

# IMAGES FOR THE WEB

## ***WORKSHOP DESCRIPTION***

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Learn the steps to create and prepare an image for use on the Web. Participants will be introduced to basic terminology used in the graphics industry and on the Web.

## ***PREREQUISITES***

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Participants should complete *XHTML Essentials, Dreamweaver: Introduction to Editing Web Pages*, or have equivalent experience editing Web pages. Individuals taking this workshop should also have knowledge of the Web, basic Web browser skills, and the ability to effectively work in the Windows or Macintosh OS environment.

## ***OBJECTIVES***

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Participants attending this workshop will learn:

- About various digital image types (and when to use them)
- How to acquire images
- About appropriate image use
- How to *Optimize* Images for the Web
- Hands on exercises including:
  - Banners and Logos
  - Buttons
  - Background images
  - Transparency

***The exercises in this workshop require files found on a 3.5" floppy diskette.  
Please make sure that you have a copy of this diskette.***

## Image Types

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There are three image file types that can be used for Web graphics. Each has its strengths and weaknesses, but the general rule is use **JPEG** images for photographs and **GIF** images for logos and buttons. In the future, we may be able to use **PNG** images for all Web graphics, but because of the limitations of some older browsers, it is probably best to stick with the **JPEG** and **GIF** image formats for the time being.

### **JPEG**

- "Joint Photographic Experts Group".
- The **JPEG** image format uses *compression* and is best for digital photographs.

### **GIF**

- "Graphic Interchange Format"
- Use **GIF** images for logos, buttons, transparency, and basic animation.
- The **GIF** image format is patented, and licensing issues are pushing some users to **PNG**.

### **PNG**

- "Portable Network Graphics"
- Best of both worlds. **PNG** images are good for photos and graphics.
- No licensing issues are imposed on the use of **PNG** graphics.
- Unfortunately, the **PNG** image format is not currently supported by all browsers.

## Acquiring Images

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Aside from starting from scratch and creating digital images with a software application such as Adobe Photoshop, there are a few easier ways information providers can acquire digital images for use on the Web.

### **"Steal" images from other Web sites**

- To borrow a Web image, right-click (or Ctrl-Click on Mac) the image and select Save As.
- Remember that images on the Web are subject to copyright. For more information on Copyright Issues, please visit <http://www.csus.edu/web/copyright.html>

### **Take photographs with a Digital Camera**

- Photos taken with a digital camera are already digital (usually stored in JPEG format).
- High quality digital photos are probably NOT the right size or resolution for Web use.
- For more information on digital photography, take our Digital Camera class.

### **Scan existing photographs**

- All you need is a scanner and a snapshot.
- Scan quality setting should be appropriate for Web, or scan for print quality and resize for the Web.
- For more information on scanning photographs, take our Scanning class.

## Appropriate Image Use

### Specify Alternate text

#### 1. HTML

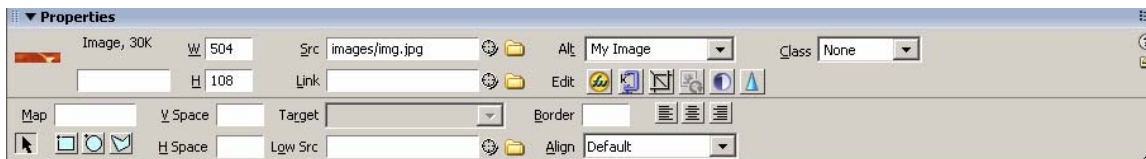
The following HTML/XHTML code example shows how to add alternate text to an image.

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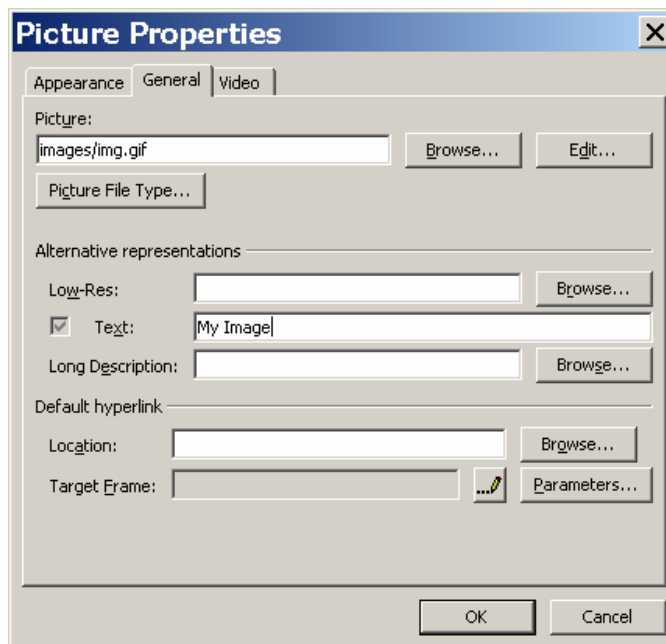
#### 2. Dreamweaver

