Department of Collegiate and Technical Education

UNIT 2

SESSION 1

MULTIMEDIA AND ANIMATION – 20CS21P

UNIT 2

IMAGE EDITING

2.1 Explore Image Editing Tool

2.1.1 Customizing Workspace

Photoshop 7 now allows you to create custom workspaces using the 'windows> workspace' menu.

The portion of the Photoshop interface that is used to view and edit documents is known as the workspace. A wide variety of windows, tools, and menus (known as panels) can be displayed within the workspace in order to provide quick access to the features needed for a given task.

Pre-Defined Workspace Layouts

Photoshop offers an incredible amount of features and tools, which often causes the workspace to become cluttered quickly. Luckily, Photoshop has pre-defined layouts of panels and menus, known as **workspace layouts**.

1. In the menu bar at the top of the screen, select Window > Workspace. Here you can see a full list of all pre-defined workspace layouts available to us, including workspaces made for typography, 3D graphics, and much more.
2. Select "Essentials" from the menu. This is Photoshop's default interface, and the one we will be using. However, feel free to explore and compare the other workspaces on your own.

Other Workspace Options

Under the same menu, you'll find an option that says **"Reset Essentials".** If you end up moving toolbars and panels around on your own and want to return to the Essentials layout, this button will always reset your workspace to its original layout.

Also under the same menu, you'll notice options for **"New Workspace"** and **"Delete Workspace"**. Along with Photoshop's pre-defined workspaces, you can also build and save your own pre-defined workspaces. However, we will not be using this feature in this class.

To create a custom workspace, simply choose your desired selection of tools and workspace windows, then go to 'windows> workspace> save workspace' and give it a name.

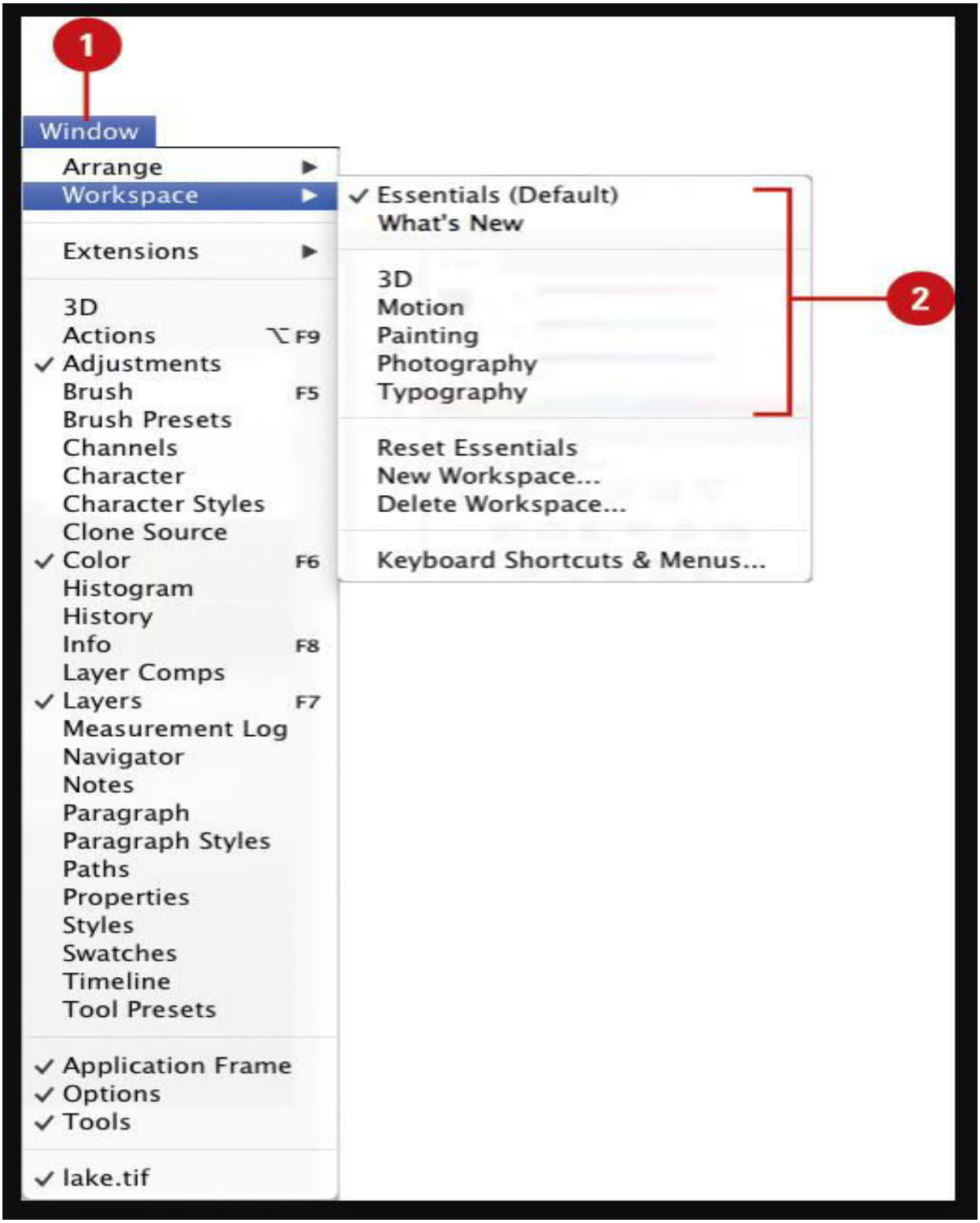
Your custom configuration will be listed on the 'workspace' menu from now on.

