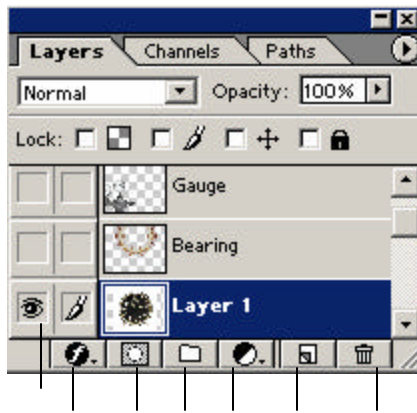


Working With Layers

Think of layers as a stack of transparencies. Layers can be changed independently of other layers by clicking on its name in the layers palette. Once the layer is active painting or filtering effects can modify it. A Photoshop image can contain up to 99 layers in version 5.5 and a maximum of 8000 combined layers, layer sets and layer effects per image in version 6.0. However, the amount of memory in your system may limit the number of layers possible in a single image. Only one layer can be active at a time. Once you're happy with your image you can combine the layers into a single layer.

Reviewing the Layers Palette:



- A: Show/Hide Layer**
- B: New Layer Style**
- C: New Layer Mask**
- D: New Layer Set**
- E: New Adjustment or Fill Layer**
- F: New Layer**
- G: Trash (Delete Layer)**

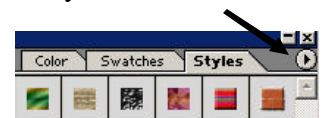
A B C D E F G

Layer Styles

Layer styles are used to add special effects to text and images. Photoshop 6.0 includes some pre-built Layer Styles that can be applied to layers and text or users can create Custom Styles. Multiple styles can be applied to a single layer and all layer effects will display as sub-items under the selected layer in the Layers Palette.

Layer Styles include effects such as drop shadow, bevel and emboss, inner shadow and many other effects. The Layer Styles are located under the Layers Menu, Layer Style. A Custom Style is being built when items are selected from the Layer Style Menu and applied to a layer. A Custom Style can be saved for later use by double clicking the layer that contains the multiple or single style effects and choosing the New Style button. Assign a name for the custom style and the style will be available in the Styles Palette.

Photoshop 6.0 also has some pre-built styles that can be applied to layers. The pre-built styles are located in the Styles Palette. Choose Windows, Show Styles to display the Styles Palette.



Select a style from the Style Palette and it will be applied to the selected layer. Display the Style Menu from the Style Palette by clicking with the mouse on the arrow to the right of the Style Palette.

Tip: Layer Styles can be copied and applied to other layers in the existing image or to a brand new image.

Tip: You cannot apply layer styles to a background, a locked layer, or to a layer set.

Layer Sets

You can organize and manage individual layers by grouping them into Layer Sets. Layer Sets can expand to display all the layers in the layer set or then can be collapsed to hide all layers in a layer set. Layer Sets function as individual layers so you can duplicate and move layer sets.

Create a Layer Set:

- Create a Layer Set by clicking on the Layer Set icon in the Layers Palette
- Create a Layer Set by selecting New Layer Set from the Layers Palette Menu.
- Right-click with the mouse on the Layer Set to choose other options such as Delete or Properties.



Place Items in a Layer Set:

- Place layers in a Layer Set by selecting a layer and dragging it to the Layer Set.

Exercise on Organizing Layers:

- Open the Photoshop file.

File | Open | keyboard

This file contains several layers. Notice the bottom layer is the *“background”* layer.

Insert an object from a separate file to the keyboard file:

- Open the 2nd file of the image you want to copy to the background.

