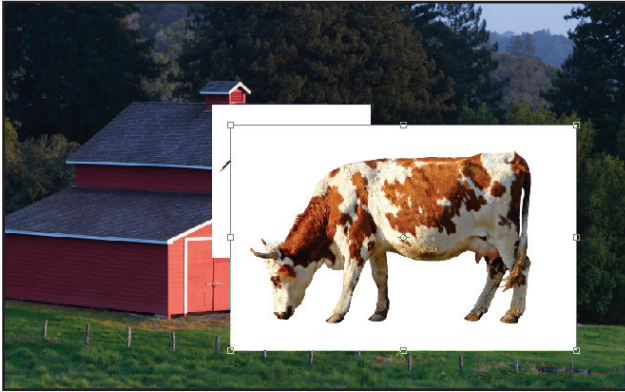
The layers renamed.

- 3 With the cow layer selected in the Layers panel, choose Edit > Free Transform, or use the keyboard shortcut Ctrl+T (Windows) or Command+T (Mac OS). Handles appear around the edges of the cow. Keep the cow selected. If you do not see handles, press Ctrl+0 (zero) (Windows) or Command+0 (zero) (Mac OS) to fit the image into the window.
- 4 Press and hold Alt+Shift (Windows) or Option+Shift (Mac OS), and then click and drag any one of the handles on the outside corner edges of the cow toward the center. The image size is reduced.

Notice that the scale percentages in the Options bar change as you scale the image. Reduce the size of the cow image to approximately 50 percent of its original size. Holding the Shift key maintains the proportions as you scale, while the Alt or Option key scales the image toward its center.

- 5 In the Options bar, click the Commit Transform button (✓) located on the right side, or press Enter (Windows) or Return (Mac OS), to accept the changes.
- 6 If you do not see the Rooster image, use the Move tool to reposition the cow to reveal it. In the Layers panel, click to activate the rooster layer, and then choose Edit > Free Transform.

- Press and hold Alt+Shift (Windows) or Option+Shift (Mac OS) and reduce the size of the rooster to approximately 60 percent, using the Options bar as a guide to the scaling you are performing. Click the Commit Transform button, or press Enter (Windows) or Return (Mac OS), to accept the changes.

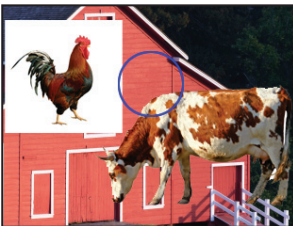


The cow layer being reduced in size, using the Free Transform command.

Removing a background

Photoshop makes it easy to remove the background of an image. Here you'll use a method that works well with solid backgrounds, such as the white behind the cow and rooster.

- Select the cow layer in the Layers panel.
- In the Tools panel, click to select the Magic Eraser tool (☒). You may need to click and hold on the Eraser tool to access the Magic Eraser tool.
- Position the Magic Eraser tool over the white area behind the cow, and click once to remove the white background.



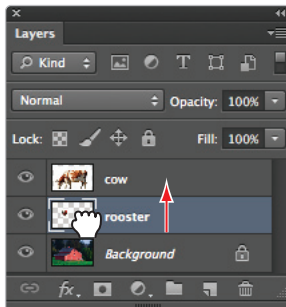
Use the Magic Eraser tool to remove the background behind the cow.

- In the Layers panel, click to activate the rooster layer.
- Position the cursor over the white area adjacent to the rooster, and click once to remove the white background.

Understanding the stacking order of layers

Layers are much like pieces of clear film that you could place on a table. The layers themselves are clear, but anything placed on one of the layers will be positioned on top of the layers that are located beneath it.

- 1 Confirm that the rooster layer remains selected. Click to select the Move tool (↔) from the Tools panel.
- 2 Position the Move tool over the rooster image in the document window, and drag the rooster so your cursor is positioned over the head of the cow. Notice that the rooster image is positioned under the cow. This is because the cow layer is above the rooster layer in the Layers panel.
- 3 In the Layers panel, click and hold the rooster layer. Drag the layer up so it is positioned on top of the cow layer. Notice in the document window how the stacking order of the layers affects the stacking order of the objects in the image.



Click and drag the rooster layer up to place it on top of the cow layer.

- 4 Using the Move tool, click and drag the rooster to position it in the lower-left corner of the image, in front of the fence and along the side of the barn. If your image seems to *jump* when you are trying to position the image, choose View > Snap to prevent the edge of the image from snapping to the edge of the document.
- 5 Click to activate the cow layer, and then, continuing to use the Move tool, click and drag the cow to position it in the lower-right corner of the image. Position the cow so it appears to be grazing on the grass without hanging outside the image area.
- 6 Choose File > Save. Keep the file open for the next part of this lesson.