This is an excellent addition for users who habitually carry out multiple tasks with Photoshop. We liked having the ability to customize our Photoshop workspace for the activity we perform most, digital photo cropping, sizing and colour correction.

Display a Workspace

- Click the **Workspaces** menu on the Options bar, or click the **Window** menu, and then point to **Workspace**.
- Select a panel option:
- **Custom panel name.** Displays a custom panel layout that you created.

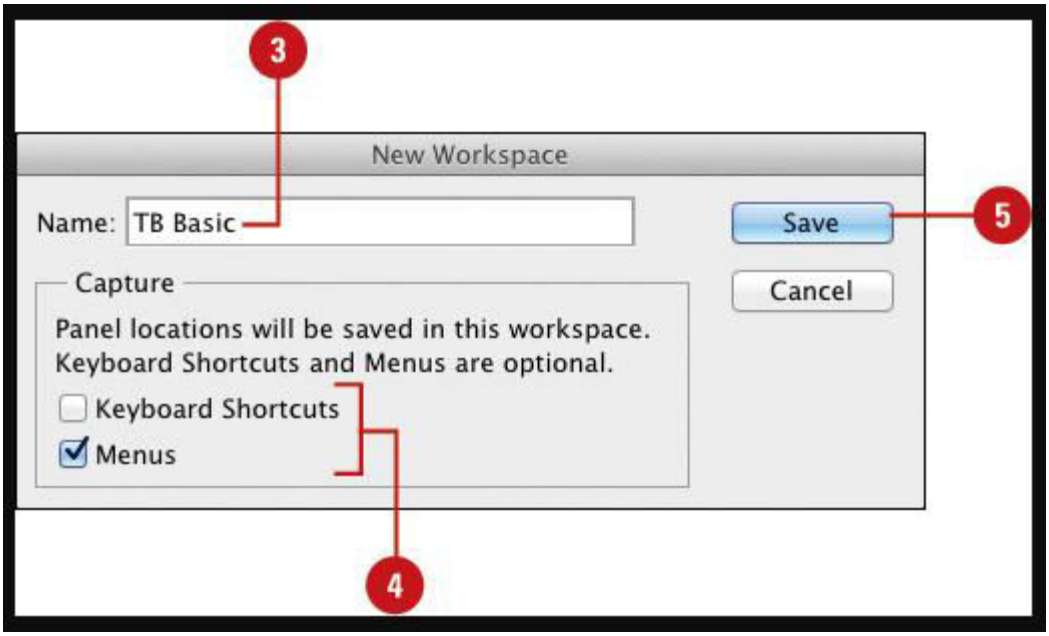
- **Essentials (Default)**, **What's New, 3D, Motion, Painting**, **Photography**, or **Typography**. Displays panel layouts created by Adobe for specific purposes in Photoshop.



You can reset a workspace. You can reset a workspace to its original configurations. Select the workspace, click the Workspace menu or click the Window menu, point to Workspace, and then click Reset *workspace name*.

