

Macworld 2011

Advanced Illustrator Techniques

Session Description

If Photoshop is the mother of all designer applications, then Illustrator is surely its little sister. Most designers, this one included, use Auntie Illustrator on a rather simple level. We tend to create design elements, logos and such using Illustrator's more or less basic tools. We use the Pen Tool, the Shape tool, the Swatches, Gradients and Pathfinder, and go about our business. But even though we may consider ourselves advanced users, there are always different, more clever, or just more useful techniques that we either underutilize, or choose to ignore completely. This two-day crammed into one-day workshop will introduce you to a number of those under-utilized tools, giving you a few invaluable techniques you will find you will be using from here on. This seminar's starting point assumes a good familiarity with Illustrator's tools already, as well as a familiarity with output formats and media.

Before we start, get an online connection and download the following file:

<http://shalat.com/dev/mw11/illusttechniques.zip>

Level: Intermediate, advanced

Basic Illustration

To start off, I want to just make a few objects in Illustrator. You see, even though we're talking about Advanced Illustrator techniques here, really the most advanced results come from some of the most basic techniques. It's the applications of these techniques that makes the advanced aspect come to life. Let's start with a simple still life, of an orange and a block of

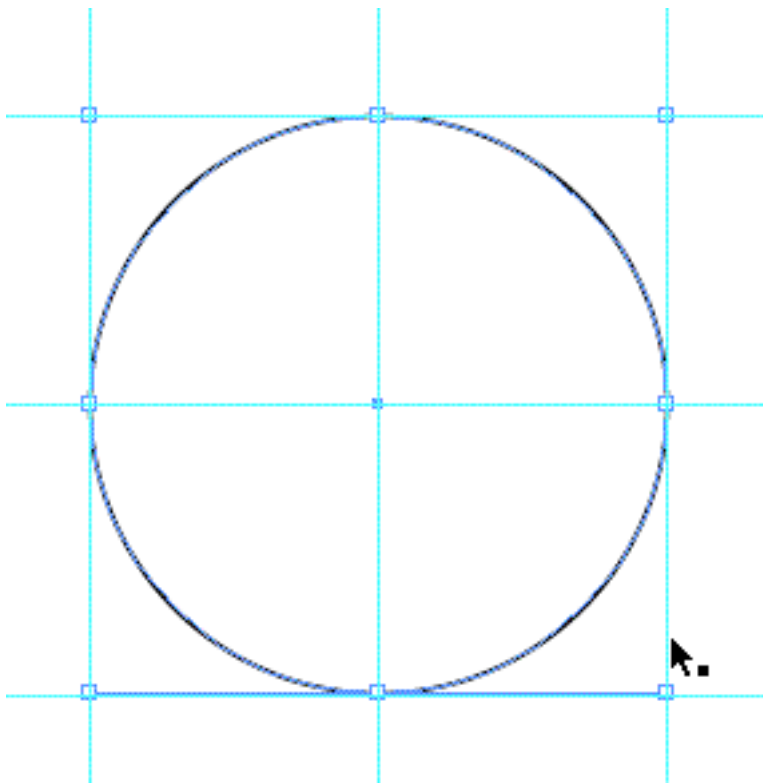
cheese.

Making an Orange

The first object for the still life is the orange. If you look at an orange, you'll see it's really a pretty simple shape—essentially an ellipse. First, locate the fill and stroke icons at the bottom of the Tools panel and make sure they're set for the default of black stroke, white fill (right).

Select the Ellipse tool and place your cursor at the central crossing guides in your grid.

Alt-click on a PC or Option-click on a Mac and drag from the crossing guides outward until your cursor reaches the outer guide either one inch up or to the right. Holding the Alt/Option key when drawing an ellipse lets us create a circular form from the center point outward.



Hold the Alt key (Option key on a Mac) to create a circle with a center origin.

We now have an ellipse (we don't necessarily want to call it a circle, although in this case it is) with a black stroke and a white fill. Let's change that so that our ellipse has no stroke color and an orange fill. Rather than getting hung up in the menus, we'll use the Swatches panel.

Basic Fills and Strokes

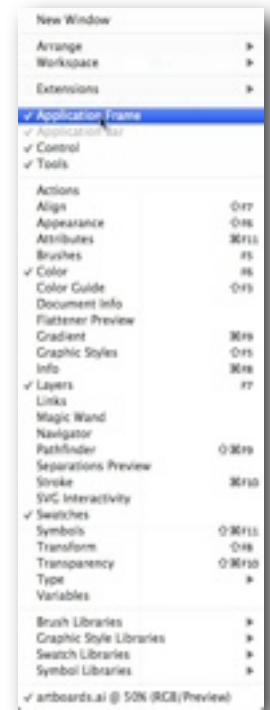
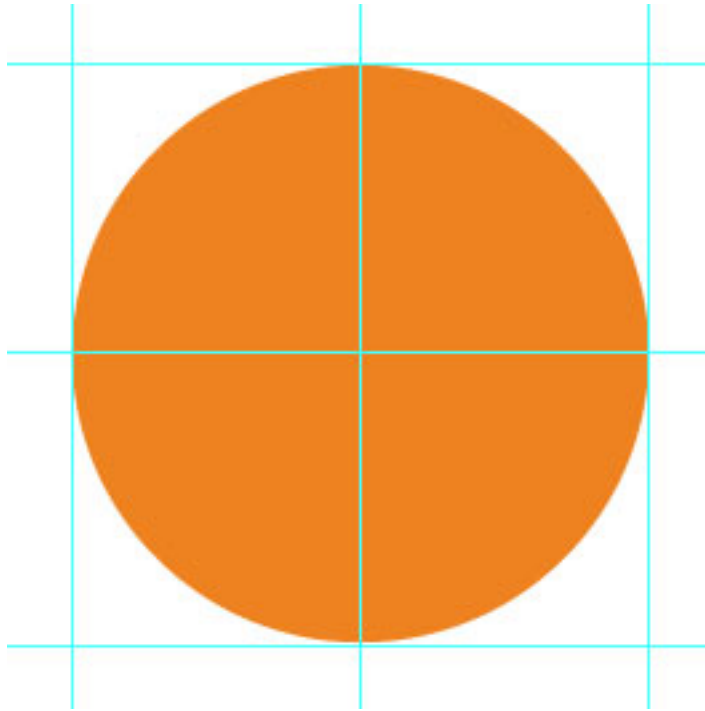
If your Swatches panel is not visible, do one of two things. Either choose **Window > Swatches**, or to be more sophisticated, choose **Window > Workspace > Essentials**. This will set up your workspace to the default settings for Illustrator.

From the Swatches panel, select the orange swatch. Drag it from the panel directly to the ellipse on the canvas. Your ellipse's fill will become that orange.



Now we want to remove the black stroke. From the Tools panel, click the stroke icon, and then just below it, and select the None color (the box with the red line through it).

Your ellipse should now be just an orange circle:

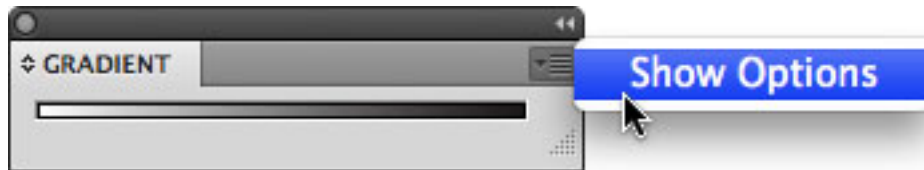


We have a solid fill here. But oranges have dimensions, as well as light and shade. So we'll now change that fill to a gradient, giving the illusion of depth.

Applying the Gradient

Select the Gradient panel (**Window > Gradient**). Make sure that you see all the advanced options. If you don't, then select Show Options from the disclosure menu, also known as the flyout menu.



