Layers

One of Photoshop’s most powerful and most popular features is Layers. Layers are similar to acetate or transparent paper. Each Layer in a Photoshop document or image can contain image data that adds to the image data placed on the Layers below. Effectively, each Layer is an entire image unto itself within a master image. By combining these images together, you get what is called a composite, meaning an image composed of many different elements, in this case made up of multiple Layers. The best way to understand the concept of Layers, how they work, and why they are so powerful is to use them.

Open “Ducky” and “CMYK balloons” from “Photoshop/Goodies/Samples.” Make “CMYK balloons” active by {Clicking} on the Image Window Title Bar. You’ll notice the color mode is CMYK rather than RGB. CMYK is a color space suited for Print production, such as magazines or flyers. Examine the Channels Palette. CMYK images are made of a composite of 4 color channels. Because we are developing for the Internet, we need to convert from CMYK to RGB image mode. Select "Image/Mode/RGB Color." Examine the Channels Palette. You’ll see only 3 primary color channels and the composite RGB channel.

We’re going to use Layers to add text to the Balloon image and make the Duck into a balloon. We’ll be using some of the Selections Tools as well. We’ll begin by examining the Layers Palette. {Click} the Layers Tab in the Layers Palette Group.
Moving Layers

Select the Move Tool. Make sure the Duck Layer is active. {Click} and drag the Duck in the Image Window. You’ll notice that you can move the Duck or part of the Duck outside the edges of the Image Window. With Layers, you can think of the Image dimensions as the dimensions of a virtual window through which we see the image data. Photoshop permits you to move image data outside of the virtual window. As a result, we can do things like drag the Duck to the bottom right corner of the screen so that only the head appears. You’ll find this flexibility a great creative aid when composing images.

Transparency

Examine the Layers Palette. The Duck Layer sits on top of the Background Layer and in the Image Window the Duck sits on top of the balloons. You can see the balloons around the Duck because, by default, Layers are transparent. Pasting the selection into “CMYK balloons” has created a new Layer with a transparent background in which the Duck selection sits. Recall when we created a new image we selected a transparent background. Transparency is represented by a gray and white checkerboard. {Click} the Visibility toggle in the background Layer. The balloons disappear. You see only the Duck and the transparent background that surrounds it.

Make sure the Duck Layer is active. Layers are active when colored blue. A paintbrush icon also appears in the Paint or Link toggle box. {Click} the “Opacity” control and drag the slider back and forth. You begin to see the balloons in the background through the Duck as you decrease its opacity. As you create images you’ll find Transparency a powerful tool.

Using Layers

Make sure you have both “Ducky” and “CMYK balloons” open and that you have changed the Image Mode of “CMYK balloons” to RGB. Make “Ducky” active.

Make a Selection around the Duck in “Ducky.” Select “Edit/Copy” to copy the contents of your Selection to the clipboard. The clipboard is Photoshop’s storage area for image data you copy and paste.

Make “CMYK balloons” active. Select “Edit/Paste.” Your Selection (the Duck) is pasted into “CMYK balloons” in a new Layer. Photoshop automatically titles the Layer “Layer 1.” {Double-Click} the Layer and rename it “Duck.” Alternately, you can use the Move Tool to {Click}, drag, and drop your selection from “Ducky” to “CMYK balloons.”
Blend Modes

Move the Duck to the center of the image. {Click} the drop-down “Blend Modes” list and explore the different Blend Modes. Photoshop examines the color data of the Layer you are blending and the color data of the Layers below and uses the various Blend Modes to create particular visual effects. Keep in mind you can also move the Layer around and play with Opacity. Photoshop’s flexibility and complexity encourages combining effects and operations for increased creativity. Make sure you select “Normal” for the Blend Mode before proceeding.

