

# INTRODUCTION TO ADOBE PHOTOSHOP

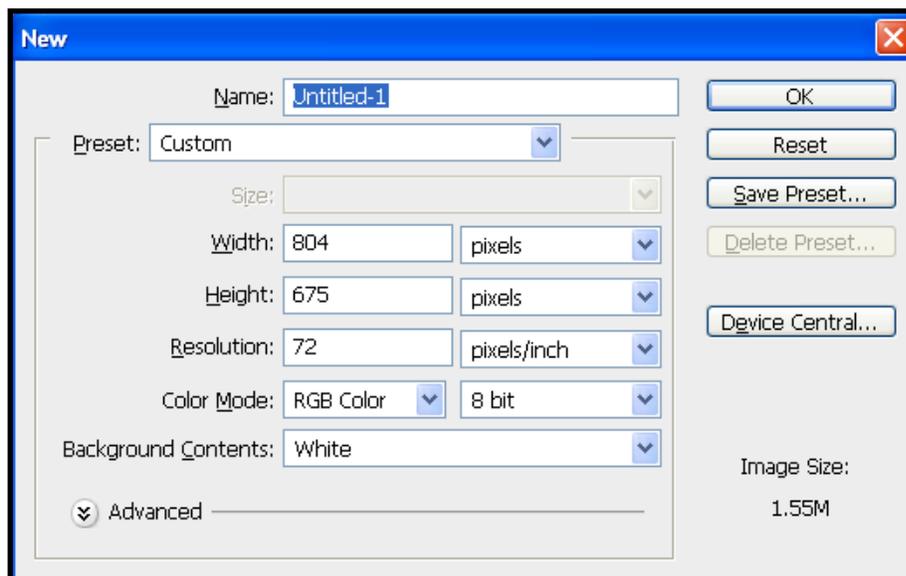
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## OVERVIEW

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## 1. Creating a New File

Open a new file via the Menu bar by hitting **FILE > NEW** or use the quick keys **Cmd N**:



## Presets:

This drop down menu will give you some optional presets for your document, such as **International Paper sizes, Mobile & Devices, Web, etc.**

## Width/Height Measures:

**pixels:** Stands for “picture element” - smallest measure of a digital image.

**inches, cm, mm:** Best settings for print projects.

**points:** A unit of measure in typography. Measures 1/72 of an inch. 72 point type is 1 inch high.

**picas:** A pica is 12 points.

**columns:** Column measures can be used to format images for InDesign where columns are more commonly used.

## Resolution:

Measured in pixels per inch, or *ppi*. The higher the ppi, the larger the file.

72 ppi - Web resolution

300 ppi - Minimum print resolution.

If you don't know what the image will be used for, start high. You can save low later if required.

## Colour Mode:

### **Bitmap:**

This mode uses only black or white, with no shades of gray.

### **Grayscale:**

This mode uses 256 shades of grey allowing for subtle shades and clear details.

### **RGB:**

Standing for Red, Blue, Green, RGB mimics light. As such, *it works best on an illuminated screen, as in websites or visual presentations.*

### **CMYK:**

*This mode is appropriate for print materials, as Cyan, Magenta, Yellow and black are the process colours of printers.*

### **LAB:**

This mode uses brightness and luminance as well as colour to balance images for different devices.