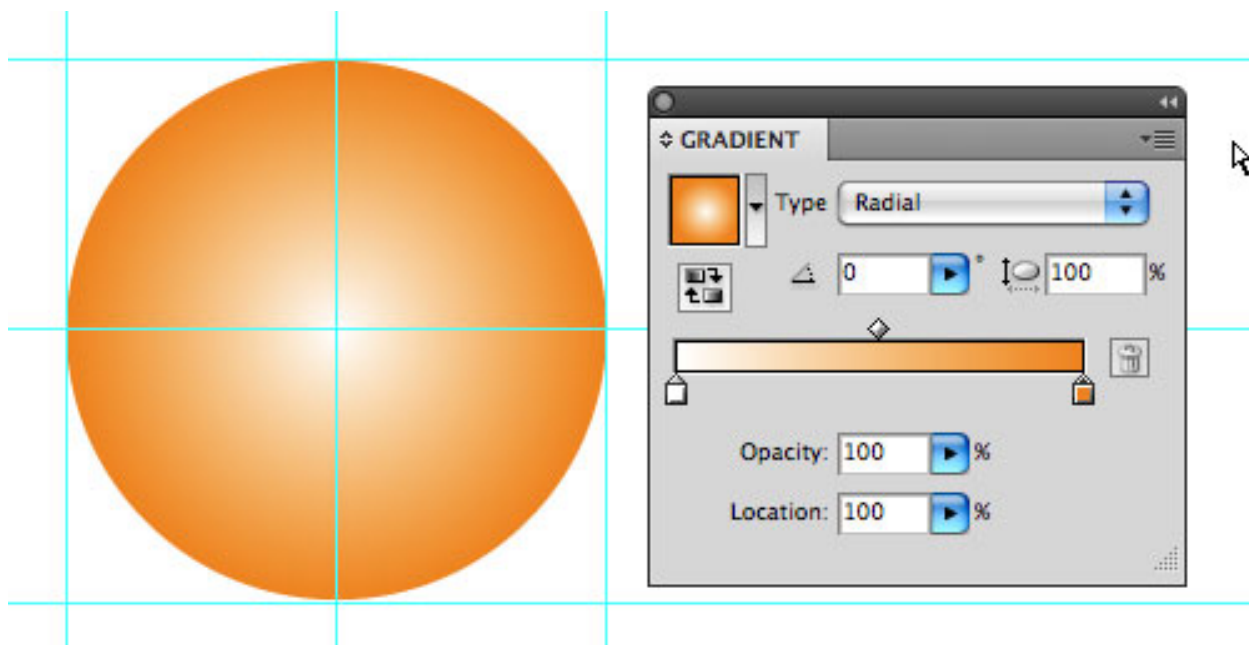


The icon in the upper-right of any panel is the disclosure icon which opens a menu.

The options give you access to what type of gradient you'll want: linear or radial. By default, the Gradient panel is set on Linear.

Make certain that your ellipse is *not* selected (**Select > Deselect**, or click anywhere on the screen with the Selection tool). Now change the gradient type to Radial. Note that since we haven't changed anything yet, the gradient is set to go from white on the left, to black on the right. Here is where we change that. Click the ellipse with the Selection tool to select it. It should be orange.

From the Tools panel, drag the orange fill color directly to the far right of the gradient display in the Gradient panel.

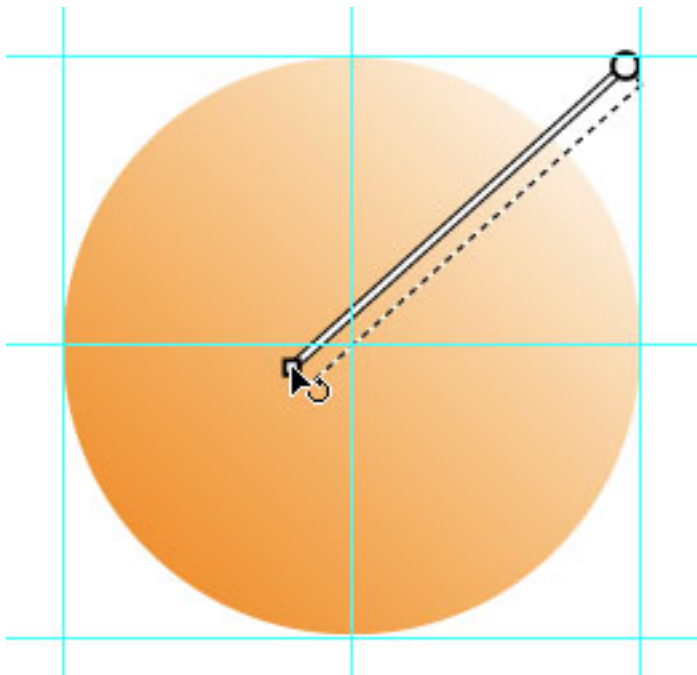


Drag the fill color from the Tools panel to the right edge of the gradient slider.

You'll notice the small diamond in the middle of the slider of the gradient display. That signifies the midpoint of the gradient. If you slide it back and forth along the line, you can see the effect on your gradient.

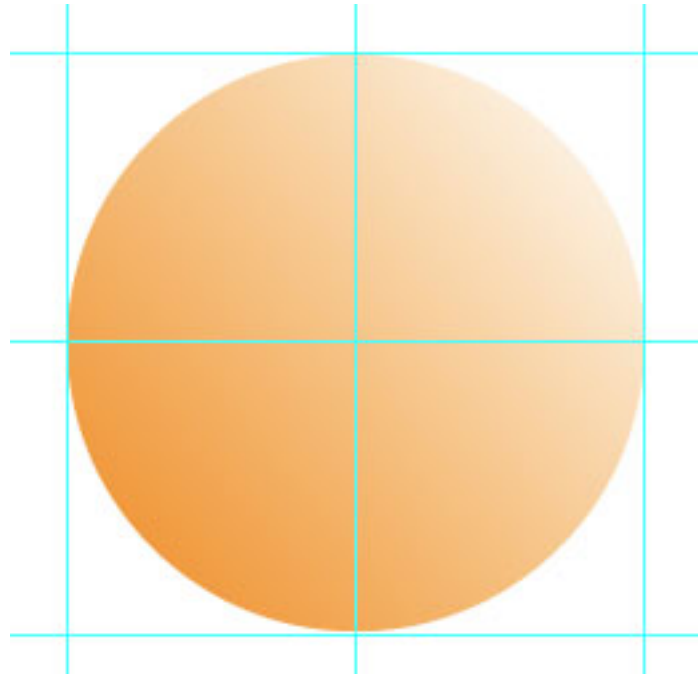
By default, when you apply a radial gradient to an object, the left hand or starting point of the gradient begins at the center. But if we were to leave the gradient at this point, it wouldn't look much like an orange, now would it? We want the gradient to show a reflection of a light source. In order to do that, we'll use the Gradient tool (as opposed to the Gradient panel). From the Tools panel, choose the Gradient tool (or press the G key).

Place the cursor at the upper right corner of the guides grid. Now drag across the ellipse, through its center to the opposite edge, and let go.



Using the Gradient tool, start in the upper right corner of the grid and let go at the bottom left of the ellipse.

Your orange is now beginning to take shape. We have a light source from somewhere to the upper right of the orange ellipse.



Navel Gazing

Now let's make it an orange fruit, not just an orange ball. We'll give it a navel. Reset the fill and stroke settings in the Tools panel. You can do that by first deselecting any elements you may have selected in the document. Now either click on the small stroke/fill icon, or simply press D on your keyboard. The small icon in the Tools panel will revert to white background, black stroke.

Next, click the curved arrow icon next to the stroke/fill icon, switching black to the fill color and white to the stroke color. Now make the stroke None so that all we have is a black fill color.

Select the Pen tool (P). We're going to create an asymmetrical polygon to represent the small navel that appears at one end of an orange. (Now, no guff from those of you who want a seeded orange! I'm choosing the fruits for this project.)

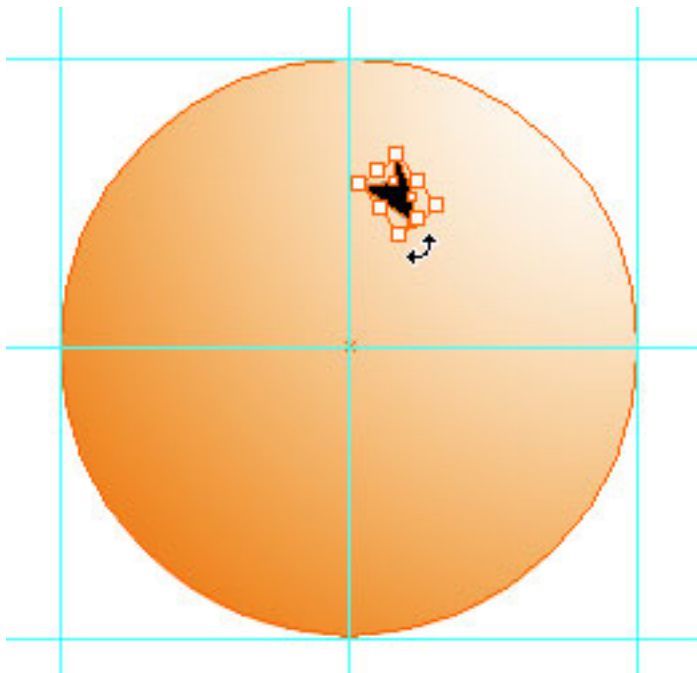
I want to create the shape to look something like this:



Navel shape

The shape has five points, but we don't want it to look too regular. So, no right angles here. Click the Pen tool to make such an image. Don't make it too big. Now select this odd shape, and place it on your orange, in the upper right quadrant.