Refining the edges of copied images

When the images were copied, they maintained very hard edges, making it very clear where the picture of the cow or rooster stops and the original image starts. This hard edge makes the images look contrived. You will blend the images so they look more natural together.

- 1 Click to select the cow layer in the Layers panel. Choose the Zoom tool (🔍) from the Tools panel.
- 2 If necessary, uncheck Scrubby Zoom from the options panel, and then click and drag to create a zoom area around the entire cow. The cow is magnified to fill the entire display area.
- 3 Choose Layer > Matting > Defringe. The Defringe dialog box opens.
- 4 In the Defringe dialog box, maintain the default setting of 1 pixel, then click OK. The Defringe command blends the edges of the layer into the background, making it appear more natural.



The cow before it is defringed.



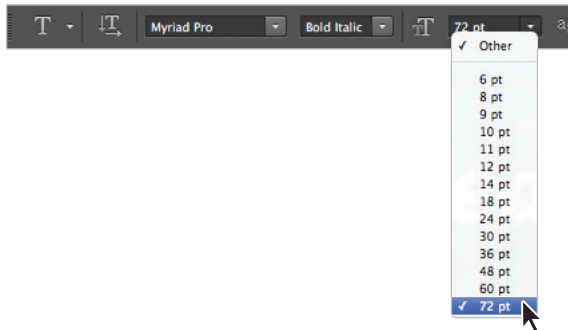
The cow after it is defringed.

- 5 Press H on the keyboard to choose the Hand tool (🖱️). Using the Hand tool, click and drag the window to the right to reveal the content positioned on the left side of the image. Stop dragging when the rooster is visible.
- 6 In the Layers panel, click to activate the rooster layer, then choose Layer > Matting > Defringe. The Defringe dialog box opens.
- 7 In the Defringe dialog box, once again maintain the default setting of 1 pixel, and then click OK. The Defringe command affects only the selected layer.
Notice that both the rooster and the cow now look more naturally blended into the background.
- 8 Press Ctrl+Z (Windows) or Command+Z (Mac OS) to undo the application of the Defringe command. Notice the hard edge around the perimeter of the rooster. Press Ctrl+Z or Command+Z again to re-apply the Defringe command.
- 9 Double-click the Hand tool in the Tools panel to fit the entire image in the document window. This can be easier than choosing View > Fit on Screen, yet it achieves the same result.
- 10 Choose File > Save.

Adding text

You will now add text to the image.

- 1 With the ps0401_work file still open, click to select the rooster layer in the Layers panel.
- 2 In the Tools panel, click to select the Type tool (T) and click in the upper-left corner of the image, just above the roof of the barn. Notice that a layer appears on top of the rooster layer in the Layers panel.
- 3 In the Options bar, select the following:
 - From the font family drop-down menu, choose Myriad Pro. If you do not have this font, you can choose another.
 - From the font style drop-down menu, choose Bold Italic.
 - From the font size drop-down menu, choose 72.



Choose font attributes in the Options bar.

- 4 Click once on the Set the text color swatch (■) in the Options bar. The text Color Picker appears. Click on white or any light color that appears in the upper-left corner of the color pane, then press OK to close the Color Picker window.
- 5 Type **Big Red Barn**; the text appears above the roof of the barn. When you are finished typing, click on the Commit checkbox (✓) in the Options bar to confirm the text.
- 6 With the text layer still active, click the Add a Layer Style button (fx) at the bottom of the Layers panel, and choose Stroke. The Layer Style dialog box opens, with the Stroke options visible; click on the color box and choose a red color. Press OK to accept the color, and then click OK again to apply the stroke. A stroke is added to the border of the text.
- 7 Choose File > Save. Keep the file open for the next part of this lesson.

Saving files

Adobe Photoshop allows you to save your files in a variety of file formats, which makes it possible to use your images in many different ways. You can save images to allow for additional editing of things such as layers and effects you have applied in Photoshop, or save images for sharing with users who need only the finished file for use on the Web or for printing. In all, Photoshop allows you to save your file in more than a dozen unique file formats.

As you work on images, it is best to save them using the default Photoshop format, which uses the .PSD extension at the end of the filename. This is the native Photoshop file format, and retains the most usable data without a loss in image quality. Because the Photoshop format was developed by Adobe, many non-Adobe software applications do not recognize the PSD format.

