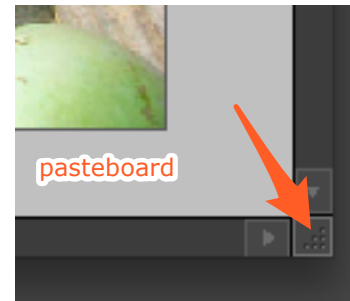


OPEN FILE ---> gourds.jpg (from the Brundage Images folder)

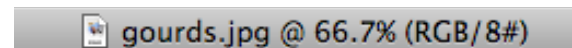
A. EXPANDING YOUR VIEW OF THE IMAGE

You will give yourself some more room to work on the image by expanding the image window. This is *not* changing the actual image.

1. First, give yourself more room to work by closing the **Project Bin**. Look for the teeny, tiny “handle” just above the project bin and **drag it down** like a window shade to hide it. (or, double-click the handle).
2. Now, hide the **Palette Bin**. It also has a “handle” on its left side. Simply single-click on it.
3. Now expand the **gourds.jpg** window by clicking and dragging the **bottom-right corner** down and to the right. You will see a light gray area around the image. This area is called the **Pasteboard**. The pasteboard is NOT part of the image. These are NOT image pixels.



B. ZOOMING YOUR IMAGE IN AND OUT



1. Look at the **Title Bar** of the gourds.com image on your screen. Mine shows a zoom value of 66.7%. What is yours? _____ %
2. **Zoom In** using **menu:VIEW>ZOOM IN** or **COMMAND-=** . What is the zoom value now? ____%
3. Now **Zoom Out** a few times by using **menu:VIEW>ZOOM OUT** or **COMMAND--** {cmd-minus} until you hit 25% zoom value. Expand your view as necessary (using technique in Part A).
4. Now **Zoom To Fit On Screen** via **menu:VIEW>Fit on Screen** or **COMMAND-0** (zero). What zoom value is your image at now? _____ %
5. Viewing your images at 100% zoom is very important when doing certain adjustments, like Sharpening. Now, zoom to 100% directly via **menu:VIEW>ACTUAL PIXELS**. What zoom value is your image at now? _____ %

C. IMAGE RESIZING --> FOR PRINTING

1. In case you made any changes to your **gourds.jpg** image, **REVERT** to the saved version via **menu:EDIT>REVERT**.
2. Now, open the **IMAGE RESIZE** panel via **menu>IMAGE>RESIZE>IMAGE SIZE...**
3. First things first, **disable “Resample Image”** by unchecking the checkbox. This protects you from changing the actual pixels for the time-being.
4. Without making any other changes, if you were to print this image now, what would be the actual printed size? _____ **Inches Wide X** _____ **Inches High**.
 (Hint: Look at the **Document Size** section in the Image Resize panel.)
5. What would the **Resolution** of this printed picture be? _____ **ppi** (pixels per inch).
6. An ideal printing resolution for a good quality, sharp print is **between 220 ppi and 340 ppi**. Set the resolution to a commonly-used figure of **300 ppi**. (Check that **Resample Image** is disabled).

7. What size print can you make now at 300 ppi? _____ **Inches Wide X _____ Inches High.**
This is really too small, isn't it? _____ **Yes,** _____ **No,** _____ **I dunno!**
8. Let's say you wanted to print the image on a piece of **4 x 6 inch photo paper.** Enter **4 inches** for the Width. What is the corresponding Height? _____ **Inches.** What is the corresponding resolution now? _____ **ppi.** Is this sufficient to get a good quality print? _____ (Hint: see #6)
9. If you had an *Epson Photo Stylus* printer, the ideal resolution would be **240 ppi,** but you could get away with **220 ppi.** Change the resolution setting to **220 ppi.** What image size would result as the largest acceptable print you can get from this image? _____ **In. Wide X _____ In. High.**

D. IMAGE RESIZING --> FOR EMAIL/WEB/PROJECTION/MONITOR VIEWING

1. **RESET** the Image Size panel by holding down the **OPTION** key, and clicking on the **RESET button.** You should now be back to where you started: 600 x 800 pixels.
2. YOU WILL BE **"RE-SAMPLING"** PIXELS. THIS MEANS THAT PIXELS WILL BE **DISCARDED** OR **CREATED** IN ORDER TO MAKE AN IMAGE **SMALLER** OR **LARGER ON SCREEN.** NOTE THAT THIS IS DIFFERENT THAN WHAT YOU CHANGE FOR PRINTING (Section C). Also, we are NOT talking about ZOOMING!!
3. At the top part of the **Image Size Panel,** the **"Pixel Dimensions"** section, what are the current **pixel dimensions** of this image? _____ **pixels Wide X _____ pixels High.**
4. Let's say you wanted to make this a **smaller** image on screen (and smaller file size) because you want to email it to someone who has an old-fashioned telephone modem and doesn't want to wait for a large picture to download to his computer. So, you decide to **down-sample (or "down-res")** the picture to a Height of 400 pixels. **The Resample Image check box should be checked.** Also, for down-sampling, the **Interpolation Method** popup menu (just to the right of the Resample Image checkbox) should be set to **Bicubic Sharper** for best results. **Enter 400 for the Height.** What is the corresponding **Width** dimension? _____ **pixels.**
5. Notice the file size information reflected in the top part of the Pixel Dimensions section of the Image Size panel. **Pixel Dimensions: 351.6K (was 1.37M)**. Notice that since we **threw away pixels** in order to accommodate the smaller image size, the resulting file size in memory **decreases.** This is because **pixels = data;** data takes up memory and disk space.
6. **RESET** the Image Size panel by holding down the **OPTION** key, and clicking on the **RESET button.** You should now where you started: 600 x 800 pixels. Note the Zoom factor? _____ %
7. Now, let's say you wanted to fill a screen with this picture. You decide that 600 x 800 is too small. You go crazy and set the Height dimension to 3000 pixels .. **TRY IT!**
8. What is the corresponding Width dimension now? _____ **pixels.**
What is the new file size? _____ **MB.**
9. Look at this picture. What is the **Zoom factor** now? (Hint: Should remain the same.) _____ %.

LOOK AT HOW BAD THIS PICTURE LOOKS! IT'S LOST IT'S SHARPNESS because of the Up-Sampling (or Up-Resing), where pixels are created to accommodate the change. IT IS ALWAYS BEST TO REDUCE IMAGE SIZE RATHER THAN INCREASE SIZE!