To add alternate text in Dreamweaver, click any image in your Web site to select it. Once selected, the **Properties** panel (below) should show all available properties for that image. Adjust the alternate text in the text field labeled **Alt**.



#### 3. FrontPage

To add alternate text in FrontPage, right-click any image in your Web site and select **Properties** from the context menu. The **Picture Properties** panel (below) should show all available properties for that image. Adjust the alternate text in the text field labeled **Alternative Representations: Text**.



### Resize before using on the Web

See **Adjusting image size in Adobe Photoshop Elements 2.0** in the tutorials section below.

### Sane use of graphics

Before inserting a graphic into you Web site, please ensure that the image is appropriate and useful to your viewers. Unnecessary images may increase Web page download time, clutter pages, and distract users.

## Optimizing Images

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The goal of optimizing images is to achieve the most acceptable compromise between small file size (in Kilobytes) and acceptable image quality. Adjusting image size (width by height), resolution in pixels per inch (**ppi**), and image quality will allow you to control file size and improve image download times. Note that all the hints provided here for optimizing images for the Web also apply to digital images attached to e-mail messages.

The instructions and screenshots provided below are specific to Adobe Photoshop Elements 2.0, but these techniques will work with other versions of Adobe Photoshop, as well as Macromedia Fireworks, Microsoft Photo Editor, and many other image manipulation programs.

### Image Size

Resize images to the size you need them to appear on your Web page before bringing the images into your Web editor. Avoid using the image adjustment tools inside Dreamweaver or FrontPage when possible.

#### **Recommended maximum pixel widths for various types of images**

Depending on your needs you may use the following pixel-width guidelines for creating various types of images for the Web. Height dimensions are less restrictive in Web design than width, but remember that taller images will reduce your available vertical screen space and will require your users to scroll more.

| Image Type               | Target Screen Size |                   |
|--------------------------|--------------------|-------------------|
|                          | 640x480            | 800x600 or larger |
| Banner or header graphic | 600px              | 760px             |
| Photograph               | 400px              | 500px             |
| Graphical button         | 100px              | 150px             |

### Resolution

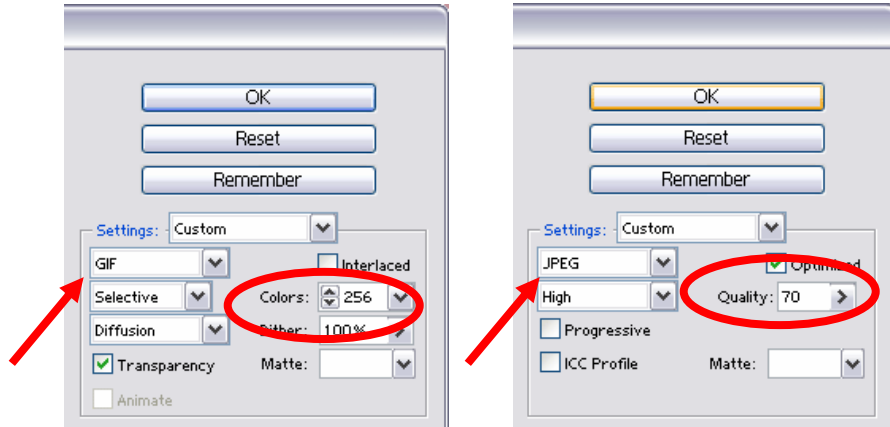
When creating a new image or adjusting the size of an existing image, you can adjust the **resolution** of the image. 72ppi (or *Pixels Per Inch*) is the de facto standard resolution for Web images. There are numerous other standard resolution settings for scanning or printing images (e.g. 150, 200, 300, 600, and 1,200), but unless you have a specific reason to do otherwise, leave your Web images at 72ppi.