Size it to fit like the image here:



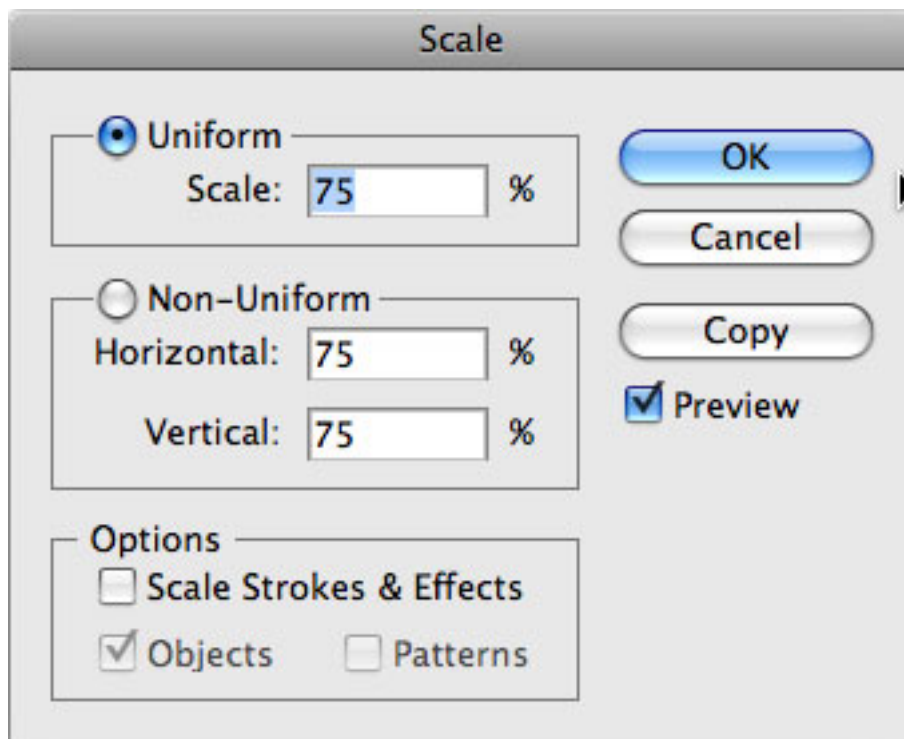
I scaled my navel down a bit using the Selection tool. Select the navel and drag a corner handle inward to scale down.

We're not finished yet. We have to give that indentation a little life too. Do either of the

following two steps: With that shape still selected, click Alt/ Option-click) and drag a few inches to the right, clear of the orange. Or while it's selected, copy and paste the shape. Either method duplicates the shape.

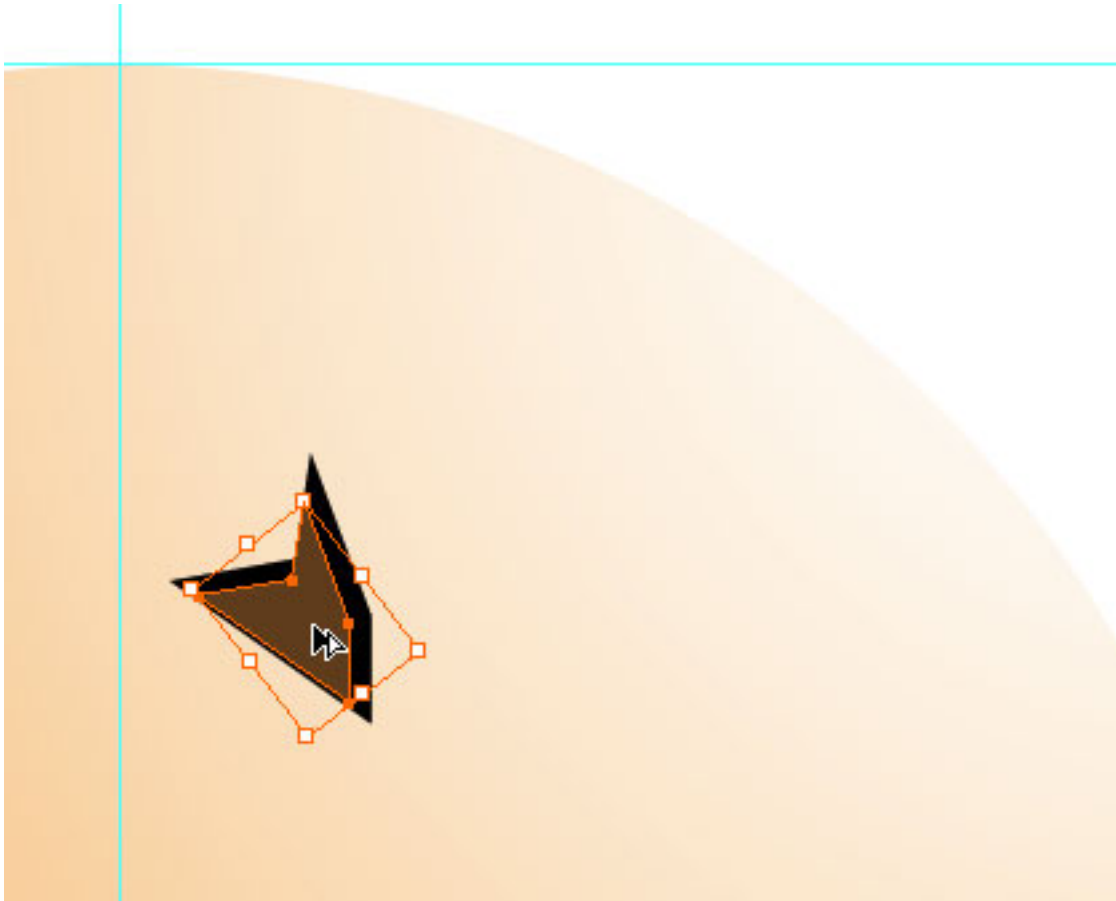
Make sure the new duplicate shape is selected. Now choose a brown swatch for its fill from the Swatches panel. I won't dictate the color. You are the illustrator here, and your judgment on that is as much a part of the process you're learning as are the specific tools you're using in the program. So make the brown something distinct enough from black, but not too dark or too light.

From the menus, choose **Object > Transform > Scale**. In the scale dialog, under Uniform, input 75%. You may also want to click the Preview check box before you do, just so you can see your results before you commit.



The Scale dialog

Drag the (now smaller) brown polygon so that it sits on top of the original black shape on the orange.



You may want to zoom in with your Zoom tool or View menu to get the placement just right.

Now close your eyes for two seconds, blink and look again. It's an orange. Almost. Let's call it a preliminary orange at this point.

Grouping and Locking Elements

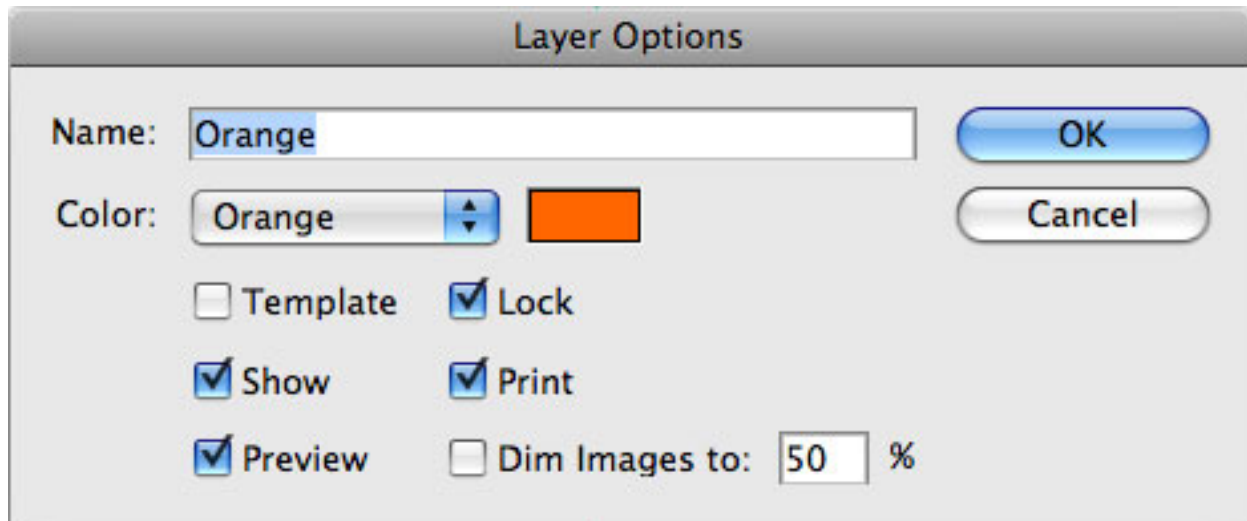
Since we're going to be dealing with this collection of elements as a unit for the most part, we should make it a group—linking the separate elements together so that if we scale it, or move it, it will stay pristine.