File | Open | clock

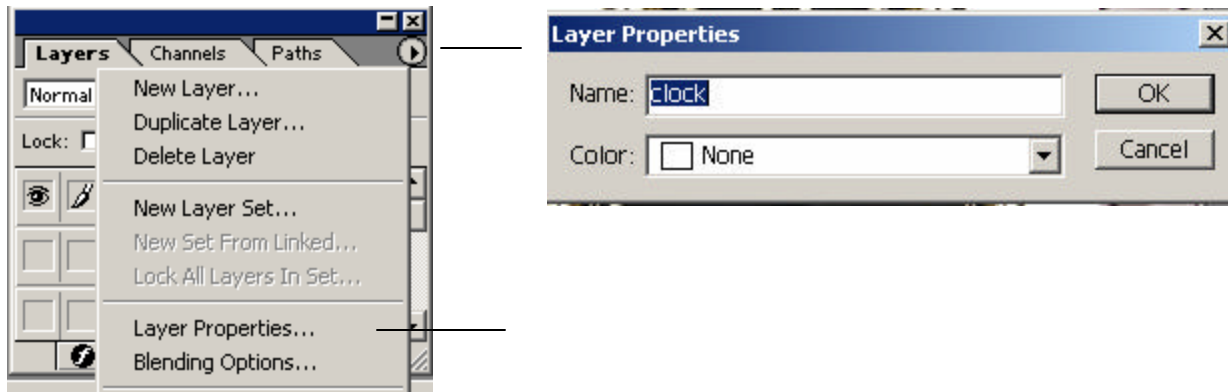
Select the Move tool and hold down the Shift-key while dragging the image to the background. Holding the Shift-key while dragging will center the image on the background.

- Choose Window | Show Layers is the Layers Palette is not open.

Name the New Layer:

The new layer was brought into Photoshop with the name of Layer 1.

From the Layers Palette choose Layer Properties and enter Clock as the layer name.



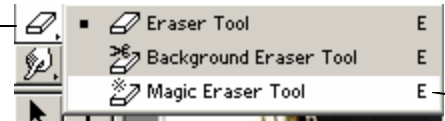
Hide or Display layers:

Click on the Eye Icon next to the layer to toggle the visibility of the layer.

Working with the Clock Layer and removing its white background:

- Select the Clock layer.
(Note: the selected layer or active layer is blue)
- Hide the Keyboard layer by clicking on the Eye icon for the keyboard (background layer).

The Clock layer (with its white background) is sitting on a transparent or checkered background at this time.



- Select the Magic Eraser tool from the toolbox. This tool will be used to erase the white background on the Clock layer.

Set the Tolerance for the Magic Eraser tool

- Too low of a tolerance will leave a little bit of white around the clock.
 - Select 10 as the tolerance.
 - Notice the image.
 - Use the History Palette and remove the tolerance setting.
- Too high of a tolerance will remove part of the clock.
 - Select 50 as the tolerance.
 - Notice the image.
 - Use the History Palette and remove the tolerance setting.
- **Set the Tolerance at 22.**
- The area around the clock is now transparent.

Turn the background image back on

- Select the Eye icon for the background image
- The Clock Layer should be sitting above the background layer.
Note: make sure all other layers are turned off

Arranging Layers

Layers can be rearranged to change the way the image is viewed.

Move the Clock layer:

- Make all layers visible by clicking on the Eye icon for each layer.
- Move the Clock layer to the top of the Layers Palette.
 - Left-click with the mouse and drag the layer to a new location.

Layer Opacity

Since the Clock layer is located above all other layers in the Layer Palette it is probably blocking the view of other layers on the canvas. Change the Opacity of the Clock layer so that all objects can be seen on the canvas.

- Select the Clock Layer
- Change the Opacity of the Clock layer.
- An Opacity setting of 100% displays the image at 100% of its color.
- As the Opacity setting decreases the image will appear partially transparent.
- Change the Opacity setting to 50%.
- All others layers below the Clock Layer can now be seen.

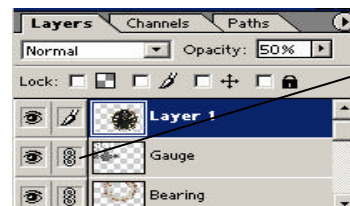


Linking Layers

Move and transform layers simultaneously while maintaining their alignment with each other by linking layers together.

1. For each layer except the background select the move tool and position the layers as you want to appear.
2. Link all layers together except for the background. With the mouse click in the box to the right of the Eye icon for each layer.

