



Digital Editing Class

1) Size and Resolution

- a) Crop for content first
- b) Pixel Size
 - i) Pixels per inch
 - ii) $\text{Pixels/ppi} = \text{display size}$
- c) Print size set in the resize box – different than display size. If you have a 600px by 400px pict and print at 200 dpi, print size = 3 x 2.
- d) Maintain aspect ratio to prevent distortion



Open a picture in PSP and click the Pan Arrow. Now zoom in and watch the image display. You'll pixelate the picture; that is squares or pixels of the original display will appear much larger.

How would you make a 400 px by 400 px image from a 640 px by 480 px original?

2) Color and Light

- a) Definitions of color that might help
 - i) Hue – a pure color
 - ii) Tint – hue mixed with white (red is a hue, pink is a tint)
 - iii) Shade – hue mixed with black (maroon is a shade of red)
 - iv) Tone – hue mixed with gray
 - v) Chroma - is the saturation or intensity of a hue (red has a higher chroma than maroon)
- b) Color models
 - i) RGB – all colors on a computer screen are a mixture of red, green, and blue
 - (1) Each is given a possible color value of 0 to 255
 - (2) Yellow, for example is 255 red, 255 green, and 0 blue
 - ii) CMYK – cyan, magenta, yellow, and black
 - (1) This is a subtractive model, as light is reflected from a surface part of the light is absorbed. Those wavelengths reflected create the color we see.
 - (2) It is used for print. We will not use this model to edit images.
 - iii) HSL – hue, saturation, and lightness
 - (1) Hue value is assign based on its position on the color wheel
 - (2) Saturation represents the amount of gray in the color, 0 = entirely gray, 255 is a fully saturated color
 - (3) Lightness – perceived intensity of light in the color; 0 = black, 50% lightness or 128 is considered pure color



Let's try working in Paint Shop Pro on color models – open a new white image and use the **Materials Palette** to change colors. (hint drag the palette out to a place its convenient for you to use)

3) File Types

- a) Raster or vector
- b) **jpg or jpeg** – lossy compression
- c) **gif** - loss less compression, 256 colors, supports transparency
- d) **tif** – can be compressed, usually not, no loss of image quality
- e) **png** (pronounced ping) – 8 to 24 bit color, supports transparency
- f) **wmf, eps, ai**, and some others are vector based file formats. They can also store some raster image information.

4) Layers

- a) Use them – click new raster layer button
- b) Layer content can be repositioned
- c) Layers can be thrown away if you do not like the change
- d) Arrange stacking order
- e) Adjustment Layers
 - i) Only that layer is changed, no change to image below
- f) Link layers to move together – right side of layers palette
- g) Layer mask –we'll do this under masks
- h) Layer opacity – change from 0 to 100, use slider next to eye on right of layer palette
- i) Blending mode – default = normal
 - i) Blending Modes of two layers
- j) Text layers under text
- k) Panoramas using layers



Open a picture. Try creating new layers. Add some brush strokes to each so that you can see their content. Rearrange the layers' stacking order in the layers palette. Change their opacity to see the effect on the whole image. Now open two images, select all of one and copy it as a new layer to the second. Change the opacity of the pasted layer to see it blend with the layer below

Building a collage or composite image: Open several images and a new blank image with a white background (about 500 px by 500 px). Select pieces of the opened images to paste as layers on the new blank image. Vary the stacking order and opacity of the layers until you get an image you like.

Color cast – fill the bottom layer with a color (set flood fill tool's tolerance to 255) and vary the layers opacity above the bottom layer.

Build a Panorama from 2 or more pictures taken for this purpose - decrease layer opacity to help line up the pictures so common features overlap a bit.

5) Text

- a) PSP creates 3 types of text
 - i) Vector text – only text that is editable after it is created
 - ii) Floating raster text – acts like a selection. You use painting tools on it.
 - (1) It is a good idea to create this type of text on a new layer
 - (2) Can apply special effects
 - iii) Selection text – is a selection on a layer.
 - (1) You can apply special effects.
 - (2) You can copy and paste selection text from one image to another.



Try creating the 3 types of text on an image. Try pasting selection text from one image to the next.

Try creating floating text on a new layer and apply a 3d Effect (found under the Effects Menu)

6) Selections

- a) Selections isolate parts of the image that can be changed – selections protect parts of the image outside of the mask
- b) Selections are based on an alpha layer with 255 colors from white to black, this allows you to vary opacity of the mask
- c) Tools: Freehand selection tools, magic wand, and shape selection
- d) A selection can be made from a mask
- e) Feather the selection to create a gradient of protection around the edges



Open two images and try selecting an object in one image. Once you have a selection with which you're satisfied, paste it as a new layer in the second image. Move it to a position you like.

Do the same thing again with a picture and a new blank image, only feather the selection this time. Add a feather setting (in the toolbar for selections) of 10 or higher so you can see the results. Copy and paste a piece of the picture onto the blank image as a new layer.

7) Masks

- a) Masks allow you to see through a layer to a layer below
- b) Layer masks can show all or hide all



Open an image, then create an empty layer above it. Fill this layer with a solid color so you can no longer see the background. Now select the second layer and create a new mask layer that shows all (Layers/New

Mask Layer). Paint on this mask layer with white, now try black where you've added white. Paint more of the mask with white. Now paint with a shade of gray.

c) You can use an image as a mask. If it is a grayscale image you can easily see how it would work, but what about color?



Open an image and add a new layer. Fill this layer with a solid color. Now create a new image with 2 lines of large text - make one line black and the other yellow or green. Now add a layer mask from an image to the picture you opened and covered with a solid color, select luminance from the masking choices. Be sure you add the mask to the second layer. What happens?