### Image Quality

An image's file size can be dramatically reduced by adjusting the quality of the image. When you are ready to save (or *export*) your completed image, select **File** and then **Save for Web** from the main menu-bar. All image quality options are available in the **Save for Web** dialog box. Notice that as you adjust the various image quality settings, you can see a preview of the exported image file size in the lower-left corner of the dialog box.

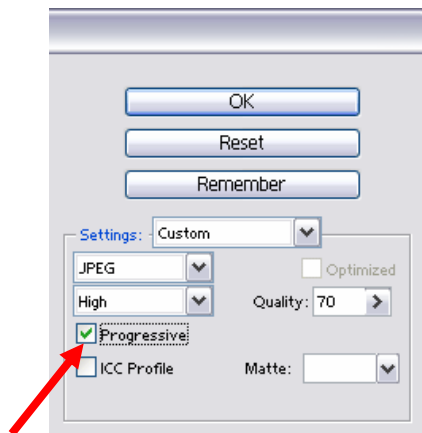
For GIF images, the quality is determined by the number of colors used in the image. Though the number of colors can be adjusted manually, the default options are 2, 4, 8, 16, 32, 64, 128, and 256.

For JPEG images, image quality is defined as a percentage, where 0% is the lowest quality and 100% is the highest.



### Progressive

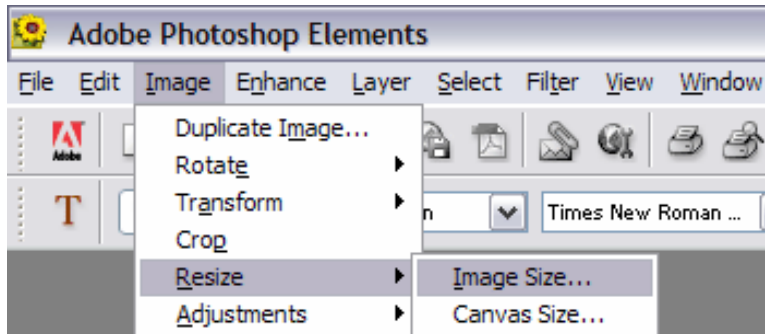
You may also adjust your images so that they load *progressively*. Progressive images allow users to see a low-resolution version of an image before it completes loading in the Web browser. This reduces some of the time a user may spend waiting for the image to load. Only JPG and PNG images can be set to load progressively.



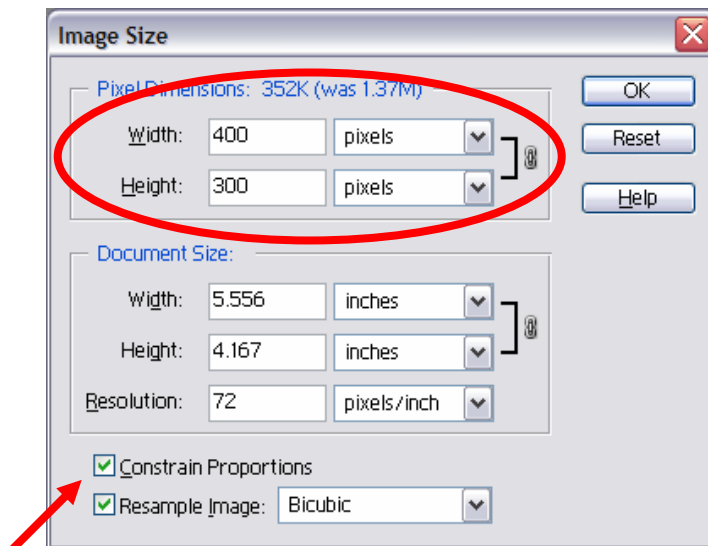
## Adjusting image size in Adobe Photoshop Elements 2.0:

**Step 1:** Open the image.

**Step 2:** From the main menu-bar, select **Image** and then **Resize Image**.



**Step 3:** Adjust the pixel width and height of the image. Inches, centimeters, and other traditional units of measurement don't have any consistent meaning across various monitors, browsers, or computer platforms.