Drag across the entire set of elements with the Selection tool to select them all. Now either go to **Object > Group**, or just use the key combination of Ctrl-G (PC) or Command-G (Mac).

Note: The guides we used to create the object are also now part of the group.

Now let's lock down the layer.

Open the Layers panel (**Window > Layers**). Double-click on the layer, called Layer 1. In the Layer Options dialog, rename the Layer "Orange." And just for good measure, change the color of the layer to orange, and then click the Lock checkbox.



Layer Options dialog

Locking the layer prevents us from altering it. If you need to make a change, click the lock icon next to the layer name to unlock it.

So, let's review what we've just done. We've created a representation of an orange, and we've given the layer upon which it lives an appropriate name. We have further locked that layer, so that we can't move the object at this time.

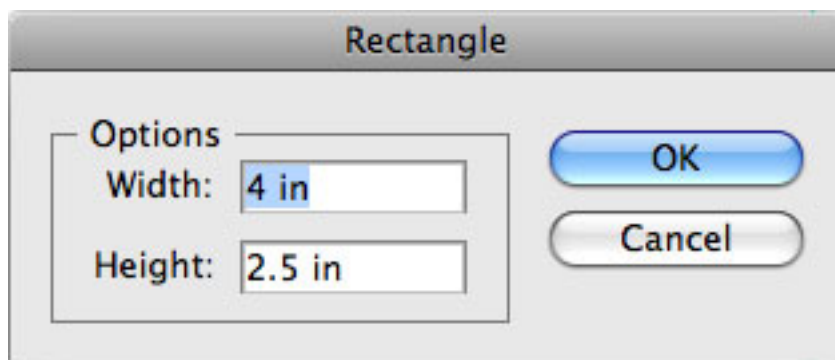
Bring on the Cheese

Since the only layer we have in this document is locked down, we must create a new layer to draw our next object, the block of cheese.

In the Layers panel, click the Create New Layer button. A new layer entitled Layer 2 will appear above our Orange layer. Double-click on Layer 2 and rename it "Cheese." Don't lock it, though. You can also change its default color if you like.

Creating a Shape Numerically

OK, that's done. Let's start making some cheese. This shouldn't take very long. Let's try something different this time. Instead of drawing out its main rectangle shape, let's do it by the numbers, just to show you how. This process will come in handy in a few steps, as well. Select the Rectangle tool (M). Place your cursor in an open area on your artboard. Mind that the point at which you place the cursor will be the center point for the rectangle (or any form you choose to make in the future with this method). Hold down the Alt/Option key and click once. In the ensuing dialog, input Width: 4", Height: 2.5" and click OK.



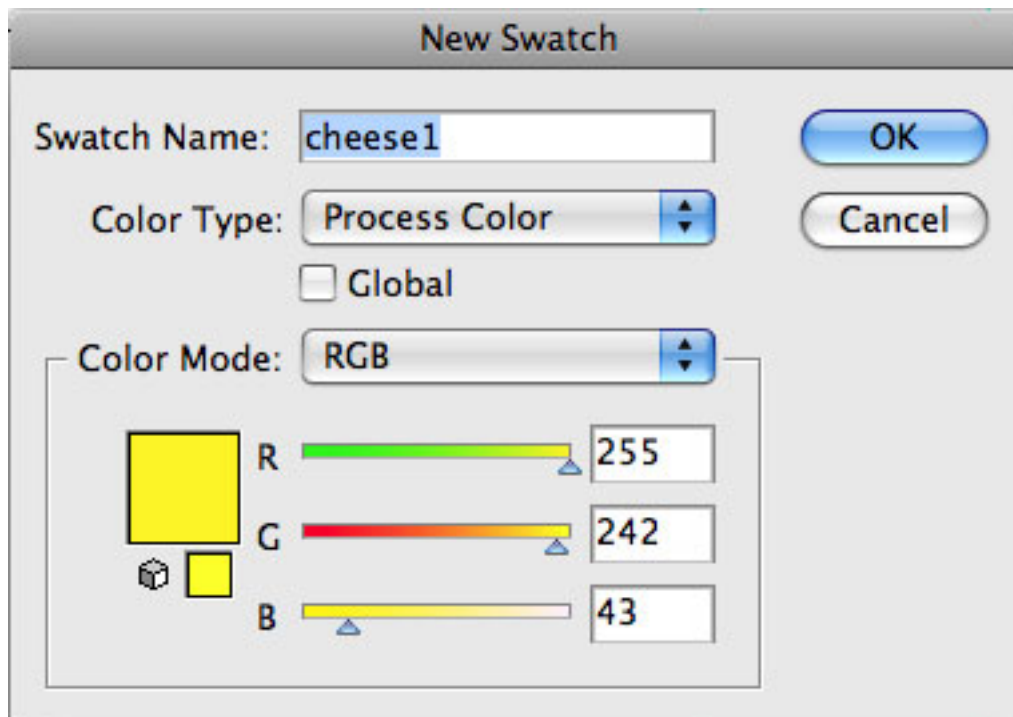
Setting rectangle dimensions

Your new rectangle needs an appropriate fill and stroke. Rather than use what the good people of Adobe have given us, let's create a new swatch or two of our own. To start, deselect the rectangle.

Creating New Color Swatches

As with almost anything in Adobe Illustrator, there are numerous ways to create a color swatch. While we could approach this from the Color panel, we're going to cut directly to the chase, and start with the Swatches panel instead.

From the Swatches panel, click on the flyout menu button, and select New Swatch. Create a Process Color swatch, call it "cheese1" or something similarly recognizable, and make it R:255, G: 242, B:43. Click OK.



The cheese1 swatch—my own invention.

Now create another swatch, call it "cheese2", and make it R: 255 G: 227 B: 43.

Select the rectangle and apply the fill as cheese2. Make the stroke None. That's the front of the block of cheese.

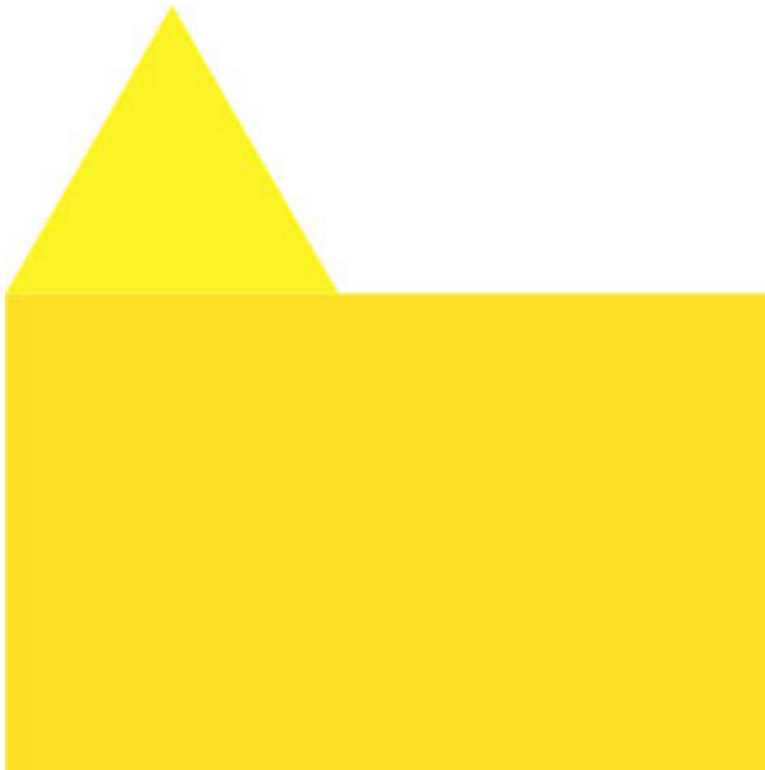
Building the Cheese Shape

Now for the top. Select the Polygon tool (it's in the same tool set as the Rectangle and Ellipse tools).