- A chain link appears in the box.
- To remove the link click on the chain link with the mouse.



Transform or Move Linked Layers:

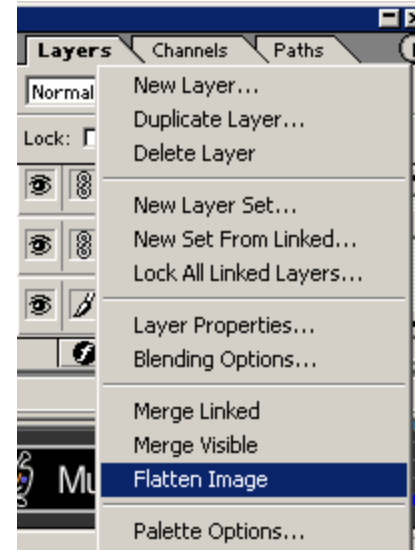
- Select the scale tool from the Edit, Transform Menu.
- Position the cursor on a corner point. Left-click with the mouse and drag in while holding the Shift-key to downsize the image.
- When finished double click inside the transformation box.

Saving your File:

Save a **copy** of your file so that the layers become flattened. Only flatten your files when you are certain editing is complete. Flattening a file's layers merges them into a single background. Once a file is flattened you cannot access the layers that were once visible and available for editing.

Flatten the Image:

- From the Layers Palette menu select Flatten Image.
- Choose File | Save As | Filename




Layer Mask Exercise


Magic Wand and Magnetic Lasso Tools

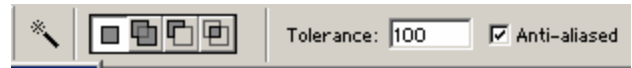
- File | Open | temple.tif

Selecting by Color

Magic Wand → 

Select similar colors quickly and easily with the Magic Wand tool. The Magic Wand tool selects similar colors according to Tolerance. The higher the tolerance the more similar colors the Magic Wand will select. The smaller the tolerance the fewer similar colors the Magic Wand will select.


- File | Open | porthole_background.psd
- From the toolbox select the Magic Wand tool 
- From the Options bar set the Tolerance at 100%.
- Select the Anti-aliased feature. The Anti-aliased feature will result in a “smooth edge” selection.
- Left-click with the mouse on any red area of the image. Notice all the red is selected. If some areas of red were not selected then press and hold the Shift key and left-click with the mouse in the red area that wasn't selected.
- At this point everything is selected except the Porthole.



Inverse the selection

- Choose Select | Inverse. Now only the Porthole is selected.

Copy the selected Porthole to the Temple.psd file.

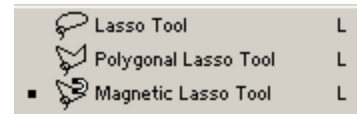
Select the Move tool from the toolbox. 

Position the cursor over the Porthole. To Copy the Porthole press the Alt key and left-click with the mouse and drag the Porthole to the Temple.psd file. ***Notice the Porthole is located on its own layer in the Temple.psd file.***


Select the Move tool and left-click with the mouse on the Porthole and drag to desired location on the Temple.psd file.

Lasso Tools

Use the Lasso tools to create freeform selections. There are three Lasso tools to choose from: Lasso Tool, Polygonal Lasso Tool, and the Magnetic Lasso Tool. The Magnetic Lasso Tool is the easiest to use.



Selecting with the Magnetic Lasso Tool

- File | Open | Zebra.psd
- Select the Zoom tool and Zoom in on the image to 100%. *The Zoom tool helps tremendously when trying to make precise selections.*
- Select the Magnetic Lasso from the toolbox. 
- Click once to set the start point of the Magnetic Lasso tool. Move the mouse along the edge of the image that you want to select. No need to click and drag – just move the mouse.

Press the Backspace key if you made a mistake and it will bring you back to the last anchor point in the selection.

Click once on the starting point (displays as an open circle) to close the selection.