Preserve Transparency

Select the “Airbrush Tool.” Make sure the Duck Layer is active. Check “Preserve Transparency.” Paint on the Duck Layer. You’ll notice that your paint strokes are limited to areas that contain image data, in this case the Duck. The effect is similar to painting a Selection. By selecting “Preserve Transparency”, you are restricting changes to the image data contained within the Layer. Use the History Palette to remove your brush strokes and uncheck Preserve Transparency.
Layer Masks

Layer Masks are Alpha Channels attached to a Layer. Black completely masks or covers image data. White reveals image data. Gray values between Black and White reveal image data at various degrees of opacity. Add a Layer Mask to the Ducky Layer by {Clicking} the “Add Layer Mask” button at the bottom of the Layers Palette. A “Link” icon and a “Mask Thumbnail” are added to the Layer.

A Layer Mask is linked to the Duck Layer.

Select the “Airbrush Tool” and {Click} on the “Brushes” Tab. {Click} the circular brush at the top right corner of Palette.

{Click} the circular brush at the top right corner of the Brushes Palette.

We’re going to mask the tail of the Duck to make the body resemble a balloon. Make sure the Foreground Color is Black. Start painting over the Duck’s tail area until the body of the Duck is roughly circular. If you examine the Thumbnails in the Layer, you’ll notice the Mask Thumbnail displays Black where you’ve applied your paint strokes, making those areas of the Duck’s tail transparent. The Duck Thumbnail looks the same because you haven’t actually erased the tail of the Duck; you’re merely hiding or masking it.
Transforming Layers

Because the Duck is so large, it obscures most of the balloon image. You can use the “Transform” effects to resize, rotate, and distort image data in Layers and Selections.

Select “Edit/Free Transform.” A Transformation Box surrounds the image data of the Layer, in this case the Duck. By {Clicking} on the Box’s handles, you can resize the image data. Holding the {Shift} key constrains the Box as you resize, maintaining proportion. If you hold the mouse pointer just outside of the Box close to one of the Handles you can rotate the image.

For precise Transformation control select “Edit/Transform” and choose the desired effect.

Make the Duck slightly larger than the balloon at the bottom center of the balloons image.
Creating New Layers

To create a new Layer {Click} the “Create New Layer” button at the bottom of the Layers Palette. A Layer is added above the currently active Layer. Make the new Layer active and rename it “Balloon.”

Make the Background Layer active. Make a Selection around the balloon at the bottom center of the balloons image. If the Duck is obscuring that part of the image you can move it away or turn the Duck Layer’s visibility off.

Having made your Selection, copy it to the Clipboard by selecting “Edit/Copy.” Make the “Balloon” Layer active. Select “Edit/Paste.” Your Selection, in this case the balloon, is placed into the Layer. You may have to move the Balloon Layer to reposition it exactly where it’s placed on the original image (the Background Layer.) As an alternate, you can select “Edit/Paste Into.” A new Layer is created and the image data in the Selection is copied to the precise position it was copied from. In addition, a Layer Mask is automatically created based on the Selection.

Move the Duck Layer so the Duck is behind the balloon in the Balloon Layer. You’ve created an image or composite using Layers. By isolating different elements or components of an image in Layers, you have a great deal of creative flexibility. Imagine creating this image without Layers. You would have to make very precise selections and use the History Palette extensively. It would also take up much more time.

The Duck Layer appears behind the Balloon Layer and above the Background Layer.
Text and Layers

When you add Text to an image by selecting the “Type Tool” and clicking in the Image Window at the location you want your text to appear, a Layer is automatically created above the currently active Layer. The name of the Layer defaults to the text you input.

Make sure the top Layer in the Layers Palette is active and the Foreground Color is white. Select the Type Tool and click toward the top left corner of the image. The “Type Tool” Dialog Box pops-up. At this point, we won’t go through the Type Tool options. For now input “Balloon Festival” and input a value from 20-30 in the “Size:” field. Click OK. Your type is created in its own Layer.

Editable Type Layers are indicated in the Layer by a capital “T”.