## Bit Colour:

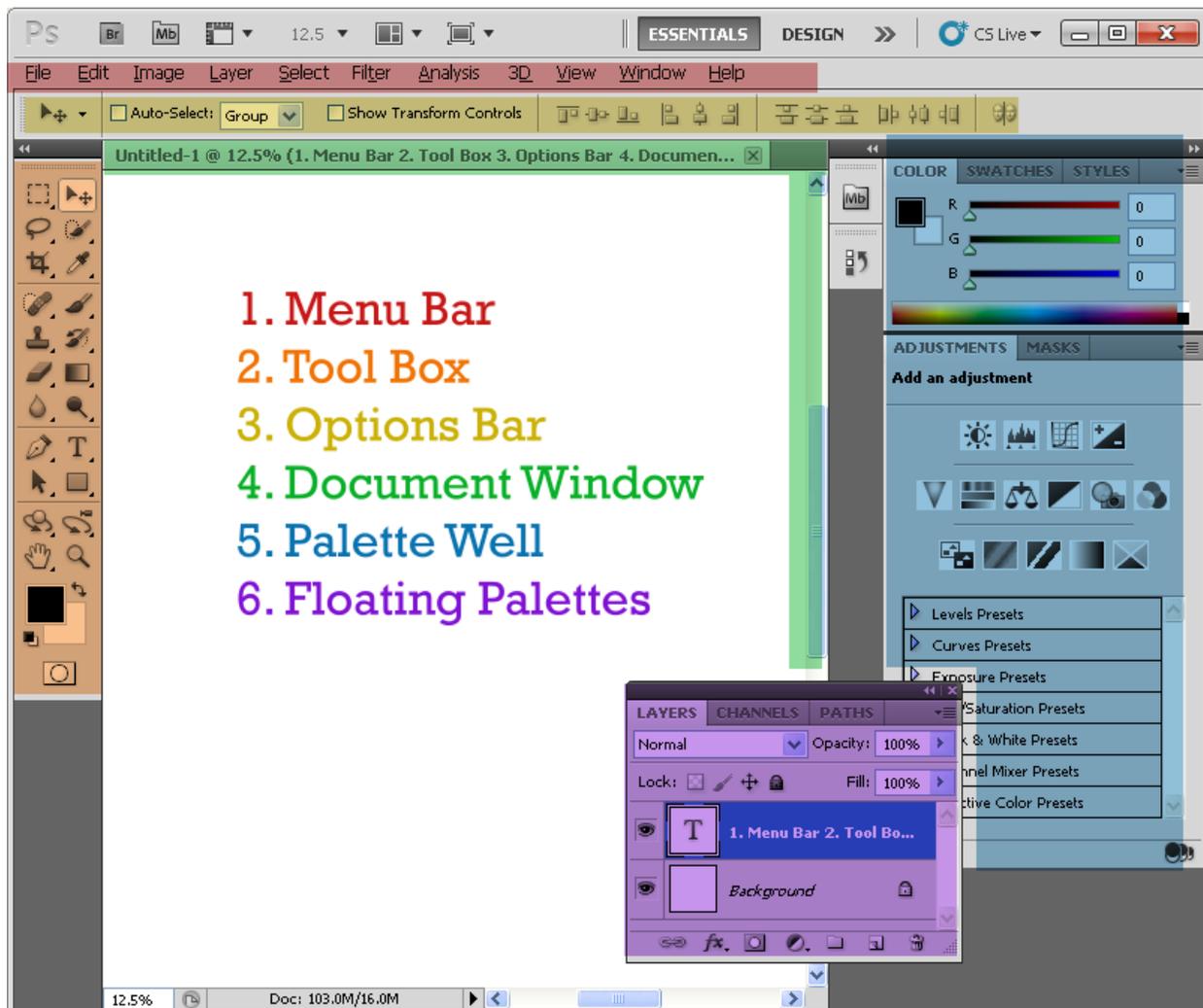
Jpgs use 8 bit colour, which provides millions of colour variations.

16 & 32 bit colour is used in raw files, and provides trillions of colour variations. This provides more flexibility in editing, and results in much larger files. Professional photographers will often shoot in raw, and transfer those files directly to Photoshop for editing.

## Opening an Existing File

Use the menu bar by clicking **FILE > OPEN**, or use the quick keys *Cmd O*.

## 2. Interface Orientation



(above: Colour coded guide to the interface)

1. Menu Bar : **File, Edit, Image, Layer, Select, Analysis, 3D, Window, and Help.** Navigate the wealth of options through drop down menus.
2. Toolbox: The tools of Photoshop craft.  
Tools for selection, cropping, retouching, painting, etc.
3. Options Bar (control panel):  
The settings and options of your selected Tool.
4. Document Window: Opened files.
5. Palette Well: Palettes keep information, tools and options visible and at the ready while you are working on a file. Highly adjustable. They can be docked in the Palette Well, far right.
6. Floating Palettes: Palettes can be pulled out of the Well and maneuvered for convenience.  
(Window>Workspace>Reset Palette Locations to reset)

## Tools and Keyboard Short Cuts (Quick Keys)

A Quick Key (or Hot key) is a keyboard short cut to a tool or function. I.e.) To save a document, you can use the Menu bar by hitting **FILE > SAVE**, or you can use the quick keys: **Cmd S**. To Select the **Move Tool** from your tool bar, you can drag your cursor to the black arrow at the top of your tool bar, or you can just hit the letter **V** on your keyboard.

**Toolbar Quick Keys:** Hover your cursor over any tool, and it's name and quick key will be displayed. I.e.) **Move Tool (V)** - "V" is the quick key. Where one tool button may contain multiple tools, hitting **SHIFT** with the respective Quick Key will scroll through the options.

**Menu Bar Quick Keys:** Items in the drop down menus with quick key options will list them beside their name. I.e.) **Open... Cmd O**

The page below contains the full list of Toolbox Quick Keys and a smaller box with some frequently used quick keys for common functions. You can keep it handy while you are learning.