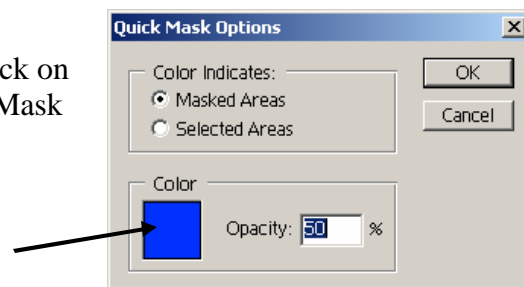
Modifying the Selection with the Quick Mask Mode tools.

Notice the selection is not very precise. Modify the selection with the Quick Mask Mode tools.

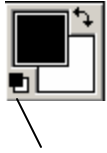
- From the Toolbox select the Edit in Quick Mask Mode button. 

The non-selected area is displayed in a Red shade. The default color for the Edit Quick Mask Mode is Red. Sometimes the color Red is hard to use when selecting a portion of the image that is the same color. To change the Quick Mask Mode Color double click on the Edit Quick Mask Mode button in the toolbox.

A Quick Mask Options dialog box will display. Click on the Color chip and select a new color for the Quick Mask Mode.



When using the Quick Mask tools reset the Foreground and Background color chips in the toolbox to the default colors of Black and White.



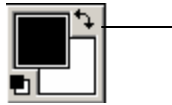
Click on the small Foreground and Background icon located in the lower left hand corner of the Foreground and Background Color Chip tool to reset the default colors for the Foreground and Background Color Chip tool.

From the Toolbox select the Paintbrush tool. The Paintbrush tool will be used to select and deselect areas of the image. **Note:** don't forget to change the Paintbrush size to fit the area you are trying to select.

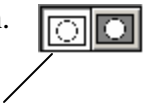
When painting with the Foreground color of Black the Quick Mask Mode will paint the selected area with the color used in the Quick Mask Mode.

When painting with the Foreground color of White the Quick Mask Mode acts as an eraser and can be used to remove the selected areas.

Click on the double arrow located in the upper right hand corner of the Foreground and Background Color Chip tool to toggle between the White and Black colors chips while using the Quick Mask Mode.



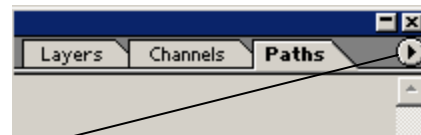
When finished selecting the area of the image exit the Edit Quick Mask Mode by click on the Edit in Standard Mode button that is located in the toolbox next to the Edit Quick Mask Mode button.



The area displayed on the screen shows the selected area of the image. Since this selection took a little work we should **Save** the selection in case we need to use it later on.

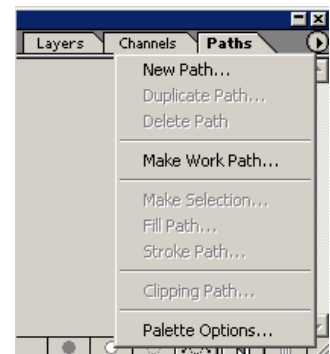
Saving a Selection:

Click on the Paths tab from the Layers Palette. Nothing is displayed at this point.



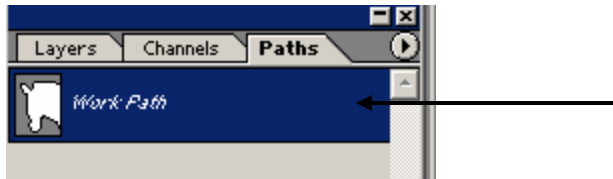
Click on the arrow to the right of the Paths tab to open the Path Menu.

From the Path Menu select **Make Work Path**.



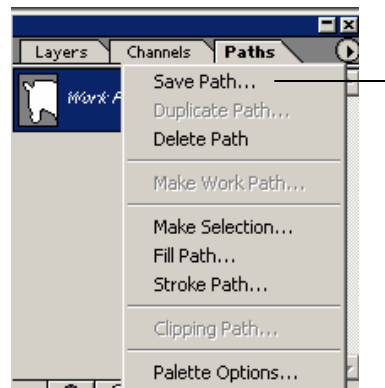
From the Make Work Path dialog box a Tolerance needs to be set. The smaller the tolerance the more accurate your selection will be. **Go with the default of .5 pixels.**

Notice the **Paths Palette** now displays the shape of your selection. The default Path Name is Work Path.