Place your cursor above the rectangle, in open space on your canvas, and Alt/Option-click.

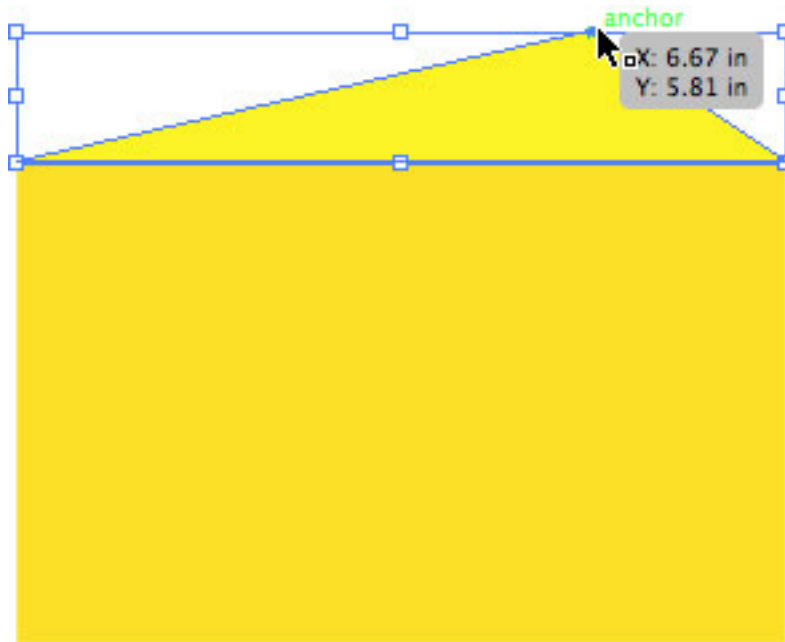
Assign three sides to the polygon (thereby making it a triangle). Make the radius 1", just for argument's sake. We'll be changing its shape in a moment.

Apply the fill color "cheese1" to the triangle. Drag the triangle to the top of the rectangle.



If we were to leave it like this that would be an odd block of cheese. Maybe sometime when we work in the style of Mondrian we can do this. But we're working in a more depictive style here. So choose the Direct Selection tool (A).

Select the bottom right point of the triangle and drag it to the upper right corner of the rectangle. Select the top point of the triangle and drag it about 4/5 the length of the rectangle.

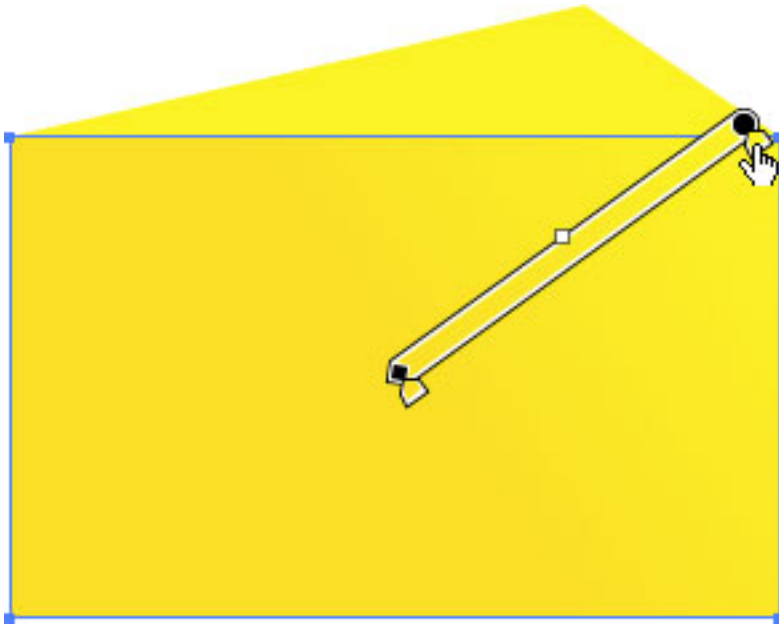


Dragging a simple triangle gives our rectangle that familiar wedge shape.

Starting to look like something, eh? Now let's make some depth.

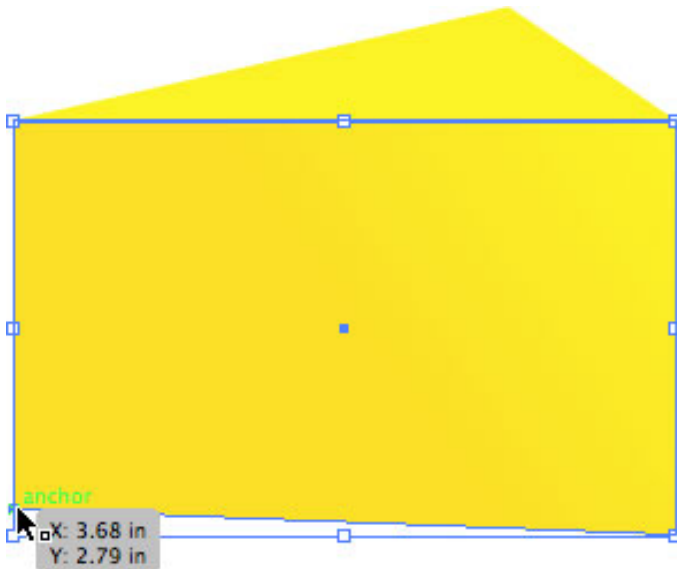
Revert to the Selection tool (V) and select the rectangle. Open the Gradient panel. Create a new Linear gradient and put cheese1 on the left hand side of the slider, and cheese2 on the right (you can drag these straight from the Swatches panel).

Select the Gradient tool (G). Starting at the upper right corner of the rectangle, drag the Gradient tool to the center point of the rectangle.



Drag the Gradient tool from the upper right to the center.

Your cheese block should start to look a bit more substantial. Now using the Direct Selection tool (A), select the bottom left corner point of the rectangle and shift-drag it directly up 1/16".



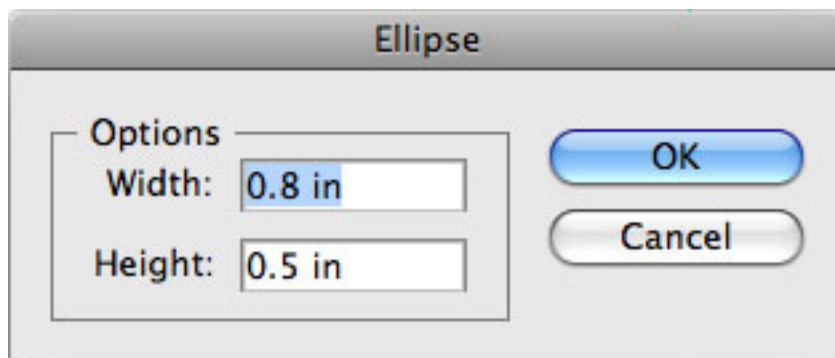
Dragging this corner transforms the rectangle into a more realistic wedge.

Adding the Holes

Now it's magic time. Let's make this a real piece of cheese.

Open the Graphic Styles panel (**Window > Graphic Styles**). With the rectangle still selected, click the New Graphic Style icon in the Graphic Styles panel. The currently selected gradient fill from your rectangle will appear as a Style selection in the panel. Now we can reuse it easily as we create the cheese holes.

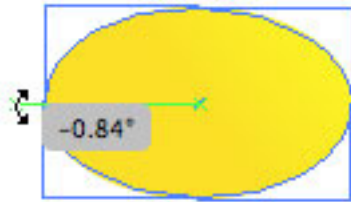
Select the Ellipse tool (L). Place your cursor on an empty area of the canvas, and Alt/Option-click. Create an ellipse with Width: 0.8", Height: 0.5".