## Toolbox Tools and their Quick Keys



V	Move
M	Marquee tools
L	Lasso tools
W	Quick Selection, Magic Wand
C	Crop and Slice Tools
I	Eyedropper, Color Sampler, Ruler, Note, Count
J	Spot Healing Brush, Healing Brush, Patch, Red Eye
B	Brush, Pencil, Color Replacement, Mixer Brush
S	Clone Stamp, Pattern Stamp
Y	History Brush, Art History Brush
E	Eraser tools
G	Gradient, Paint Bucket
	Sharpen, Blur, Smudge (no quick key)
O	Dodge, Burn, Sponge
P	Pen tools
T	Type tools
A	Path Selection, Direct Selection
U	Rectangle, Rounded Rectangle, Ellipse, Polygon, Line, Custom Shape
K	3D Tools
N	3D Camera Tools
H	Hand
R	Rotate View (also under the Hand button)
Z	Zoom
D	Default colors in Colour Picker
X	Switch Foreground and Background colors
Q	Quick Mask Mode

Some buttons have more than one tool nested within them. To switch between all tools within groups, hold the **SHIFT** key while hitting the letters above. For example, to switch between the **Magic Wand** and **Quick Selection** Tools, hold **SHIFT** and hit **W** several times to toggle between them.

THE SUPER KEYS - add your own as you learn!

**Cmd C - copy**

**Cmd X - cut**

**Cmd V - paste**

**Cmd A - select all**

**Cmd D - deselect**

**Cmd Z - undo (1 move)**

**Cmd T - free transform**

**Cmd S - save**

**Cmd SHIFT S - save as**

**Cmd O - open**

### 3. Selecting and Resizing

#### Selection Tools:

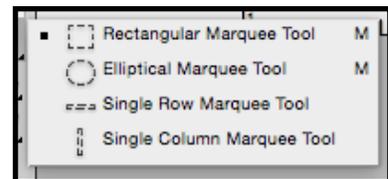
In order to work with a portion of your image, it must first be selected. The selection tools are:

	M	Marquee tools
	L	Lasso tools
	W	Quick Selection, Magic Wand

You can also Select All by clicking in the Menu bar: **SELECT > ALL**, or by using Quick Keys **Cmd A**. You can Deselect any selection using **SELECT > DESELECT** or **Cmd D**.

#### Marquee Tool (M):

- **Selecting Different Marquees:** Select Marquee from the Toolbox or hit **M**. Hold **SHIFT** and hit **M** multiple times to scroll through the different options.
- **Perfect Square or Circle:** Once selected, hold the **SHIFT** key down as you drag your cursor.
- **Add to Existing Selection:** Hold the **SHIFT** key down as you make an other selection.
- **Subtract from Existing Selection:** Hold the **ALT** key and deselect from your existing selection.



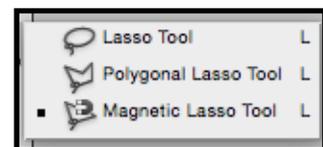
#### Lasso Tool (L):

**Freehand:** Lets you draw your own selection.

**Polygonal:** Create a selection using only straight lines.

You click from point to point.

**Magnetic:** Snaps to edges - works best in high contrast areas.



#### Magic Wand Tool/Quick Selection Tool (W):

**Magic Wand:** Designed to select pixels of similar colour.

Tolerance can be adjusted in the Options Bar (default is 30).

**Quick Selection Tool:** Picks up on not only colours but textures. Paint over areas you want to select; holding **SHIFT** is *not* required to add to selection. This tool is especially good at detecting edges. *A Favorite.*



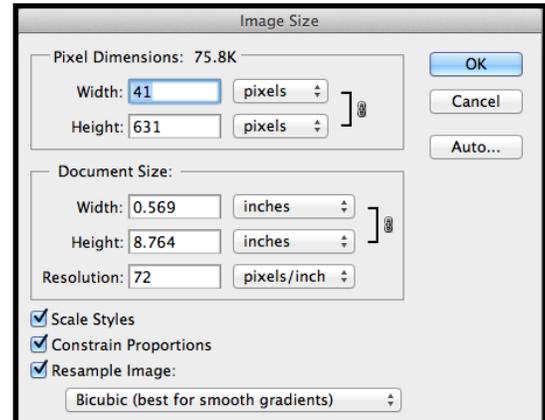
## Crop Tool (C):

Once selected, drag the Crop tool over the area you'd like to crop. Adjust the handles to tweak your selection. Double click to crop.



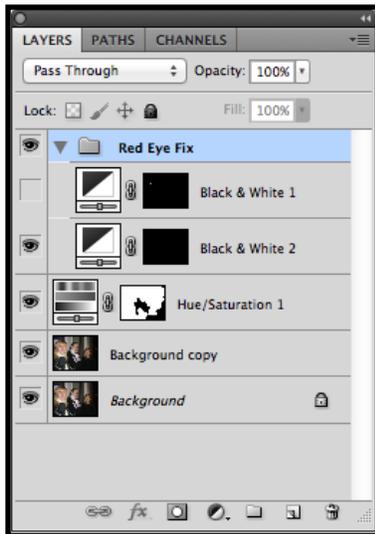
## Resize an Image:

To resize your entire image, on the Menu Bar, click IMAGE > IMAGE SIZE. Here you can change the unit of measure, resolution and document size.