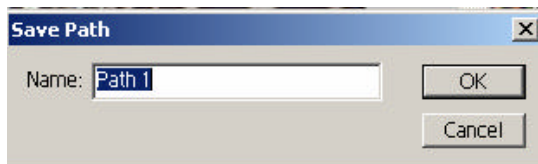


Save the Work Path with a name that coincides with the selection.

From the Paths Menu select the Save Path option.

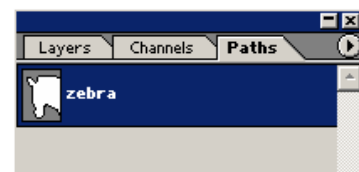


A Save Path dialog box will display.



Type the name: Zebra and Press OK.

Notice the Path Palette now displays the Path name as Zebra instead of Work Path.



To display the selection at a later time:

Select the Path from the Path Palette. Open the Path Menu and choose Make Selection. The “marching ant” selection will display on the image.

Copy the Zebra selection to the Temple.psd file.

Note: if the “marching ants” are not displayed around the zebra go to the Paths Menu and select Make Selection. Insert a Feathering Radius of 2 or 3 pixels and Press OK.

- Select the Move tool from the toolbox.



Copy the selection:

Position the cursor in the selected area. Press the Alt key and left-click with the mouse and drag the selection in the Temple.psd file. Notice the image of the Zebra is located on a separate layer from the Porthole.

- The Zebra is too large. Transform the Zebra by choosing **Edit | Transform | Scale**.

This puts a box around the Zebra. Position the cursor on a corner placeholder and hold down the Shift key while left clicking and dragging in to make the Zebra smaller. The Zebra should be a little smaller than the Porthole. When finished transforming the Zebra double click inside the Transform box.

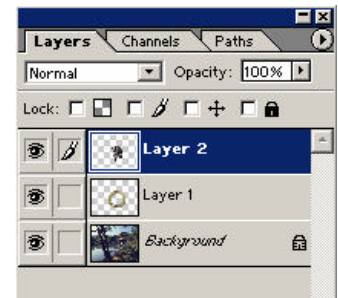
- Use the Move tool and position the Zebra over the Porthole.

Objective: Make it appear that the Zebra is looking through the Porthole. We will have to use a Layer Mask to accomplish this next step.

Using the Layer Mask:

Select the Layers Palette. There should be three layers in this exercise.

Rename Layer 1: Right-click with the mouse on Layer 1 and select Layer Properties or hold down the Alt key and double click on the layer and type a new name for the layer.



Rename the layer to: Porthole

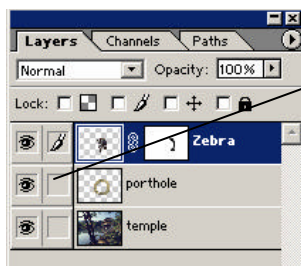
Rename Layer 2 to: Zebra.

Applying the Layer Mask:

- Select the Zebra layer from the Layers Palette.
- To add a Layer Mask choose **Layer | Add Layer Mask | Reveal All**.
- Select the Paintbrush from the toolbox. Paint with Black to make portions of the Zebra invisible and paint with White to make portions of the Zebra visible.

When finished and happy with the end result be sure to link the Porthole layer and the Zebra layer together. Linking the layers together will allow the layers to be moved together when using the Move tool.

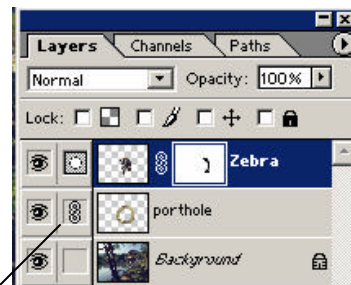
Linking Layers



Select the Zebra layer.

Left-click with the mouse in the little box to the right of the Eye icon on the Porthole layer.