At this point, the type can be re-edited or changed by double-clicking on the “T” in the Layer. Editable type is indicated by the capital “T” that sits at the edge of the Layer. By right-clicking on the “T” and selecting “Render Layer” you convert the type to a graphic, making it no longer editable. You can position the type as close to the top left corner as you wish.
The Tail of the Duck is masked out by the Layer Mask.

The tail is still on the Layer, but is hidden by the mask.

{Click} the “Link Icon” in between the Thumbnails of the Duck Layer. Move the Duck. You’ll notice that the Mask remains in place. To move the Mask with the image data keep the Thumbnails linked.

To remove the Layer Mask select “Layer/Remove Layer Mask.” You’ll be asked if you want to apply the Mask. If you {Click} “Apply”, the masked areas of the Duck are erased and the Mask Thumbnail removed. {Click} “Discard” to remove the Mask and restore the Duck to its original state.

Selecting “Layer/Disable Layer Mask” keeps the Mask but does not apply it to the Layer. A red ‘X” appears over the Mask Thumbnail. To reapply the Mask select “Layer/Enable Layer Mask.”

Recall making Selections into Alpha Channels. If you \textit{Click} the 
"Channels Palette" you’ll see that adding a Layer Mask creates an Alpha 
Channel in the “Channels Palette.”
Layers Palette

The Layers Palette is divided into 6 distinct controls, which include Layers, Blend Mode, Opacity, Preserve Transparency, and the Layer Mask, New Layer, and Trash Icon set. Its important to note the Layers have a stacking order, from the bottom up, meaning the Layer at the very bottom of the Layers Palette is the last or bottom Layer.
Layers

Each layer contains a Layer name, thumbnail, paint or linking toggle, and visibility toggle.

Layer Name

It’s a good idea to name your Layers for easy reference and organization. By default Photoshop names each new Layer “Layer x” where x represents a number, starting at 1. If you import a flat image (meaning an image with only one Layer, such as “CMYK balloons”) Photoshop defaults to naming the Layer “Background” in italics. The Italics indicate that no other layer can be placed beneath it, in effect locking the Layer as the bottom Layer. To change the name of any Layer simply {Double-Click} the Layer and enter a new Name in the “Name:” field. When you rename the “Background” Layer it is no longer fixed to the bottom of the stack.

Thumbnail

The Thumbnail is a visual representation of the Layer’s content. By default, Photoshop uses the smallest Thumbnail size. To change the size or disable the Thumbnail {Click} the Options Triangle and select “Palette Options.” Check the Thumbnail size you desire in the “Layers Palette Options” dialog box.
Paint or Linking Toggle

When a Layer is active or selected (by *Clicking* on it) a Paintbrush icon appears in the Toggle box beside the Thumbnail, indicating the Layer can be painted on. When you *Click* in the Toggle box of an inactive or unselected Layer you “Link” that Layers content to the current active Layer, no matter where the active Layer is in the stacking order. Changes in position and various effects you apply to the active Layer are also applied to the “Linked” Layer. A “Chain” icon appears to indicate Linking.

Visibility Toggle

*Clicking* the “Visibility” toggle makes Layers visible or invisible in the Image Window. It’s important to note that even though a Layer may be invisible, if it’s the active Layer or is linked to an active Layer any changes you perform still occur.

Blend Mode

You can select from 17 different Blending options to affect how the image data in a layer mixes or blends with other Layers. Usually you’ll use “Normal” mode. Some of the other Blend Modes produce interesting effects. By experimenting and practicing as you compose your images, you will become familiar with the most, if not all the Blend Modes. You must have at least two Layers in your image to use Blend Mode.

Preserve Transparency

Check “Preserve Transparency” to limit painting and editing effects to areas of a Layer that are not transparent.

Layer Mask, Create New Layer, Trashcan

*Clicking* the Layer Mask button adds a Mask to the currently active Layer. Layer Masks are covered in depth later on.

*Clicking* the Create New Layer button creates a Layer above the currently active Layer.

*Clicking*, dragging and releasing a Layer over top of the Trashcan deletes the Layer.