Additionally, the PSD format may contain more information than you need, and may be a larger file size than is appropriate for sharing through e-mail or posting on a web site. While you may create copies of images for sharing, it is a good idea to keep an original version in the PSD format as a master file that you can access if necessary. This is especially important because some file formats are considered to be *lossy* formats, which means that they remove image data in order to reduce the size of the file.

Understanding file formats

While Photoshop can be used to create files for all sorts of media, the three most common uses for image files are web, print, and video production. Following is a list of the most common formats and how they are used.

WEB PRODUCTION FORMATS

JPEG (Joint Photographic Experts Group)

This is a common format for digital camera photographs and the primary format for full-color images shared on the web. JPEG images use lossy compression, which degrades the quality of images and discards color and pixel data. Once the image data is lost, it cannot be recovered.

GIF (Graphic Interchange Format)

GIF files are used to display limited (indexed) color graphics on the Web. It is a compressed format that reduces the file size of images, but it only supports a limited number of colors and is thus more appropriate for logos and artwork than photographs. GIF files support transparency.

PNG (Portable Network Graphics)

PNG was developed as an alternative to GIF for displaying images on the Web. It uses lossless compression and supports transparency.

PRINT PRODUCTION FORMATS

PSD (Photoshop document)

The Photoshop format (PSD) is the default file format and the only format, besides the Large Document Format (PSB), that supports most Photoshop features. Files saved as PSD can be used in other Adobe applications, such as Adobe Illustrator, Adobe InDesign, Adobe Premiere, and others. The programs can directly import PSD files and access many Photoshop features, such as layers.

(continues)

PRINT PRODUCTION FORMATS (continued)

TIFF or TIF (Tagged Image File Format)	TIFF is a common bitmap image format. Most image-editing software and page-layout applications support TIFF images up to 2GB in file size. TIFF supports most color modes and can save images with alpha channels. While Photoshop can also include layers in a TIFF file, most other applications cannot use these extended features and see only the combined (flattened) image.
EPS (Encapsulated PostScript)	EPS files may contain both vector and bitmap data. Because it is a common file format used in print production, most graphics software programs support the EPS format for importing or placing images. EPS is a subset of the PostScript format. Some software applications cannot preview the high-resolution information contained within an EPS file, so Photoshop allows you to save a special preview file for use with these programs, using either the EPS TIFF or EPS PICT option. EPS supports most color modes, as well as clipping paths, which are commonly used to silhouette images and remove backgrounds.
Photoshop PDF	Photoshop PDF files are extremely versatile, as they may contain bitmap and vector data. Images saved in the Photoshop PDF format can maintain the editing capabilities of most Photoshop features, such as vector objects, text, and layers, and most color spaces are supported. Photoshop PDF files can also be shared with other graphics applications, as most of the current versions of graphics software are able to import or manipulate PDF files. Photoshop PDF files can even be opened by users with the free Adobe Reader software.

VIDEO PRODUCTION FORMATS

TIFF or TIF	<i>See Print Production Formats, above.</i>
TARGA (Truevision Advanced Raster Graphics Adapter)	This legacy file format is used for video production. The TARGA format supports millions of colors, along with alpha channels.

Choosing a file format

In this section, you will save your file to share online and for printing. You will use two common formats, JPEG and Photoshop PDF.

Saving a JPEG file

To save a copy of your image for sharing online, whether on a web site or to send through e-mail, you will save it using the JPEG file format. In this lesson, you will use the Save menu, but in Lesson 12, “Creating Images for Web and Video,” you will discover additional features when saving files for use online, including how to use the Save for Web feature in Photoshop.

- 1 Choose File > Save As.
- 2 In the Save As dialog box, type **farm** in the File name text field. From the Format drop-down menu, choose JPEG. If necessary, navigate to the ps04lessons folder so the file is saved in this location, then press the Save button. The JPEG Options dialog box appears.

- 3 In the JPEG Options dialog box, confirm the quality is set to maximum, and leave the format options set to their defaults. Press OK. This completes the Save process for your file.
- 4 Choose File > Close to close the file and click Save when prompted.



Because JPEG is supported by web browsers, you can check your file by opening it using any web browser, such as Firefox, Internet Explorer, or Safari. Open the browser and choose File > Open, which may appear as Open File or Open Location, depending upon the application. Navigate to the ps04lessons folder and double-click to open the file you saved.