The **Scale Styles** and **Constrain Proportions** **Boxes** should remain checked so your changes are made to scale.

## 4. Introducing Layers

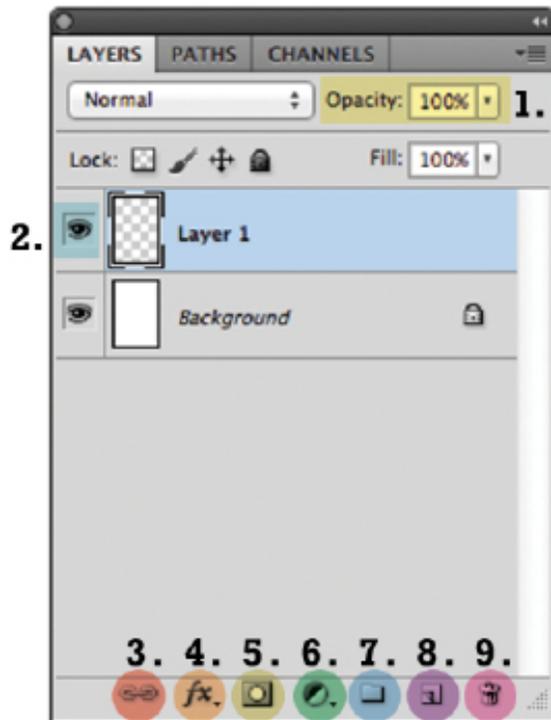


Layers are one of Photoshop's most powerful tools. Imagine a photograph with multiple layers of transparency sitting on top of it, each one changing a minor aspect of the image: adding depth, making a correction, removing unwanted information, or adding a new element all together. Each layer can be turned on and off, grouped together, linked, tweaked, and improved continually. That is how layers work, and knowing how to use them opens up Photoshop's possibilities.

The Layers Palette is usually open by default on the bottom right corner of your screen in the Palette Well. It can also be opened by using the Menu Bar and clicking WINDOW > LAYERS or by hitting the F7 key.

*As mentioned earlier, like all palettes, the Layers Palette can stay in the Palette Well or be dragged closer to your document by clicking on the grey top bar of the panel (next to the tabs that say Layers, Channels, Paths), and dragging it away from the docking area.*

## The Layers Palette



1. **Opacity Slider**
2. **Indicates Layer Visibility**
3. **Link Layers**
4. **Add a Layer Style**
5. **Add a Mask**
6. **Create new Fill or Adjustment Layer**
7. **Create a new Group**
8. **Create a New Layer**
9. **Delete Layer**

\* **Hovering the cursor over an unknown element will usually reveal information.**

### Opacity Slider:

Allows you to change the opacity of a selection within the Layers Palette.

### Indicates Layer Visibility:

Make the layer visible or hidden by clicking the eye icon.  
Great for testing effects.

### New Layer:

Click this button to create a new layer on top of your currently selected layer

## HOT TIP

Get into the habit of naming all new Layers. Later when scrolling through your full Layers Palette, you will be able to find what you need quickly and easily.

### Create a New Group:

In the same way you organize your computer's files, creating a group lets you drag selected layers into a folder that can be minimized or expanded. This can create space in your Layers Palette and allow for easier organization of similar layers.

**Layer Mask:**

Layer Masks affect the transparency of each Layer, and allow you to block or mask out portions of that layer.

**Link Layers:**

Two or more layers can be linked together, so that changes to one layer, such as resizing or moving, will effect all linked layers. To link, select the appropriate layers by clicking them while holding down the Ctrl key. Hit the Link Layers button to link.

**Delete Layer:**

Layers can be discarded either by selecting the layers you want to delete and clicking the Trash bin, or by manually dragging the layers into the Trash bin

**Adjustment Layers (vs. Direct Adjustments):**

Adjustments allow you to make changes and corrections to your image. This is where Contrast, Brightness, Saturation, Exposure, and more can be modified and manipulated.

Adjustments can be done *directly to the image* - this is done by using the Menu bar and clicking **IMAGE > ADJUSTMENTS**, which will produce a drop down menu full of options.

Adjustment Layers allow for *non-destructive editing*, as the layers (and their respective changes) sit on top of the original image, which remains untouched. This also allows for more creativity and flexibility, as these adjustments can be layered, reordered, and modified continually.