Ellipse settings

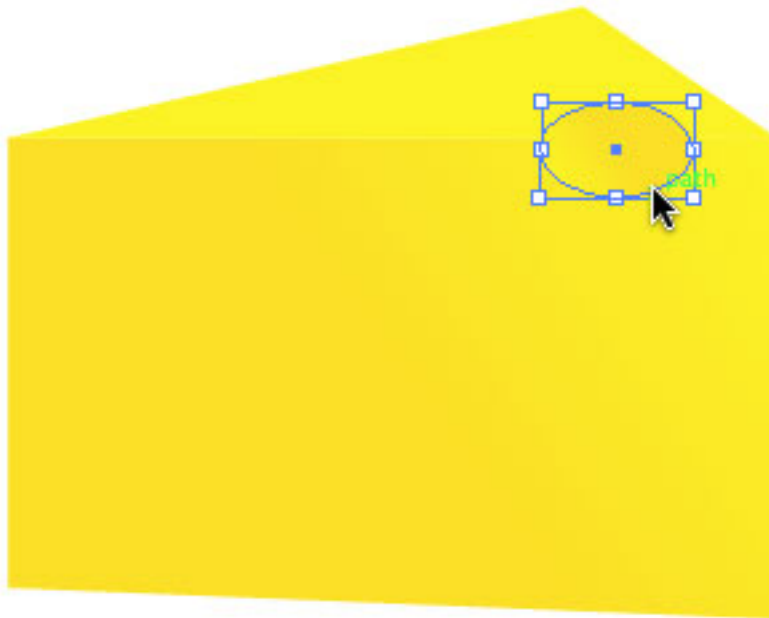
Let's make the fill the same as the rectangle's gradient using the new Graphic Style we created. Select the ellipse, and then click once on the gradient graphic style. You should have an oval with the same fill as the rectangular portion of the block of cheese.

Place your cursor just outside the selected ellipse. It should turn into a curved line with arrowheads on each end. That means it's in rotation mode. Hold Shift and rotate the ellipse 180 degrees, just so.

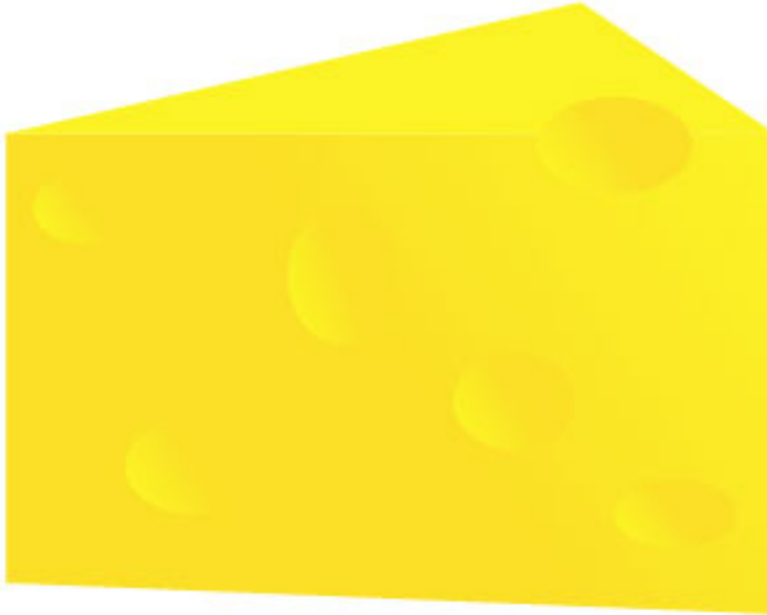


Look for the curved arrow icon,
then start rotating.

Drag the ellipse to the cheese. Place it on the boundary between the top triangle and the front rectangle.



Now Alt/Option-drag the circle (or copy/paste) and place variations of the ellipse on the front rectangle of the cheese. Make sure to vary the size and the shape of the ellipse, but *don't* rotate it. Rotating the ellipse will change the light source.

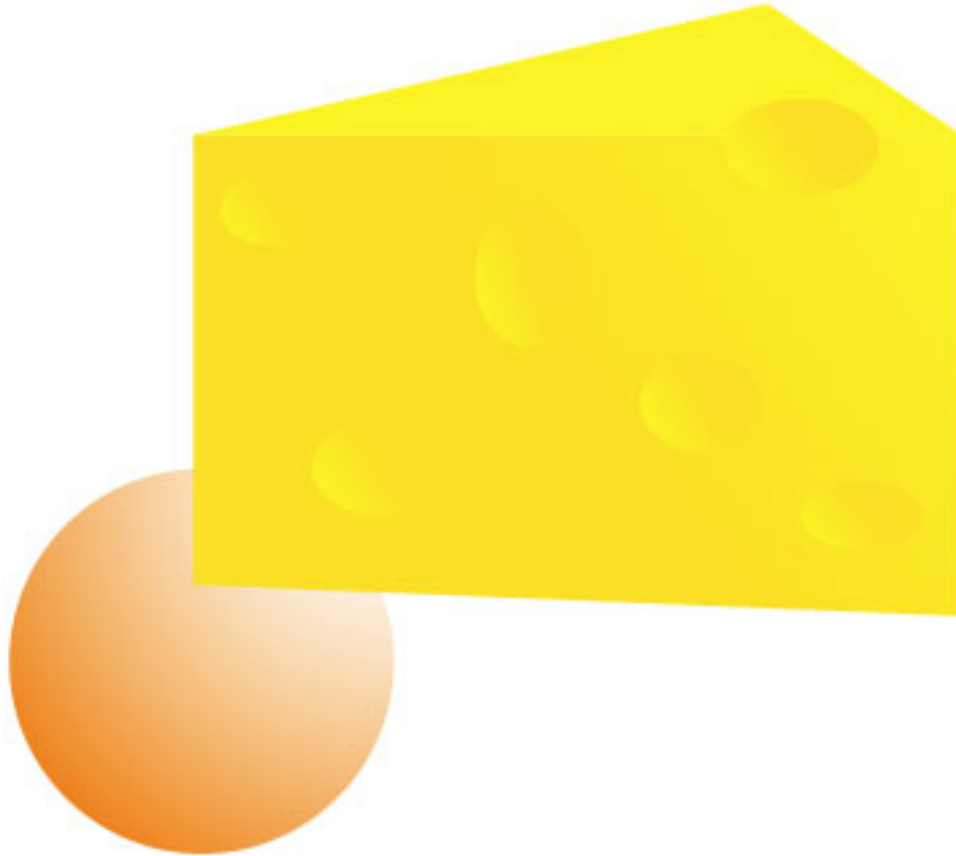


By scaling but not changing the rotation, the light source remains constant.

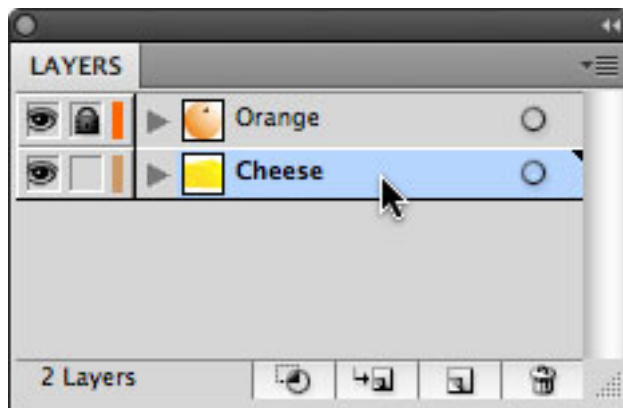
Guess what. You've got a block of cheese. Magic!

On the Cheese layer, select all (**Select > Select All**). You can always just drag across the block of cheese to accomplish this.

Don't forget to group your block of cheese, using Ctrl/Command-G. Now drag the cheese so that it partially obscures the orange. If you've been following this to the letter, it should look like this:



Access the Layers panel and drag the Cheese Layer below the Orange Layer. Position the Cheese so that it sits lower than but in front of the orange.



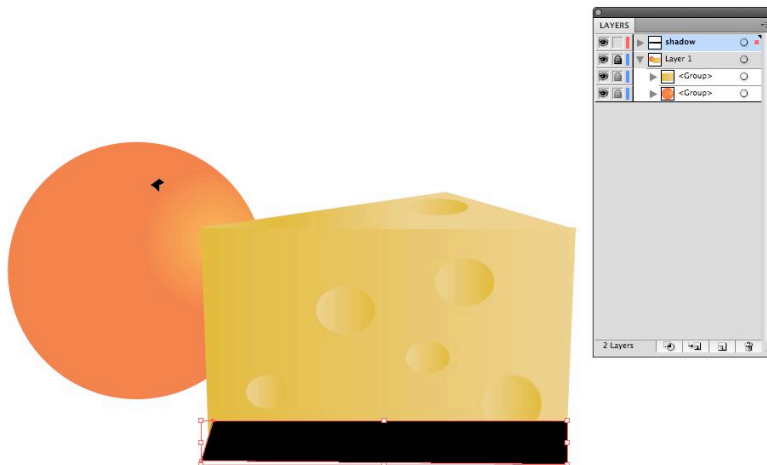
Keep your Layers panel color-coded.