Saving for print

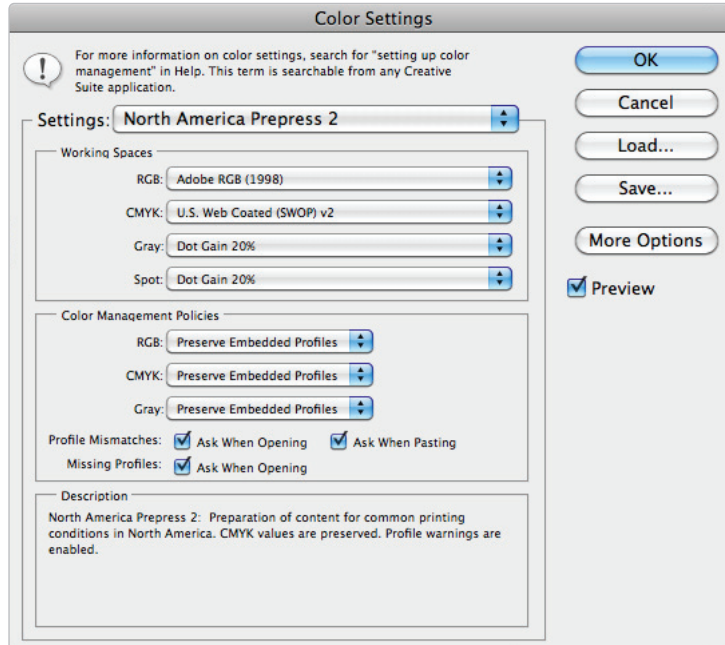
In this part of the lesson, you will change the color settings to choose a color profile more suitable for print to help you preview and prepare your file for printing. You will change the resolution of the image before saving it.

Changing the color settings

You will now change the color settings to get a more accurate view of how the file will print.

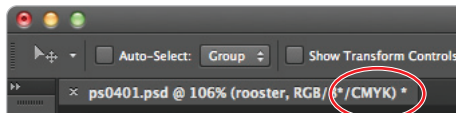
- 1 If ps0401_work.psd is not open choose File > Open Recent > ps0401_work.psd. You can use the Open Recent command to easily locate your most recently opened files. The file opens.
- 2 Choose Edit > Color Settings. The Color Settings dialog box appears.

- From the Color Settings drop-down menu, choose North America Prepress 2. This provides you with a color profile based upon typical printing environments in North America. Press OK to close the Color Settings dialog box.



Select the North America Prepress 2 color setting.

- Choose the Zoom tool (Q) from the Tools panel, and then click and drag to create a zoom area around the text at the top of the image. The text is magnified to fill the entire display area.
- Choose View > Proof Colors. Notice a slight change in the color of the red stroke around the text, as the colors appear more subdued. The Proof Colors command allows you to work in the RGB format while approximating how your image will look when converted to CMYK, the color space used for printing. While you will work on images in the RGB mode, they generally must be converted to CMYK before they are printed.

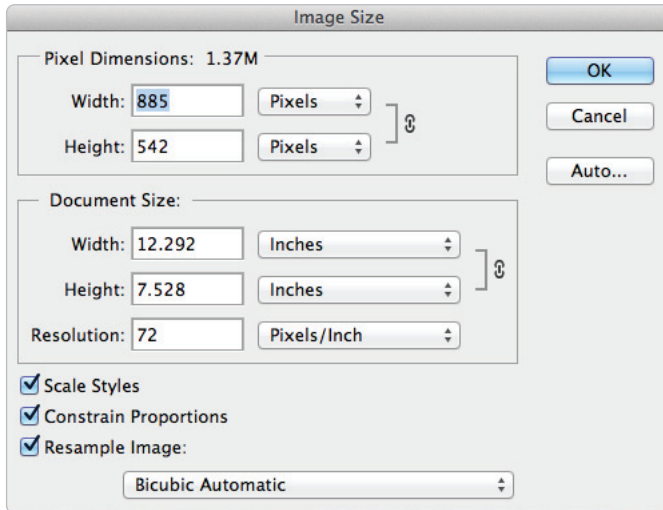


The title bar reflects that you are previewing the image in CMYK.

Adjusting image size

Next you will adjust the image size for printing. When printing an image, you generally want a resolution of at least 150 pixels per inch. For higher-quality images, you will want a resolution of at least 300 pixels per inch. While this image was saved at 72 pixels per inch, it is larger than needed. By reducing the physical dimensions of the image, the resolution (number of pixels per inch) can be increased.

- 1 Choose Image > Image Size; the Image Size dialog box appears. The image currently has a resolution of 72 pixels per inch.



The image is at a low resolution of 72 pixels per inch.