Create a Customized Workspace

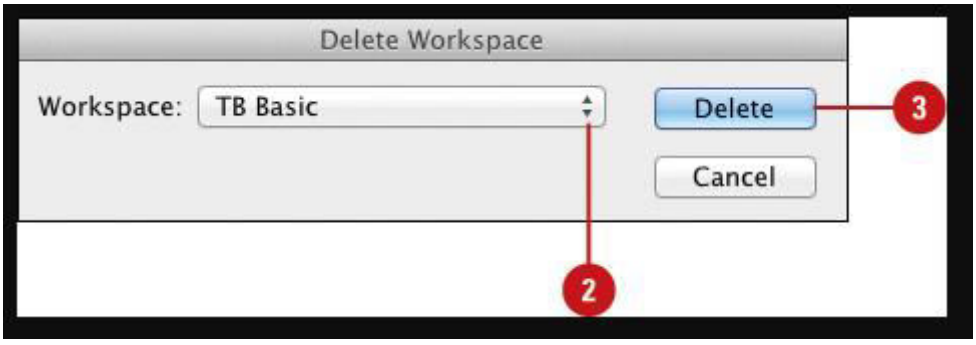
- Arrange the panels into a specific working order.
- Click the **Workspaces** menu on the Options bar, or click the **Window** menu, and then point to **Workspace**.
- Type a name for the workspace.
- Select check boxes to save **Keyboard Shortcuts** or **Menus**.
- Click **Save**.



Delete a Customized Workspace

- Click the **Workspaces** menu on the Options bar, or click the **Window** menu, and then point to **Workspace**.
- Click the **Workspace** list arrow, and then click the workspace you want to delete, or click **All Custom Workspaces**.
- You cannot delete the current workspace. You must switch to another workspace first.

Click **Delete**, and then click **Yes** to confirm the deletion.