A Chain Link will appear. The Chain Link icon represents a linked layer.



- Select the Move tool and move the Zebra. The Zebra and the Porthole should move together if linked correctly.

Using the Extract Tool

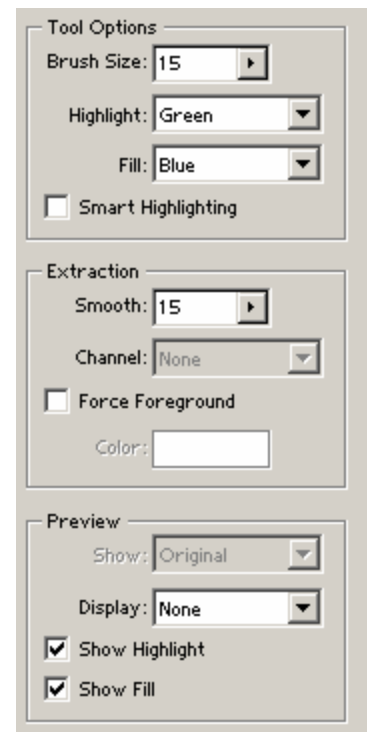
There will be times when you want to omit the background from an image. The Extract tool is perfect to use when you want to omit the background.

- Open an image: File | Open | extract.jpg
- Make a copy of the file incase you need the original image for other tasks. Choose File | Save As | select the Copy feature.
- In this example we only want the baby gorilla.
- Choose Image | Extract




The extract tools are located in a toolbox on the left side of the Extract screen.


The tool options are located on the right side of the Extract screen.



- Select the Highlight tool from the toolbox. Under the Tool Options select a color for the highlighter. The default color is Green.
- Select a Brush Size and highlight the edge of the image you want to extract.
- **Optional:** Choose Smart Highlight if you are highlighting a well-defined edge. This option will help you keep the highlighter on the edge of the image. Note: When using the Smart Highlighter the brush size does not matter because the highlighter will re-size automatically to cover the edge.
- Select the Paint bucket from extract tools and fill the selection. Blue is the default fill color.
- Select the Preview button that is located above the Tool Options to view the extracted image.

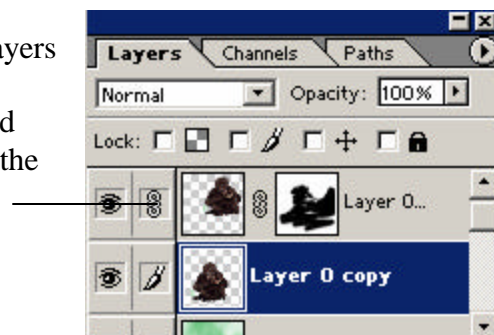
- Select the Clean Up tool to remove any unwanted areas of the image that were not extracted. 

Press the Alt-key while using this tool to insert part of the image that was extracted.

- Select the Edge Touch-Up tool to smooth out and select/deselect areas around the outline of the image that was extracted. 
- Select the OK button when finished to extract the image. Note: all pixels outside the extracted object are erased to transparency.

Creating a Background for the Extracted Image

- Create a new canvas for the extracted image. Choose File | New | 500 x 500 pixels, RGB, and select white background.
- Select a Forest Green Foreground color and fill the canvas with the selected color.
- Apply the **Clouds** filter from the Filter, Render Menu.
- Copy the extracted image to the new canvas. Select the Move tool and press the Alt-key while dragging the extracted image to the new canvas.
- Touch up the Image using the Eye Dropper, Clone Stamp and the Paint Brush
- Duplicate the Gorilla layer. Change the Opacity on the Gorilla copy to 25%. Add a Layer Mask (Layer | Add Layer Mask | Reveal All) and make part of the Gorilla invisible.
- Link the Gorilla layers together. From the Layers Palette click in the box next to the Eye icon to display a chain link. The layers are now linked together and can be moved together. Click on the chain link icon to remove the link.