## Resizing Layers

The advantage of using layers is that by separating elements of your image, you can manipulate them separately. To resize only one layer (or a portion of a layer, using the selection skills you learned above):

1. Select that layer from your Layers Palette by clicking on it.
2. Go to the **Menu Bar > Edit > Free Transform** OR use the quick key **Cmd T**.
3. A Bounding Box will appear around your selection. By clicking and dragging on the boxes around it, you can stretch and resize the image.
4. Hold **SHIFT** to keep changes to scale.
5. Double click the selection or select another tool from your toolbox to exit transformation mode and lock in your changes.

## 5. PROJECT 1

In this project we will open an image, talk more about and demonstrate destructive and non-destructive editing, adjust the colour and contrast of the image, do some light touch ups.

1. Open up the indicated file (see instructor) by either clicking **FILE > Open** on the Menu Bar or hitting **Cmd O**.

**Destructive Editing** makes changes directly to your original file. The more changes you make, the more information is lost. This results in a deterioration of the image quality and limits your freedom to undo or tweak your changes.

**Non-Destructive Editing** (as mentioned) keeps your original image untouched, and allows for ongoing manipulation without information loss.

### Step 1: Fixing Red Eye Through:

#### 1. Destructive Editing

a. Select the Red Eye Tool from the Tool bar by either clicking and holding on the Healing Brush (the bandage icon), which will open the menu, or by holding the SHIFT key and hitting J until the Red Eye icon appears.

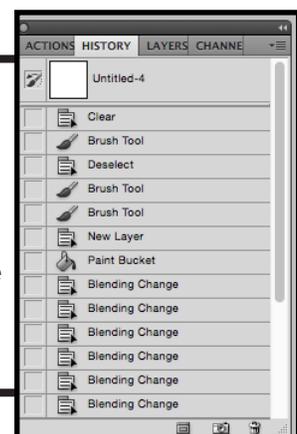


b. Hover cursor over the red eye in question and click.

The image itself has been coloured. (Change cursor with the Options Bar)

#### HOT TIP

If you make a mistake or don't like the effect, hit **Cmd Z** to undo, or click **EDIT > UNDO**. This will let you go back one move. If you made several clicks and want to undo all of them, go to **WINDOW > HISTORY** which will open up the History Palette. Here you can see and undo multiple actions, or click the file name at the top to undo all actions and start fresh.



#### 2. Non-Destructive Editing

There are a several ways to remove red eye while keeping our primary file intact. We will use the Quick Selection Tool and the Black and White Adjustment Layer.

**a.** Select the Quick Selection tool from the Tools by either clicking and holding on the Magic Wand, which will open the menu, or by holding the SHIFT key and hitting W until the Quick Selection icon appears.



**b.** Click on the red pupils until the red area is selected. Hold down SHIFT to make multiple selections, i.e. So both eyes are selected at the same time.  
*Note: If needed: Zoom in on the image by clicking on the Magnifying Glass in your Tools (Quick Key: Z) or holding Cmnd + (you can zoom out with Cmnd -).*

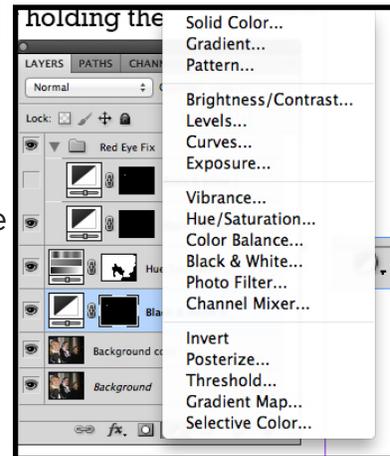
**c.** When you are happy with your selection, go to your Layers Palette, and hit the button to Create an Adjustment Layer.



Select **Black & White**.

**d.** The subject's pupil's should now be in grayscale, and an Adjustment Palette will have popped up.

**e.** Adjust the Red slider (the colour being adjusted is red) and darken the eyes, until you are happy with the result.

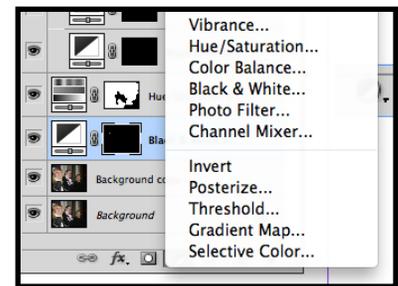


*This may seem like much more work, but as we continue working with non-destructive editing, the benefits and flexibility will become clear.*

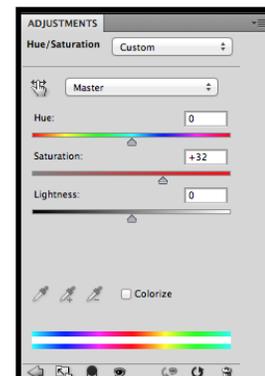
## Step 2: Adjusting Colour & Levels Non-Destructively.