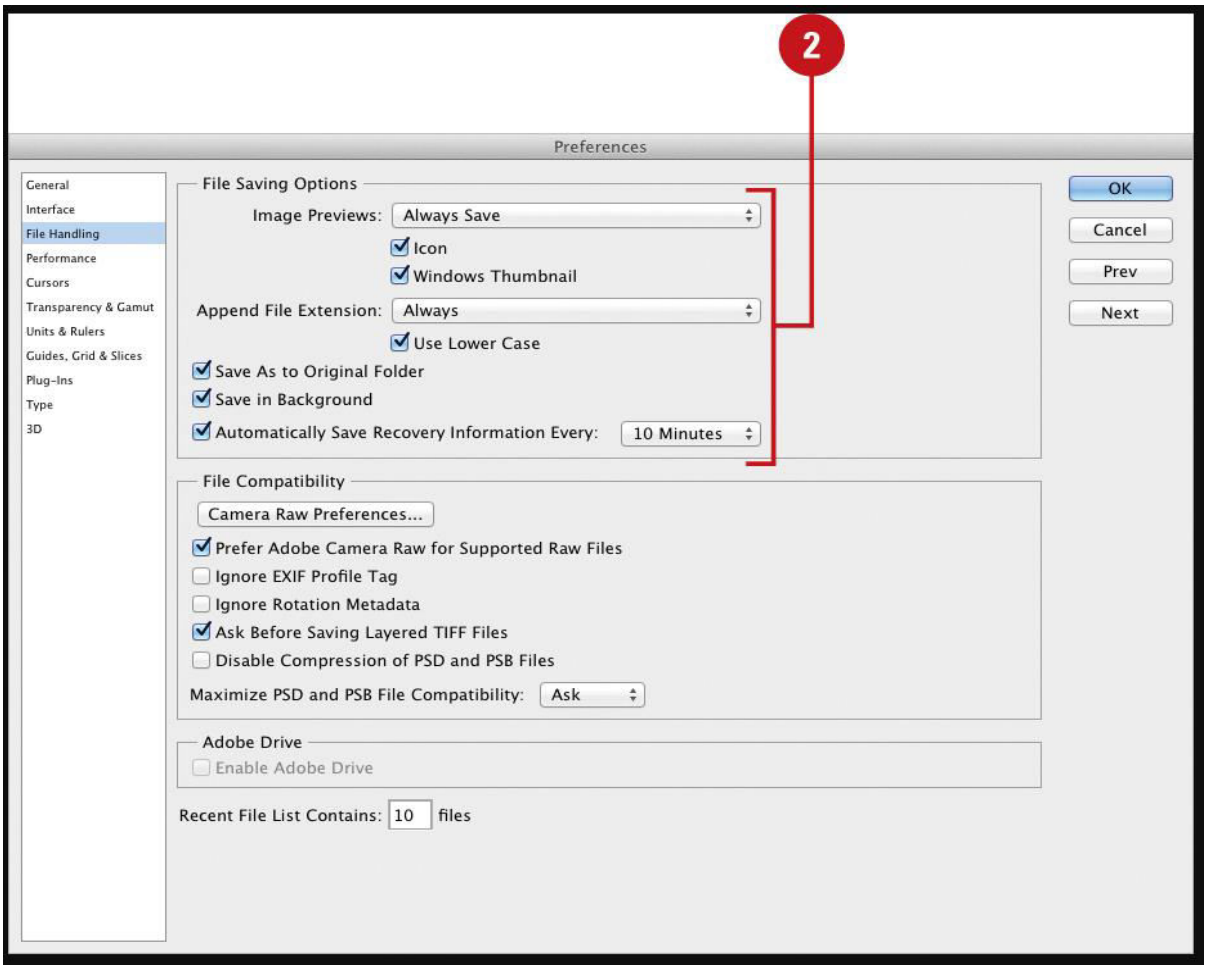
2.1.2 File Handling

Setting File Handling Preferences

Photoshop lets you save files using different formats, including TIFF, EPS, JPEG, or BMP. The File Handling preferences provide several options that modify what information is saved with a file. You can also set options to automatically save the file based on a time interval or save the file in the background, which allows you to keep working while Photoshop saves behind the scenes; a progress information appears in the Document tab and Status bar. If Photoshop crashes unexpectedly, the program automatically tries to recover and open your file. Image previews are typically very small, adding very little to the file size of the saved document. Once saved you may want to open, print, and possibly even modify the document using other image-editing applications. The File compatibility options help you save a file that will be transportable to other applications.

Work with File Handling Options

1. Click the **Edit** (Win) or **Photoshop** (Mac) menu, point to **Preferences**, and then click **File Handling**.
2. Select the File Saving Options you want to use:
    - **Image Previews:** Select from: Always Save, Never Save, or Ask When Saving.



- **Icon.** Saves previews of the images (Mac).
- **Windows Thumbnail.** Saves previews viewable when using the Win File Open command (Mac).
- **Append File Extension.** Lets you choose whether or not to append the file extension (Mac).
- **Use Lower Case (Mac) or File Extension (Win).** Choose to have upper or lower case extensions.
- **Save As To Original Folder.** Saves the file to original folder as the default.
- **Save in Background.** Photoshop automatically saves while you work.
- **Automatically Save Recovery Information Every.** Saves current document information for recovery based on a specified interval.

3. Select the File Compatibility options you want to use:

   a. **Camera Raw Preferences** Click to choose from options such as default image settings, cache size, DNG file handling, and whether or not to open JPEG and TIFF files with Camera Raw.

   b. **Prefer Adobe Camera Raw for Supported Raw Files.** Open supported raw files in Camera Raw.

   c. **Ignore EXIF Profile Tag.** Ignores color space metadata attached to digital camera images.

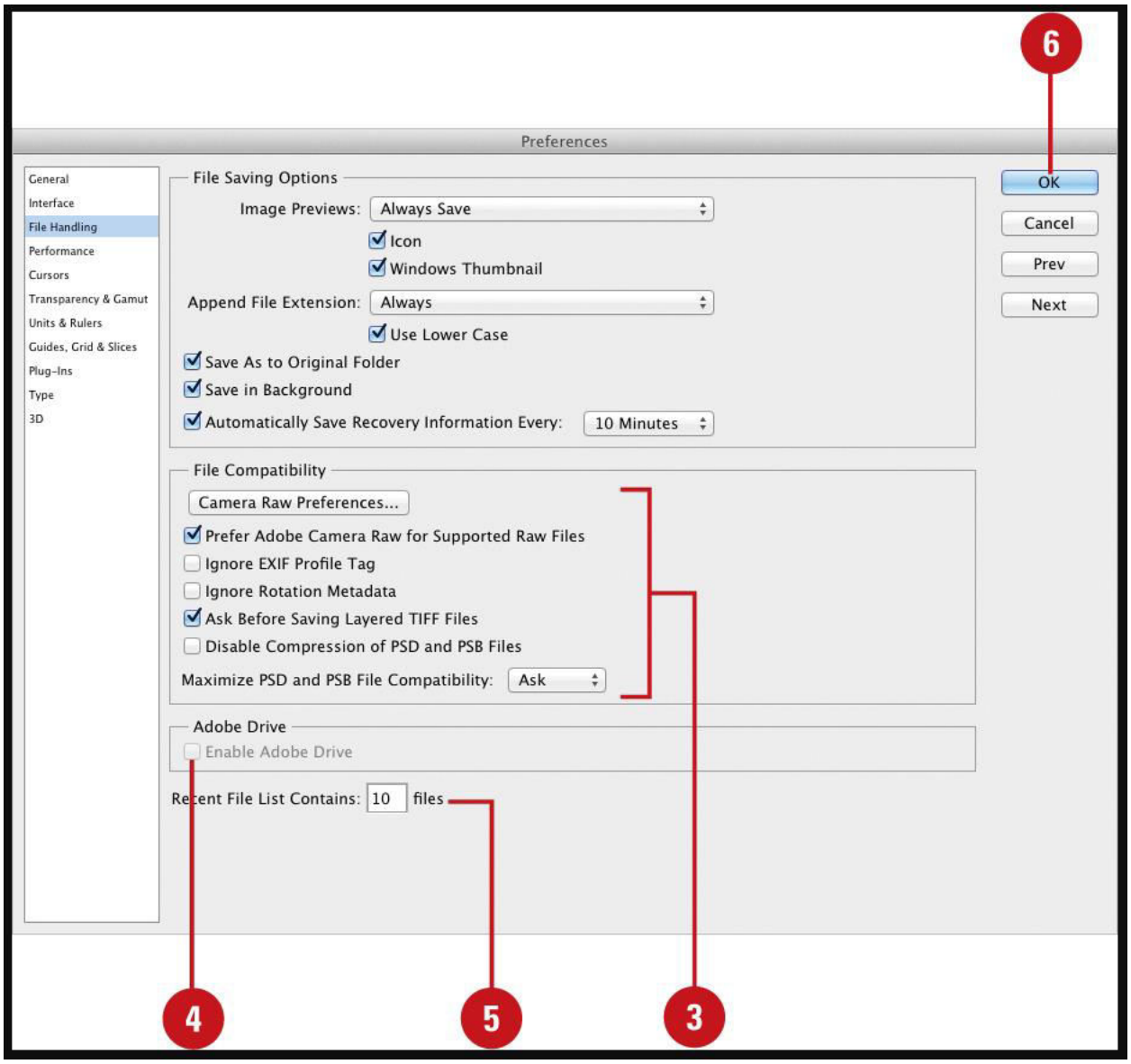
   d. **Ignore Rotation Metadata.** Ignore metadata attached to digital camera images.