This low resolution affects the image quality, and should be increased to print the best image possible. For this to occur, the dimensions of the image will need to be reduced so the image will be of a higher resolution, but will be smaller in size.

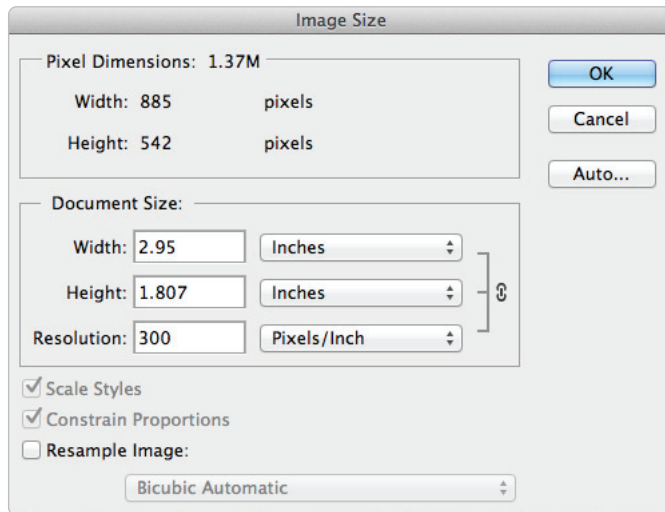
Resampling changes the amount of image data. When you resample up, you increase the number of pixels. New pixels are added, based upon the interpolation method you select. While resampling adds pixels, it can reduce image quality if it is not used carefully.

- 2 In the Image Size dialog box, uncheck Resample Image. By unchecking the Resample Image checkbox, you can increase the resolution without decreasing image quality.

You can use this method when resizing large image files, like those from digital cameras that tend to have large dimensions but low resolution.

- 3 Type **300** in the Resolution field. The size is reduced in the Width and Height text boxes to accommodate the new increased resolution but the Pixel Dimensions remain the same. For quality printing at the highest resolution, this image should be printed no larger than approximately 2.9 inches by 1.8 inches. Press OK.

In this image, you are not adding pixels, you are simply reducing the dimensions of the image to create a higher resolution.



Increase resolution without decreasing quality.

- 4 Choose File > Save. Keep this file open for the next part of this lesson.

Saving a Photoshop PDF file

Images containing text or vector shapes may appear fine in low resolution when viewed on a computer display, even if the vector information is rasterized (converted into pixels.) When the same images are used for print projects, they should retain the resolution-independent vector elements. This keeps the text and other vector graphics looking sharp, so you do not need to worry about the jagged edges that occur when text and shapes are rasterized. To keep the vector information, you need to save the file using a format that retains both vector and bitmap data.

- 1 With the ps0401_work.psd image still open, choose File > Save As. The Save As dialog box appears.
- 2 In the Save As menu, navigate to the ps04lessons folder. In the Name text field, type **farm print version**. From the Format drop-down menu, choose Photoshop PDF, then press Save. Click OK to close any warning dialog box that may appear. The Save Adobe PDF dialog box appears.
- 3 In the Save Adobe PDF dialog box, choose Press Quality from the Adobe PDF Preset drop-down menu, and then click Save PDF. If a warning appears, indicating that older versions of Photoshop may not be able to edit the PDF file, click Yes to continue.
- 4 Your file has been saved in the Adobe PDF format, ready to be used in other applications such as Adobe InDesign, or shared for proofing with a reviewer who may have Adobe Acrobat or Adobe Reader.

Congratulations! You have finished the lesson.

Self study

- 1 Using the farm image, try adjusting the stacking order of the layers in the composite image.
- 2 Scale and move the layers to place the cow and rooster in different positions.
- 3 Add your own images to the composition, adjusting their position and scaling.
- 4 Save the images as PDF and JPEG files using the different compression options and presets to determine the impact these have on quality and file size.

Review

Questions

- 1 Describe two ways to combine one image with another.
- 2 What is created in the destination image when you cut and paste or drag and drop another image file into it?
- 3 What are the best formats (for print) in which to save a file that contains text or other vector objects?

Answers

- 1 **Copy and Paste:** Select the content from your source document and choose Edit > Copy. Then select your destination document and choose Edit > Paste to paste the artwork into it.

Drag and Drop: Make sure both your source and destination documents are visible. With the Move tool selected, click and drag the image from the source file to the destination file.

- 2 When you cut and paste, or drag and drop, one image into another, a new layer containing the image data is created in the destination file.
- 3 If your file contains text or vector objects, it is best to save the file in one of these three formats: Photoshop (PSD), Photoshop (EPS), or Photoshop (PDF).