**Step 4:** If the Constrain Proportions option is checked, adjusting the width will automatically adjust the height proportionally. Adjusting the height will automatically adjust the width. This will keep your images from getting unnaturally skewed or squashed.

Your image is now resized. If you're not happy with the new image, you can select **Edit** and then **Undo** from the menu-bar (or press **Control** and **'Z'** on the keyboard).

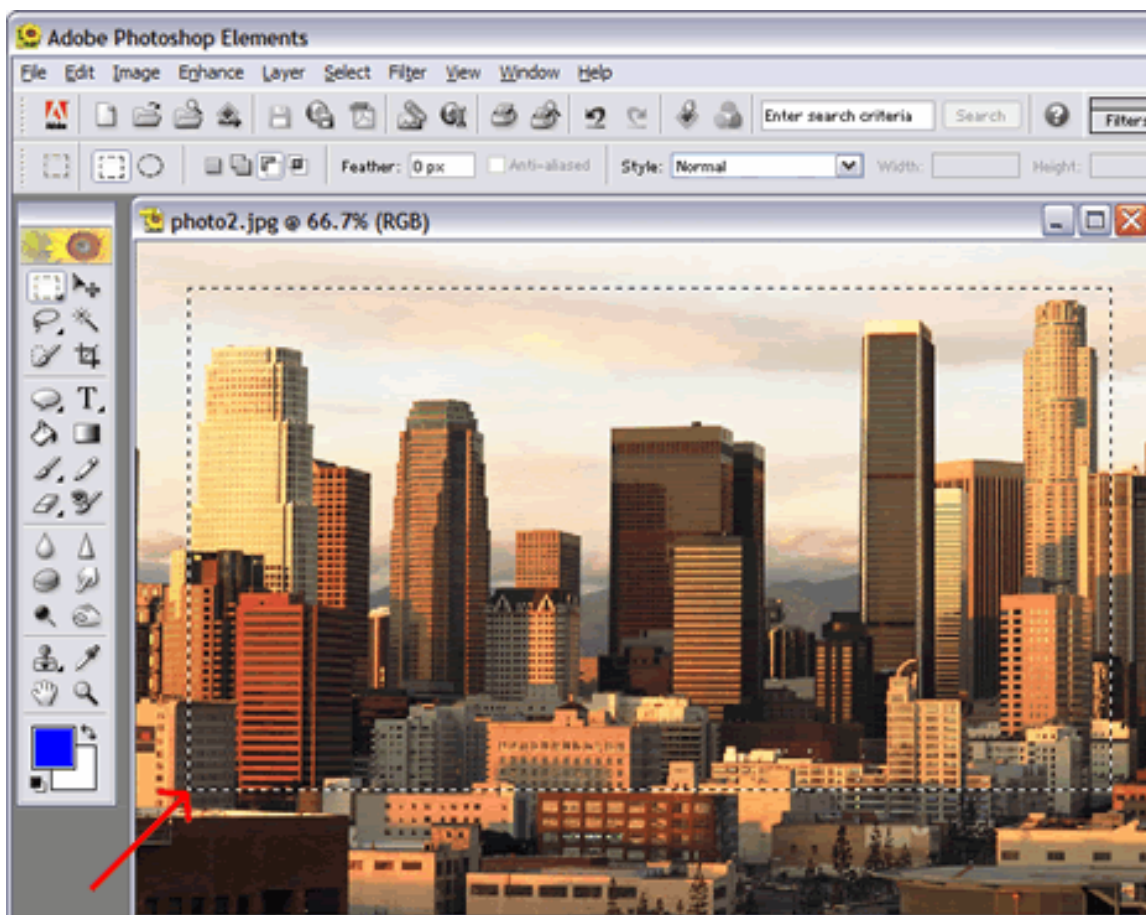
## Cropping Images in Adobe Photoshop Elements 2.0:

**Step 1:** Open the image.

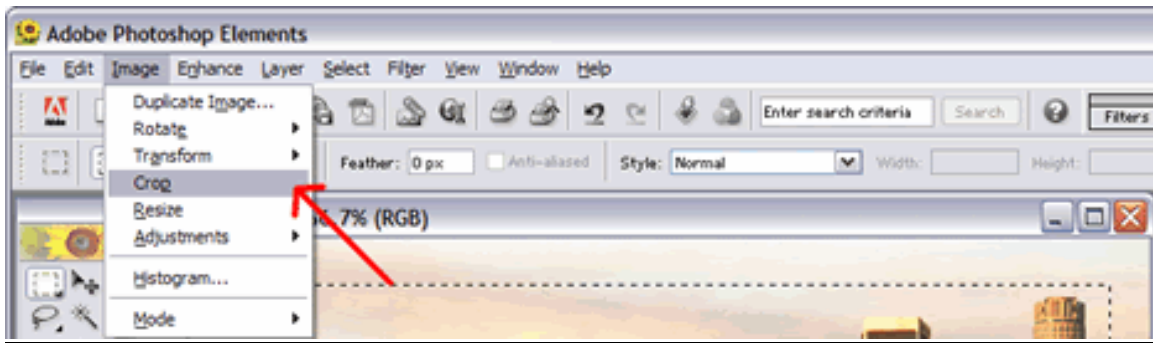
**Step 2:** Select the Rectangular Marquee Tool from the Tools window.



**Step 3:** Using the Rectangular Marquee Tool, draw a rectangle over your image that defines the area you want cropped.



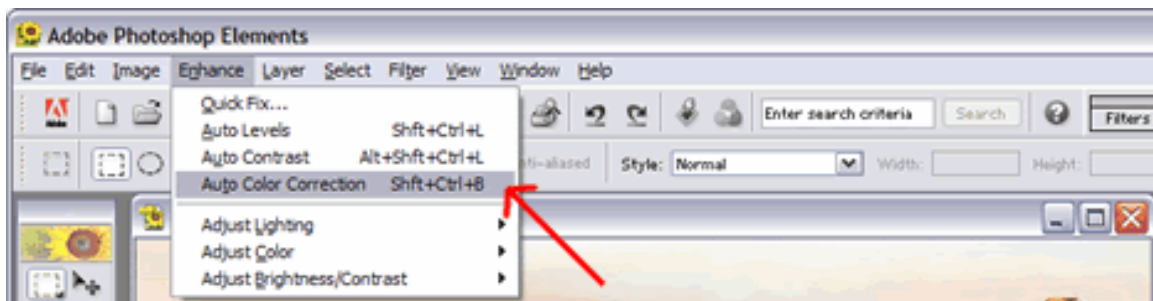
**Step 4:** Select Image and then Crop from the menu-bar.



Your image is now cropped. If you're not happy with your crop, you can select **Edit** and then **Undo** from the menu-bar (or press **Control** and **'Z'** on the keyboard).

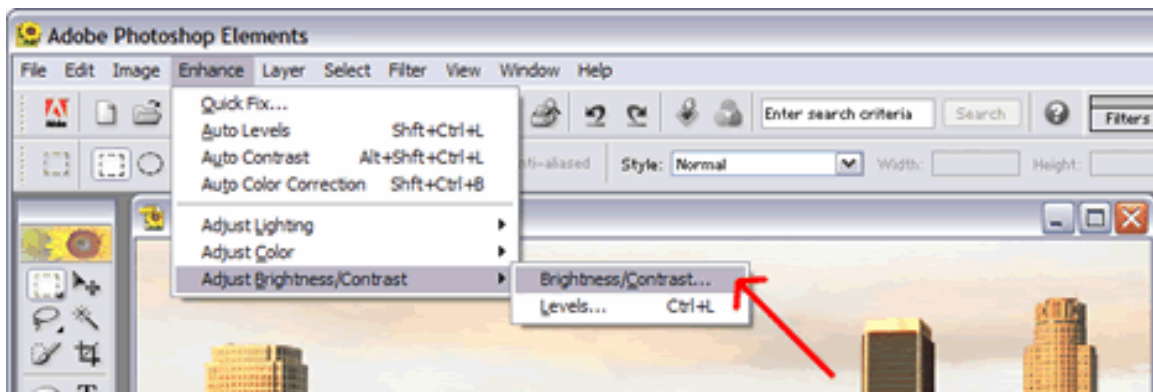
**Color-correcting images in Adobe Photoshop Elements 2.0:**

**Step 1:** You may find it easiest to experiment with Photoshop's Auto Adjustment features. Click Enhance then Auto Color Correction (or Auto Contrast or Auto Levels).