   e. **Ask Before Saving Layered TIFF Files.** Lets you create multi-layered documents, and then save them using the TIFF format.

      This is a distinct advantage when you need to use multi-layered files and you don't want to save them using Photoshop's proprietary format (PSD).

   f. **Disable Compression of PSD and PSB Files.** Disables compression of files.

   g. **Maximize PSD and PSB File Compatibility.** Lets you save PSD files that can be opened in earlier versions of the program and PSB (Large Document Format) files.



4. Select the **Enable Adobe Drive** check box to enable Adobe Drive in your work process.

5. Enter the number of files (up to 30) to keep in the Recent File List box.

6. Click **OK**.

2.1.3 Setting size and resolution parameters

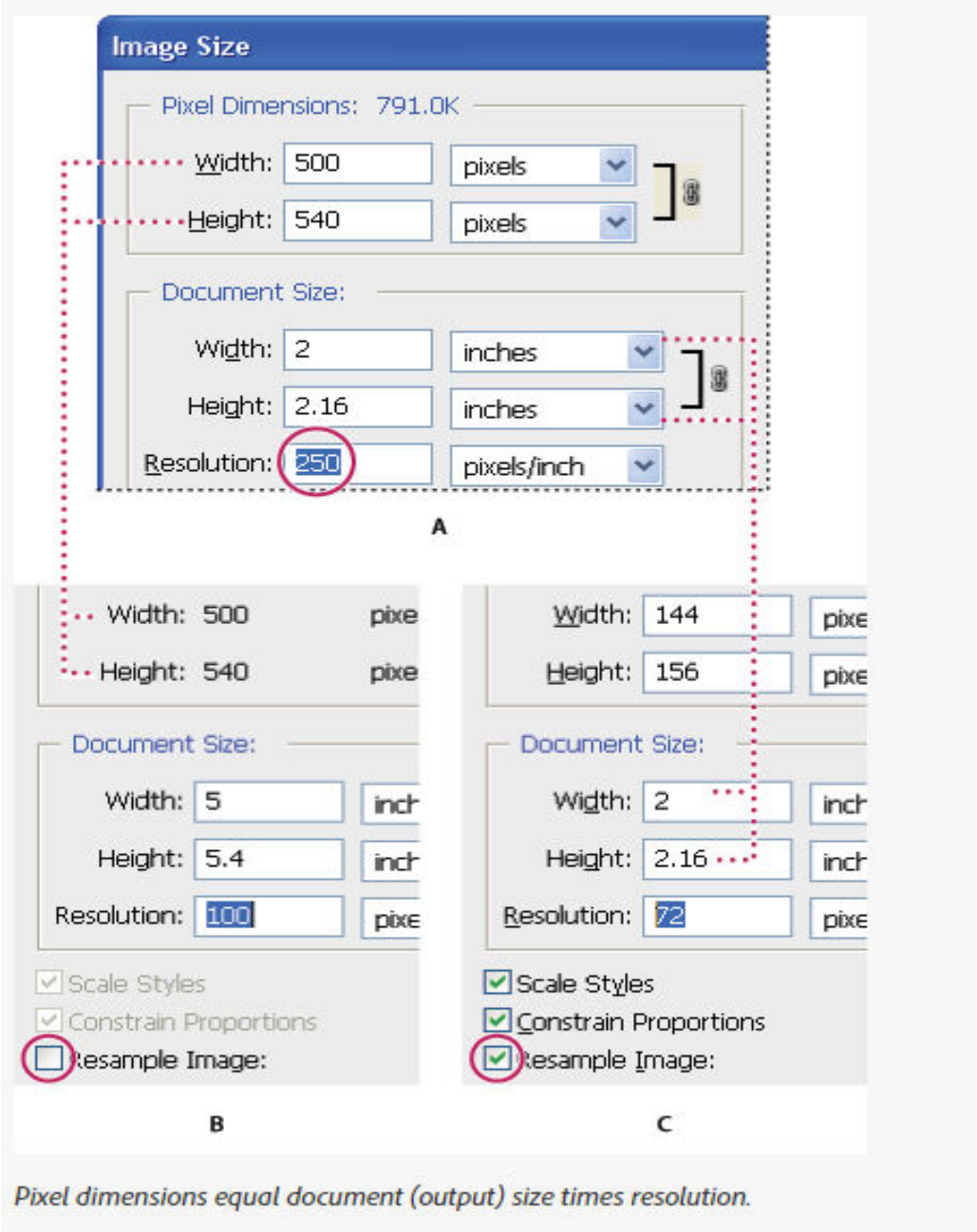
About pixel dimensions and printed image resolution