Finally, lock the Cheese layer. Not even the most enterprising mouse could alter it now.

The final step in any illustration is to create light and shadow. We've already assigned light source here (coming from the upper right). So now in order to make these objects look right, we need the corresponding shadows.

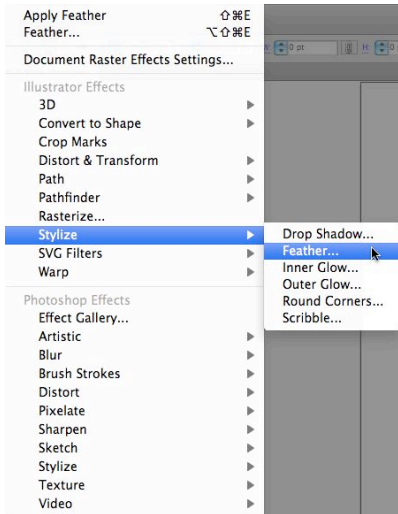
Here's how:

1. Create a new layer.
2. On the new layer (you can call it shadows) use the pen tool to draw our a shape that corresponds to the base shape of the Cheese. Since the other layers are locked, you can draw with some freedom, knowing you won't disturb your cheese block.

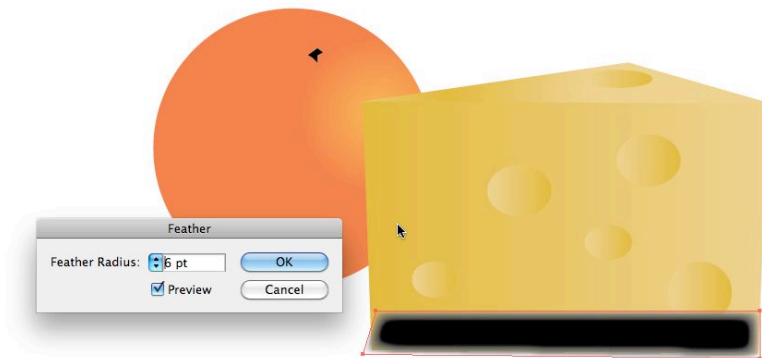


3. The hard edge on the shadow shape won't do. While there are several ways to achieve the soft edge, we're going for the simplest right now. Select the Effects menu and choose

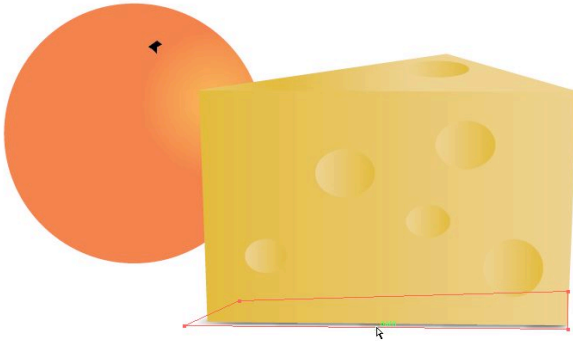
Stylize > Feather.



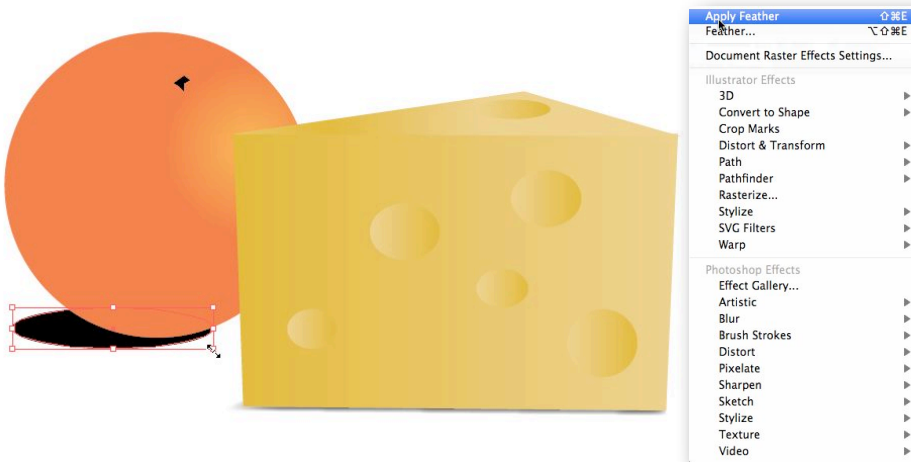
I decided on a 6pt feather here. Yours may vary according to your own eye.



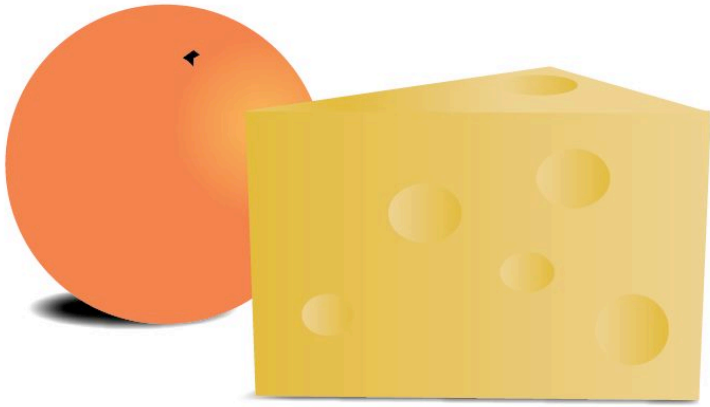
4. When you have a shape that roughly works with the base shape (imagine a triangle) now take your shadow layer and drag it below the object layers.



5. Now draw a black ellipse under the orange. When you have a good relative size for it, return to the top of the Effects menu, and choose “apply Feather”.



Your results should look something like the image below:



Now that we have the basics out of the way, let's get into some of the features in Illustrator that you'll be using as you apply your illustrative skills.

Working with Artboards

Multiple Artboards: The first thing we're going to look at comes at you before you even put mouse to paper, as it were. Illustrator has finally kicked the one page per document limitation. The Multiple Artboards feature had been a long time coming when it finally appeared in CS4. Even back in the heady days of competition with Macromedia FreeHand, Illustrator resolutely kept to its one page per document. FreeHand, if you will recall had multiple page, and multiple page size capabilities way back in the days of version 5.5. But that's the past, and we're not here to mull over the dark ages. We're here to celebrate the present, and gripe toward the future.

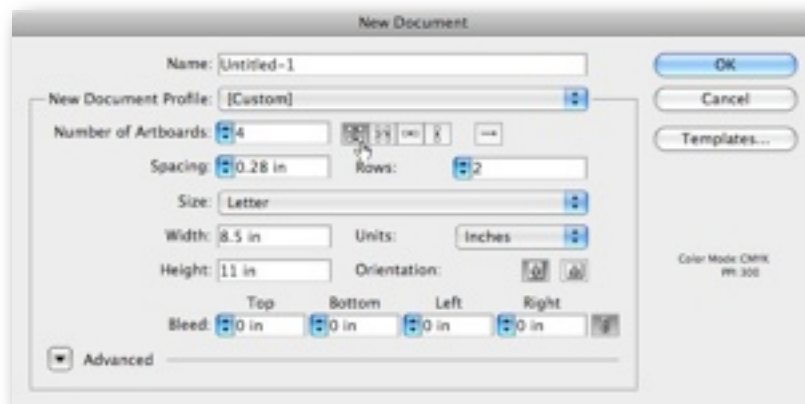
I'm still talking about Multiple Artboards as something new, even though it's already one version rev old. And that's because Multiple Artboards opens up a whole new way of considering Illustrator documents. The area between InDesign and Illustrator has become

grayer. Multiple artboards let you create a document that flows from one page to the next. And those pages don't have to be the same size or orientation. You may ask why is this such a boon. Well, that remains to be seen, whether it is or not. When setting up package designs, with tabs and variously shaped faces, you might find the multiple artboard helpful in the prototype process. You'll certainly find it useful when exporting illustrator files to InDesign, Flash, and of course PDF's. But enough intro. Let's take a look.

1. Open a new document. Everything should look pretty much the same as before, but for the addition of the Number of Artboards dropdown, and the ensuing reading path arrangement icons. (See Fig1).