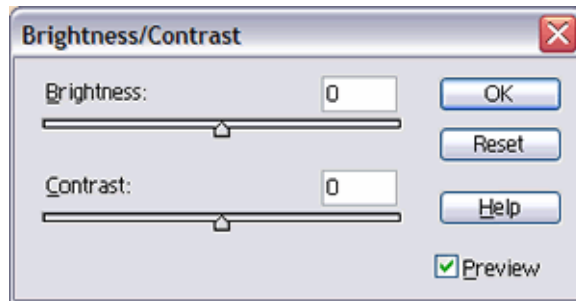


While these features work well with certain images, the Auto Adjustments often make too many "guesses" about what kind of color correction you need. For this reason you may want to experiment with some of the manual color correction features.

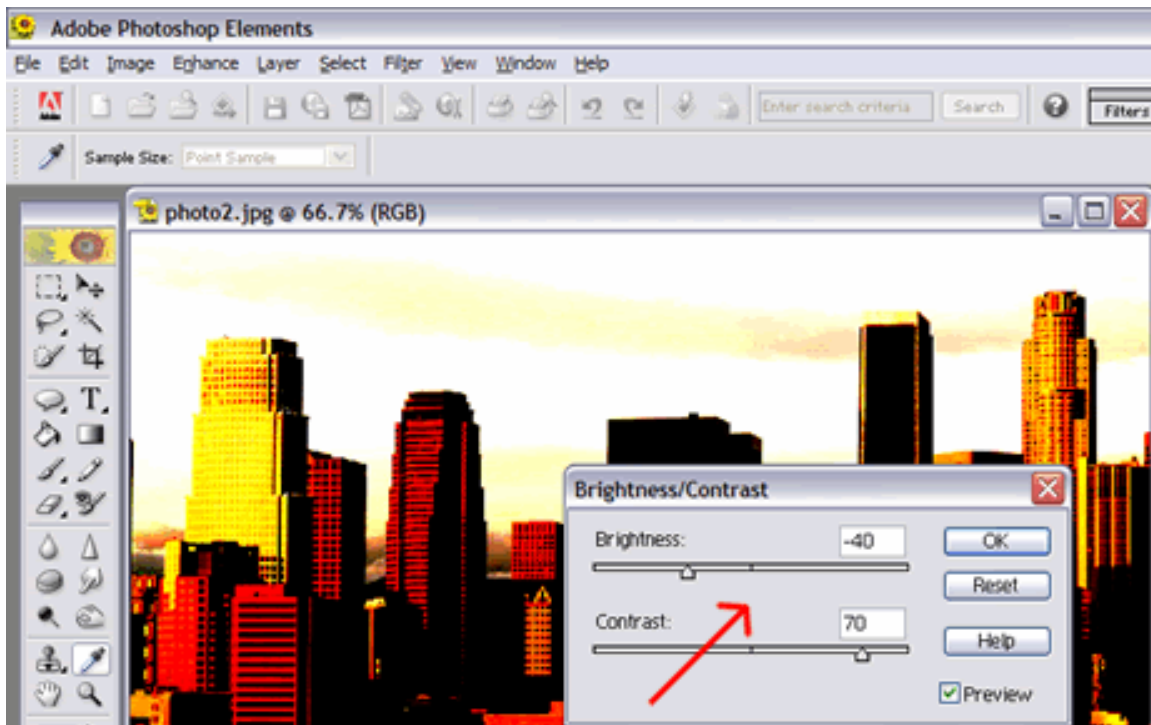
**Step 2:** Click Enhance then Adjust Brightness/Contrast and then Brightness/Contrast.



**Step 3:** You will be presented with two slider bars and a checkbox labeled Preview. Leave this checkbox checked and you will be able to see the result of your adjustments as you make them. If you hit cancel at any time, no changes will take effect.



**Step 4:** As you make your adjustments you will see that it is easy to make drastic changes to your image. With Brightness and Contrast, very small adjustments are generally the most appropriate.



**Step 5:** Because many photographs are over- or under-exposed, Brightness and Contrast are among the most often needed corrections. You may also experiment with "Hue/Saturation" and "Levels" under the "Enhance", "Adjust Color" and "Enhance", "Adjust Brightness/Contrast" submenus.