Pixel dimensions measure the total number of pixels along an image's width and height. Resolution is the fineness of detail in a bitmap image and is measured in pixels per inch (ppi). The more pixels per inch, the greater the resolution. Generally, an image with a higher resolution produces a better printed image quality.

Same image at 72-ppi and 300-ppi; inset zoom 200%

Unless an image is *resampled* (see Resampling), the amount of image data remains constant as you change either the print dimensions or resolution. For example, if you change the resolution of a file, its width and height change accordingly to maintain the same amount of image data.

In Photoshop, you can see the relationship between image size and resolution in the **Image Size** dialog box (choose Image > **Image Size**). Deselect Resample Image, because you don't want to change the amount of image data in your photo. Then change width, height, or resolution. As you change one value, the other two values change accordingly. With the Resample Image option selected, you can change the resolution, width, and height of the image to suit your printing or onscreen needs.



Pixel dimensions equal document (output) size times resolution.

Quickly display the current image size

If you want to quickly display a document's current image size, use the information box at the bottom of the document window.

1. Position the pointer over the file information box, and hold down the mouse button.

2. **File size**

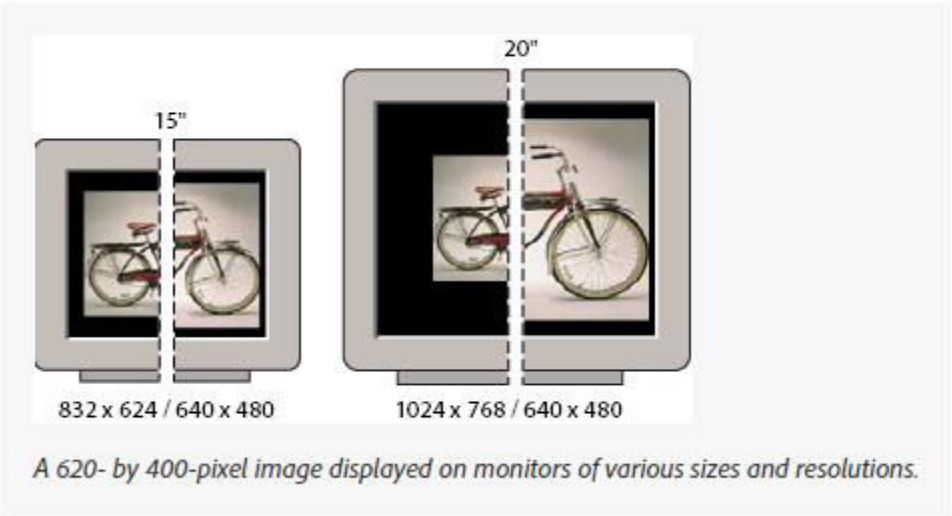
The file size of an image is the digital size of the image file, measured in kilobytes (K), megabytes (MB), or gigabytes (GB). File size is proportional to the pixel dimensions of the image. Images with more pixels may produce more detail at a given printed size, but they require more disk space to store and may be slower to edit and print. Image resolution thus becomes a compromise between image quality (capturing all the data you need) and file size.