By applying changes to layers that sit above the image, the fidelity of the original is maintained.

1. Click the Adjustment Layer button on the Layer Palette. This will call up the same menu we just used. This time select **Hue/Saturation**.
2. An Adjustment Palette with Sliders will open up.
3. Click on the pointer below each slider and move it to change your image.
4. Note the new Adjustment Layer in your Layers Palette.

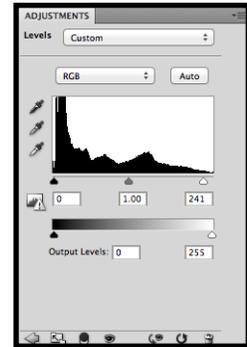


**Note:** *These sliders can always be accessed and changed by clicking the slider icon in the layer.*



Let's Add Another!

1. Click the Adjustment Layer button on the Layer Palette. This time select "Levels".
2. A new Adjustment Palette will open up.
3. Increase Darks by sliding the black triangle (below the graph) to the middle. Increase Lights by sliding the white triangle toward the middle.



**Note:** *Hue/Saturation and Levels are good tools to use when editing images for the web. The internet tends to lighten images. Darken and increase the Saturation on photos to maintain vibrancy and contrast online.*

### Step 3: Touch Ups Using the Clone Stamp Tool

The **Clone Stamp** (Quick Key: **S**) allows you to copy part of your image and paint or stamp with it. This is especially useful for touching up photographs.

1. Zoom in on the subject's face, using **Cmd +** (**Cmd -** will zoom you out again).
2. Create a New Layer above the image layer by hitting the Create New Layer button at the bottom of your Layers Palette.
3. Select the **Clone Stamp** from the Tool Bar or by hitting the Quick Key **S**.
4. Go to the Options Bar. Set your brush to 25, and Hardness to 15%. Opacity should be at 100%. Make sure the drop down is set to **Current & Below**.



5. Choose a portion of your image to clone. If you are covering a blemish, chose a patch of skin to sample that is similar to the area you want to cover.

To select: Hold down the **ALT** key. Your cursor will turn into a target. Hover on the selected area and click the mouse.

6. Move your cursor over the area you want to paint. Your cursor will give a preview of the clone stamp. If you don't like it, re-sample. When you are ready, click to paint.

For fun, go to your Layers Palette and click the eye icon that indicates layer visibility. Hide and show all of your layers and compare the image with and without effects. If desired, reopen the sliders on your Adjustment layers and tinker with them. Change the Opacity of your Clone Stamp layer. Add more Adjustment layers. Explore the variations.

## HOT TIP

**Remember:** You are painting on a separate, transparent layer above your original image. If you don't like your results you can erase, manipulate, and even delete the layer, without harming the original. Non-Destructive!

## 6. Working with Text

Click the Text icon in your toolbar or hit the quick key **T**. Note the changes in the Options Bar/Control Panel: Familiar options appear to change the typeface, size, colour, alignment, etc. Further type editing tools are available from the drop-down menu: There are two ways to place text:



**1. One click:** Click anywhere on your image and start typing or paste text. You will notice the words continue in a long line. In this mode you must manually add line breaks.

- Switch to the **Selection Tool** or move the cursor away from the line of type (until it changes to a black arrow) to move the type selection around on your image.
- To exit the type mode, select another tool from the tool bar.
- To edit text, reselect the **Type Tool (T)** and double click on top of your text.

**2. Click and drag a text box:** By clicking and dragging you create a text box that you can type in or paste text into. Line breaks occur naturally based on the size of the box. Hover your cursor over the boxes on the corners and medians of the bounding box - it will turn into a double ended arrow. With this, you can resize the box without altering the text inside.

Hold your cursor outside of the text box until it turns into a black single arrow. With this you can move this box around your image.

*Note: Photoshop is not an ideal program for a text heavy project like a large brochure or book layout. For a project in which text is minimal and treated more like a design element, Photoshop can be a successful choice.*

## 7. PROJECT 2

In this project we will use our selection tools, adjustment layers, photoshop filters and text tools to create a collage image and give it an old-timey, distressed feel.

**Step 1:** Open the image you want to modify. (**Cmd O**)

**Step 2:** Click the adjustment layer “Photo filter,” select **Sepia**, and adjust the slider until you’re happy with the effect



**Step 3:** Duplicate the image layer and name it. Make sure this layer is above your original image layer. Click **Filter** in the menu bar, and select **Gaussian Blur**.

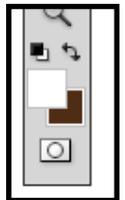


**Step 4:** Add a layer mask to this layer. Select a brush, adjust it’s edges and paint into the layer mask, revealing the in focus image underneath, but leaving the edges blurry.