Using Adjustment Layers to change colors in an image

- File | Open | balloon_flower
- Double click on the Background Layer and name the layer.
(layer name can be whatever)
- Using the Magnetic Lasso tool or Quick Mask tool select an area of the flower
- Create an Adjustment Layer

Choose Layer | New | Adjustment Layer

From the pull-down menu select Hue/Saturation (try 2nd example using Color)

Hue is the name of the color. Hue is pure color. ie: Red, Green, Yellow....

Saturation is the amount of gray in a color. A fully saturated color (100%) is pure hue and there is no gray in the color. When more gray is added the colors become dull and eventually will turn very gray.

Lightness → **Tints**. Tints are created when white is added to a color. These are the pastel colors such as pink.

Lightness → **Shades**. Shares are created when black is added to a color, such as Forest Green.

- Choose OK when finished.
- When using an Adjustment layer the original layer of the image is not being altered. All special effects are linked to the Adjustment Layer.
- Add more Adjustment layers for other areas in the image.

Clipping Groups

We will be working with clipping groups in two different ways for the class example.

1. In a clipping group the bottom layer will act as a mask for the entire group.
2. Using an Adjustment Layer we will change the Color balance on a multi-layered image.

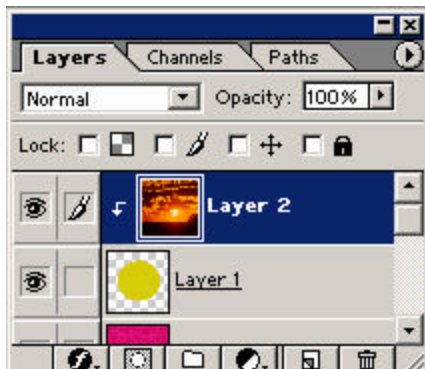
Using a Clipping Group so the bottom layer acts as a mask:

- Create a New Canvas:

File | New | 400 x 400 pixels, 72 = resolution, RGB = color mode, white = background.

- Fill the Canvas by selecting a Foreground color and then choosing Edit, Fill, use Foreground Color.
- Apply a Texturizer filter by choosing Filter, Texture, Texturizer
- Add a new Layer by clicking on the New Layer Icon in the Layers Palette.
- From the New Layer draw a selection using the Elliptical Marquee tool.
- Fill the Selection by selecting a Foreground color and then clicking on the Paint Bucket tool with the mouse to fill the selection.
- Open the file: Sunset_copy.psd
- Select the Move tool and Shift-click and drag the Sunset image to the canvas you are working with. Note, the Sunset image appears in it's own layer.
- Add a Clipping Group.

Position the cursor at the base of the Sunset layer (the top layer). Press the Alt-key and at the same time left-click with the mouse on the bottom border of the Sunset layer.



When a clipping group is applied the layer will contain an arrow pointing down and the layer will be indented.

To remove a clipping group press the alt-key and left click on the layer border that contains the clipping group OR select Ungroup Layers from the Layers

menu.

The end result will display the shape you drew filled with the Sunset image, which are all on the background layer.

Using an Adjustment Layer and a Clipping Group.

- Open Cock file.
- Duplicate the Clock Layer by dragging the Clock Layer to the New Layer Icon at the bottom of the Layers Palette.
- From the duplicated Clock Layer, select the Magic Eraser tool from the toolbox and remove the background on the layer.
- Select the duplicate Clock layer (the one that you just removed the background from) and drag it to the New Layer Icon to create another duplicate.
- Using one layer at a time, select the Move tool from the toolbox and move each layer so the clock layers aren't overlapping anymore.

Adding an Adjustment Layer and a Clipping Group to Change the Color

- Select the top layer in the Layers Palette.
- Choose Layer, New Adjustment Layer, Color
- Play with the colors. Notice how the color is changing for all layers?
- Select a color that you like and choose OK.
- Select the layer with the Adjustment Layer.
- Add a Clipping Group to the Layer that contains the Adjustment Layer. Position the cursor on the base of the layer and press the Alt key while left-clicking with the mouse on the layer border.

End Result: the adjustment layer for the color has been applied only to the layer that has the clipping group.