Another factor that affects file size is file format. Because of the varying compression methods used by GIF, JPEG, PNG, and TIFF file formats, file sizes can vary considerably for the same pixel dimensions. Similarly, color bit-depth and the number of layers and channels in an image affect file size.

Photoshop supports a maximum pixel dimension of 300,000 by 300,000 pixels per image. This restriction places limits on the print size and resolution available to an image.

3. **About monitor resolution**

Your monitor's resolution is described in pixel dimensions. For example, if your monitor resolution and your photo's pixel dimensions are the same size, the photo will fill the screen when viewed at 100%. How large an image appears on-screen depends on a combination of factors—the pixel dimensions of the image, the monitor size, and the monitor resolution setting. In Photoshop, you can change the image magnification on-screen, so you can easily work with images of any pixel dimensions.



A 620- by 400-pixel image displayed on monitors of various sizes and resolutions.

When preparing images for viewing on-screen, you should consider the lowest monitor resolution that your photo is likely to be viewed on.

About printer resolution

Printer resolution is measured in ink dots per inch, also known as dpi. Generally, the more dots per inch, the finer the printed output you'll get. Most inkjet printers have a resolution of approximately 720 to 2880 dpi. (Technically, inkjet printers produce a microscopic spray of ink, not actual dots like imagesetters or laser printers.)

Printer resolution is different from, but related to image resolution. To print a high quality photo on an inkjet printer, an image resolution of at least 220 ppi should provide good results.

Screen frequency is the number of printer dots or halftone cells per inch used to print grayscale images or color separations. Also known as *screen ruling* or *line screen*, screen frequency is measured in lines per inch (lpi)—or lines of cells per inch in a halftone screen. The higher the resolution of the output device, the finer (higher) a screen ruling you can use.

The relationship between image resolution and screen frequency determines the quality of detail in the printed image. To produce a halftone image of the highest quality, you generally use an image resolution that is from 1.5 to at most 2 times the screen frequency. But with some images

and output devices, a lower resolution can produce good results. To determine your printer's screen frequency, check your printer documentation or consult your service provider.

Screen frequency examples

A. 65 lpi: Coarse screen typically used to print newsletters and grocery coupons **B.** 85 lpi: Average screen typically used to print newspapers **C.** 133 lpi: High-quality screen typically used to print four-color magazines **D.** 177 lpi: Very fine screen typically used for annual reports and images in art books

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Determine a suggested resolution for an image

If you plan to print your image using a halftone screen, the range of suitable image resolutions depends on the screen frequency of your output device. Photoshop can determine a recommended image resolution based on the screen frequency of your output device.

Note:

If your image resolution is more than 2.5 times the screen ruling, an alert message appears when you try to print the image. This means that the image resolution is higher than necessary for the printer. Save a copy of the file, and then reduce the resolution.

1. Choose Image > **Image Size**.
2. Click Auto.

3. For Screen, enter the screen frequency for the output device. If necessary, choose a different unit of measurement. Note that the screen value is used only to calculate the image resolution, not to set the screen for printing.
4. For Quality, select an option:

Draft

Produces a resolution that is the same as the screen frequency (no lower than 72 pixels per inch).

Good

Produces a resolution 1.5 times the screen frequency.

Best

Produces a resolution 2 times the screen frequency.

View the print size onscreen

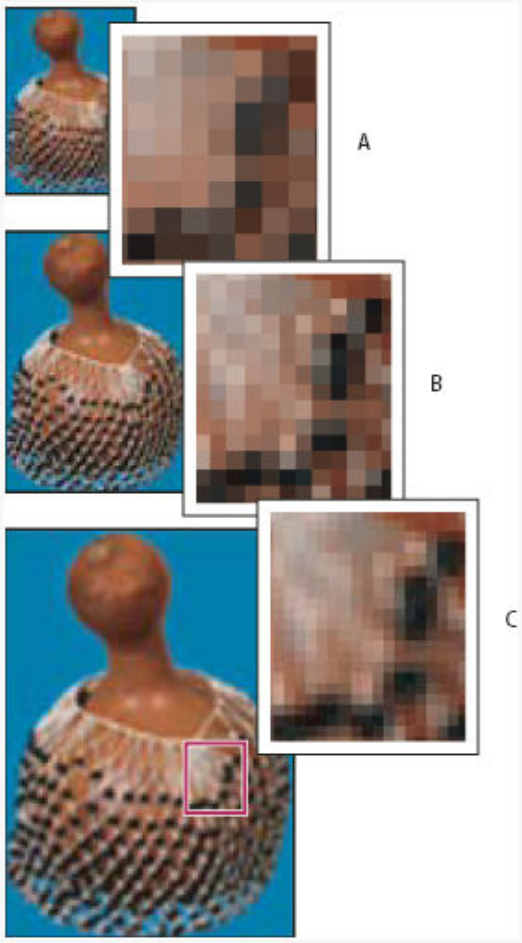
1. Do one of the following:

- Choose View > Print Size.
- Select the Hand tool or Zoom tool, and click Print Size in the options bar.

The image is redisplayed in its approximate printed size, as specified in the Document Size area of the **Image Size** dialog box. The size and resolution of your monitor affect the on-screen print size.

Resampling

Resampling is changing the amount of image data as you change either the pixel dimensions or the resolution of an image. When you *downsample* (decrease the number of pixels), information is deleted from the image. When you *resample up* (increase the number of pixels, or *upsample*), new pixels are added. You specify an *interpolation* method to determine how pixels are added or deleted.



Resampling pixels

A. Downsampled **B.** Original **C.** Resampled up (selected pixels displayed for each set of images)

Keep in mind that resampling can result in poorer image quality. For example, when you resample an image to larger pixel dimensions, the image loses some detail and sharpness. Applying the Unsharp Mask filter to a resampled image can help refocus the image details.

You can avoid the need for resampling by scanning or creating the image at a sufficiently high resolution. If you want to preview the effects of changing pixel dimensions on-screen or to print proofs at different resolutions, resample a duplicate of your file.

Photoshop resamples images using an *interpolation method* to assign color values to any new pixels based on the color values of existing pixels. You can choose which method to use in the **Image Size** dialog box.

Change pixel dimensions of an image

Changing an image's pixel dimensions affects not only its onscreen size but also its image quality and its printed characteristics—either its printed dimensions or its image resolution.

1. Choose Image > **Image Size**.
2. To maintain the current ratio of pixel width to pixel height, select Constrain Proportions. This option automatically updates the width as you change the height, and vice versa.
3. Under Pixel Dimensions, enter values for Width and Height. To enter values as percentages of the current dimensions, choose Percent as the unit of measurement. The new file size for the image appears at the top of the **Image Size** dialog box, with the old file size in parentheses.
4. Make sure that Resample Image is selected, and choose an interpolation method.
5. If your image has layers with styles applied to them, select Scale Styles to scale the effects in the resized image. This option is available only if you selected Constrain Proportions.
6. When you finish setting options, click OK.

Change the print dimensions and resolution

When creating an image for print media, it's useful to specify image size in terms of the printed dimensions and the image resolution. These two measurements, referred to as the *document size*, determine the total pixel count and therefore the file size of the image; document size also determines the base size at which an image is placed into another application. You can further manipulate the scale of the printed image using the Print command; however, changes you make using the Print command affect only the printed image, not the document size of the image file.

If you turn on resampling for the image, you can change print dimensions and resolution independently (and change the total number of pixels in the image). If you turn off resampling, you can change either the dimensions or the resolution—Photoshop adjusts the other value automatically to preserve the total pixel count. For the highest print quality, it's generally best to change the dimensions and resolution first, without resampling. Then resample only as necessary.

1. Choose Image > **Image Size**.
2. Change the print dimensions, image resolution, or both:

- To change only the print dimensions or only the resolution and adjust the total number of pixels in the image proportionately, select Resample Image and then choose an interpolation method.
- To change the print dimensions and resolution without changing the total number of pixels in the image, deselect Resample Image.

3. To maintain the current ratio of image width to image height, select Constrain Proportions. This option automatically changes the width as you change the height, and vice versa.
4. Under Document Size, enter new values for the height and width. If desired, choose a new unit of measurement. Note that for Width, the Columns option uses the width and gutter sizes specified in the Units & Rulers preferences.
5. For Resolution, enter a new value. If desired, choose a new unit of measurement.

What affects file size?

File size depends on the pixel dimensions of an image and the number of layers it contains. Images with more pixels may produce more detail when printed, but they require more disk space to store and may be slower to edit and print. You should keep track of your file sizes to make sure the files are not becoming too large for your purposes. If the file is becoming too large, reduce the number of layers in the image or change the image size.

You can view the file size information for an image at the bottom of the application window.