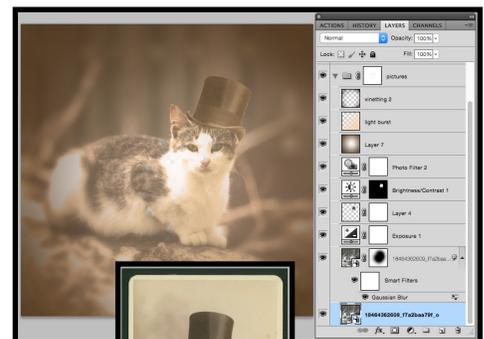


**Step 5:** Try out different adjustment layers, such as **Exposure**, **Brightness/Contrast**, **Curves**, **Levels** to create an aged effect.

**Step 6:** Add a new layer. Name it *Vignette*. Select it. Select your **Eyedropper (I)** tool, and click into the darkest part of your image (it should now be the foreground colour in your Colour Picker). Use **X** quick key to switch the foreground and background colours until you have white in the front, the dark brown in the back. Select the **Gradient** tool (quick key **G** - however this is a nested tool, so hit **SHIFT + G** until the icon looks like a small gradient). Select **Radial Gradient** from the control panel. Click into the centre of your image and drag a line out to any corner. Set the blending mode of that layer to multiply and adjust the opacity until you are happy with the effect.

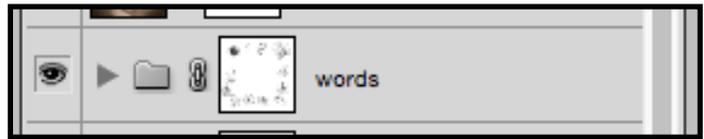


**Step 7:** Move to your second image. Use your selection tools to grab a selection. Use the **Refine Edge** button (in your control panel) to finesse the selection. When you like it, use **Cmd C** to copy. **Cmd V** to paste that image into your primary image. Add an adjustment layer and your brushes to fit. Make sure the selection falls under your other adjustment layers, so it blends in.



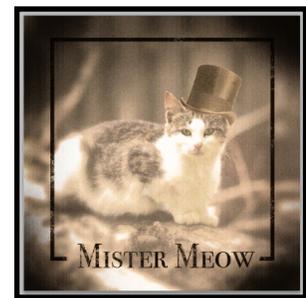
**Step 8:** Select the Type Tool (T) and click into the image, and add some type.

**Step 9:** Add an adjustment layer to your type. Select a different textured brushes from your brush palette (**File Menu: Window > Brushes**), and paint into your adjustment layer (with black). Adjust your brush settings until you get a nice distressed effect.



**Step 10:** Take your image layers and group them into a folder. Name it “*Master Layers*.” Duplicate that file (drag it over the **New Layer** icon), and re-name that “*Merged Image*.” Open that file, select all of its contents and flatten them (Control Click on the selected files and chose **Merge Layers** from the drop down menu or hit **Cmd E**). This will merge all layers into one, while the second Master file holds your originals intact.

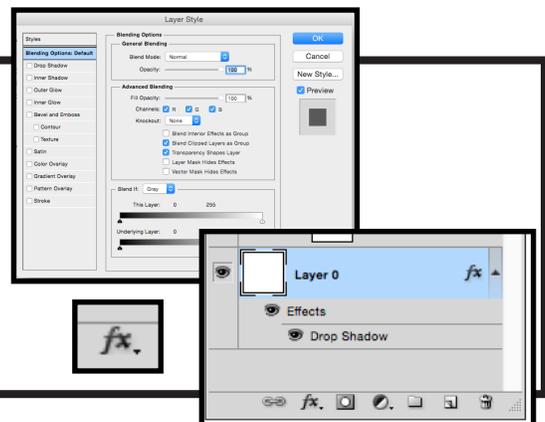
**Step 11:** Select the single Merged image, and open your Filter Gallery (**File Menu: Filter > Filter Gallery**). Select **Texture > Grain > Vertical**. Adjust the sliders until you’ve achieved the effect you’d like. Try the other grain options, experiment with filters, and try layering them. Have fun!



## HOT TIP

### The FX Panel, aka “Blending Options”

Add special effects like Drop Shadows, Outline (“Stroke”), Glow, and others to text or design elements. These effects are non-destructive, and can be turned off and on by clicking the eye-shaped icon that shows up under the layer.



## 8. Save Your Files

1. FILE > SAVE AS (or hit **Cmd SHIFT S**).
2. Name the file
3. Choose your file's destination
4. Click Format to produce a drop down menu full of options:

CHOOSING FORMAT:

PSD - The Photoshop PSD preserves your layers. ***ALWAYS save as a PSD first, then save as desired.***

TIFF - Great for high quality photographs/images for print. File sizes are very large. Not suitable for web, but a lossless format - all information is retained (can be saved with or without layers).

JPEG (JPG) - You can choose the quality of a JPG, so it can be suitable for print and web, if your resolution is set accordingly. Layers are flattened, and the files are compressed, so a bit of information is lost every time you open and re-save.

GIF - Very small file sizes, so they load quickly online. Better suited to graphics (logos, banners, etc) than to photographs.

PNG - A fairly recent alternative to GIFs. Good for graphics and retains transparency. Fine for web use.

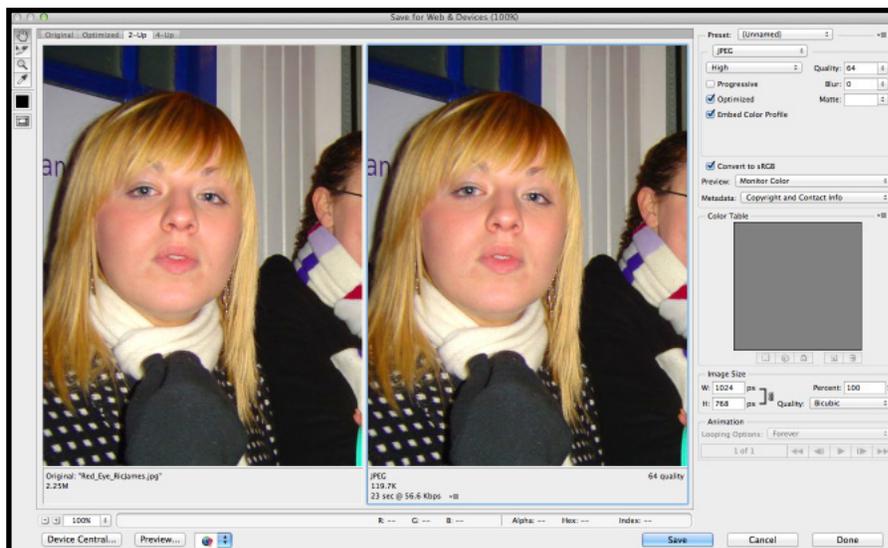
Click the best format for your project and hit **SAVE**.

*Note: Don't forget if you are saving for print, your resolution must be at least 300ppi. To check the resolution of an image, go to the Menu Bar and click **IMAGE > IMAGE SIZE**.*

## SAVE FOR WEB & DEVICES

Photoshop offers a specific function called Save for Web & Devices. It automatically converts any sized image to 72ppi, and offers a pop up window where you can customize the various adjustments before you hit save.

1. File > Save for Web & Devices.
2. The pop up window offers a side by side comparison of your original image and the web-ready image, with file sizes listed at the bottom of each. As you make modifications, the file size of your web-ready preview window will change. Here you can find the balance between low file size (most web images are around 100K or less) and image quality.



- In the top right corner of the pop-up window, you can choose your **Format** (only Web compatible formats are listed), and **Quality**: there is a numerical slider as well as a drop down menu that gives you options like High, Low, Very Low that also correspond to numerical values. Further down there is an option to adjust the image size. Many blogs will list an optimal image size in pixels, usually between 500 and 800 px.
3. Once you have reached a desired outcome, hit save. The regular Save window will now pop up, giving you a chance to name and direct your newly web optimized file.

## 9. Resources

If you don't have Adobe Photoshop at home, 30 day free trial versions are available for download on the adobe site: Adobe.com

Great Introduction to Layer Masks:

<http://www.youtube.com/watch?v=DA8TgyTruV8>

This uses an outdated (but very similar) version of Photoshop, but I like the simple guide:

<http://www.peachpit.com/guides/guide.aspx?g=photoshop>

The same resource has an updated podcast, however, it is less general, more project specific and fairly advanced:

<http://www.peachpit.com/podcasts/channel.aspx?c=f833aac7-8922-4a01-b1d4-e10805e67b6a>

Some of these effects are a little corny, but there are some great step-by-step lessons here that will build on what you have learned:

<http://www.onextrapixel.com/2010/08/23/34-photoshop-tutorials-that-will-leave-you-looking-like-a-pro/>

The Toronto Public Library has both books and online tutorials you can stream, when you search "Photoshop".

When in doubt, Google it. There are many sites and forums full of insider tips and how-tos, not to mention extensive youtube tutorials. Explore!

### References:

Photograph of woman, from Flickr User RicJames' photostream:

[http://www.flickr.com/photos/ricjl/with/8109150698/#photo\\_8109150698](http://www.flickr.com/photos/ricjl/with/8109150698/#photo_8109150698)

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Cat photo from Flickr user Raita Futo's photostream:

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