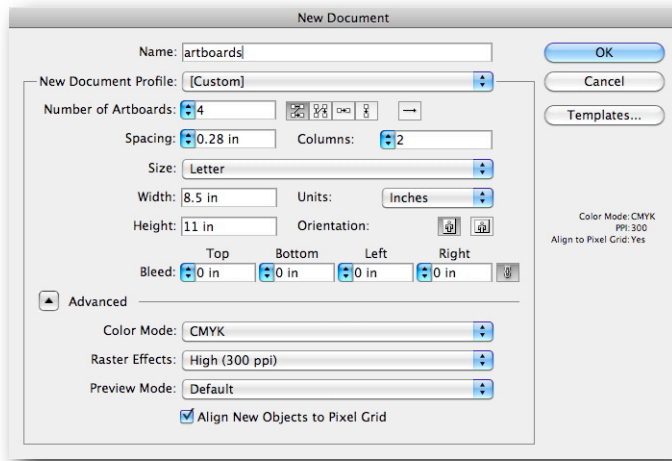
First thing, though, that you should know is that this new version of Illustrator redefines the term *Artboard* from earlier versions. If in an earlier version of Illustrator, you thought of *Pages*, you should now replace that term in your mind with *Artboards*. When you increase the number of pages, uh, I mean *Artboards*, to say, 4, you then have access to the arrangement of those Artboards and how they will read. The spacing area lets you set the space on the canvas between your artboards. You can have it at "0" if you like. I'm leaving it default here.

Fig1:



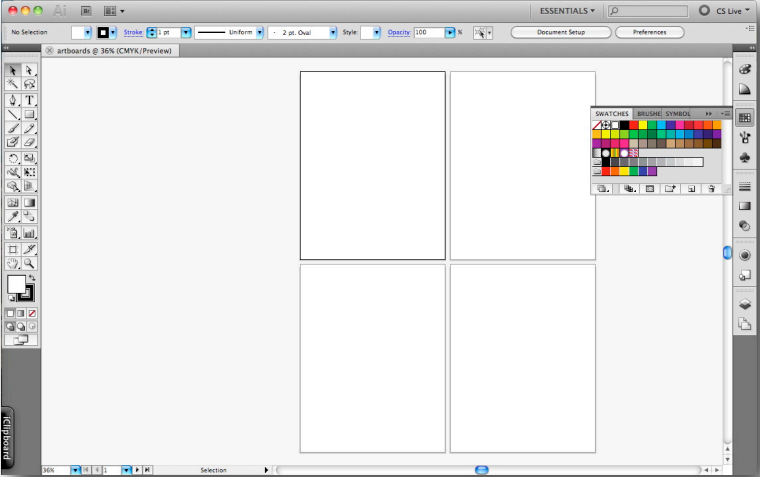
Clicking on the Advanced disclosure triangle will give you the color space options (CMYK versus RGB), as well as the resolution of any raster effects you may use in your document. (See Fig.2).

Fig2:



2. Name your document artboards, set it for RGB, with Raster Effects on High (300 ppi). Give the document 4 Artboards, and let's just have them follow the pattern described by the first button icon in the New Document dialog window.
3. When the app opens, you'll now see all four of your artboards, arranged in the fashion we designated a moment ago. The active artboard will have a darker perimeter than the others. See Fig 3.

Fig 3:



We have four artboards here. In this example each is of equal size and equally distributed. There is also something else of note in this example. The whole of the AI interface is contained in a singular unified window frame. Windows users have had this feature for some time, but this is new to the Mac, and you'll notice it in most CS5 applications. It's called the Application Frame View. You can access it from the Window menu. (see fig 4 to the right).

It lets you keep all your Illustrator tools in one clean, ordered area, and lets you drag the whole interface around as a single unit. If you work on multiple monitors, say, then this is a time saving feature.

Okay, back to Artboards. Let's say we want to change the size of one or another of the artboards. Here's how.

1. From the tool bar, select the Artboard Tool (Shift + O). When you have the Artboard tool selected, the background of the canvas turns a medium gray color, rather than white. It's a visual cue to let you know you're in *artboard* editing, not *artwork* editing.
2. Let's resize the second artboard. There are two ways to do this. The first is to select the artboard you want to resize, and drag on one of the perimeter anchor points. (see Fig 5)



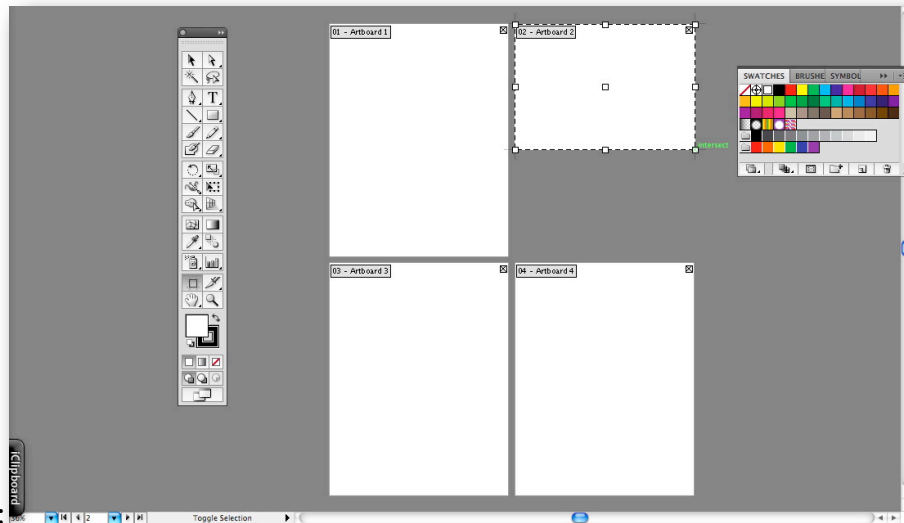


Fig 5:

This is a good way to eyeball the size.

But there is a more precise way to do this as well.

3. With the artboard tool selected, point your cursor over the artboard tool options panel at the top of the window, and input the precise sizes you want. (Fig 6)

Fig 6:



Done.

Now let's look at a document that already has multiple artboards, with art already existing.

The easiest way for us to do this is to use what comes with the CS5CS5 application.

1. Under File, select New from Template.
2. From the Adobe templates, select Club > Promotional 2.ait

An untitled document will open in your application window. This particular template has four artboards: a poster, a flyer, a table tent and an ad.

Note that each is a different size, with different art and text, but each is also a related collateral piece to a whole set. And that's an important thing to understand how and when to use multiple artboards. (Fig 7)

Fig 7:



If you like, click on any of the artboards, then under View, choose *Show Rulers*, and then go back and choose *Show Artboard Rulers*. You will see a set of green rulers automatically show up next to the selected artboard. (See Fig 8)

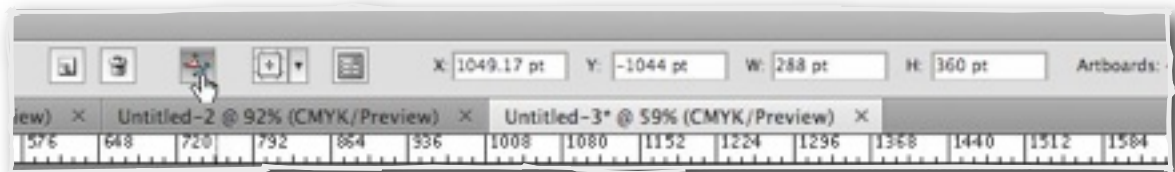
Fig 8:



Back to business. Let's look at what we can do with those artboards.

1. Select the Artboard tool (Shift+O).
2. Locate the tool settings at the top of the window, and select the icon button just to the right of the small trashcan button. This is the *Move/Copy with Artboard* option button.
3. Click it once, so that the button is darkened. This enables you to move the contents of a particular artboard when you move the artboard across the canvas. (see Fig 9)

Fig 9:



4. Now, with that option chosen, click on the Ad artboard (labeled "04") and drag it to the right. You'll note that when you release, the artwork has moved along with it. (See Fig 10)

Fig 10:



- Next, let's click once again, essentially toggling the *Move/Copy with Artboard* option button so that it is no longer dark, or enabled. Now move the same artboard back to the left. This time, you'll see that the artwork stayed where it was, but the artboard moved. (Fig 11)

Fig 11:



- Click Undo and undo again. Let's return back to our original state.

7. Finally, with the Artboard tool, select Artboard 02. Hold down the Shift key, and click-drag around just the upper left text block area on that page. As you move your cursor, you'll see the area you are designating is constrained to a square. But if you release the shift as you drag, you can conform the area to the rectangular shape of the text block. Most importantly, though, you are creating a new artboard directly on top of an existing one. (see figs 12, 13).



Fig. 12:

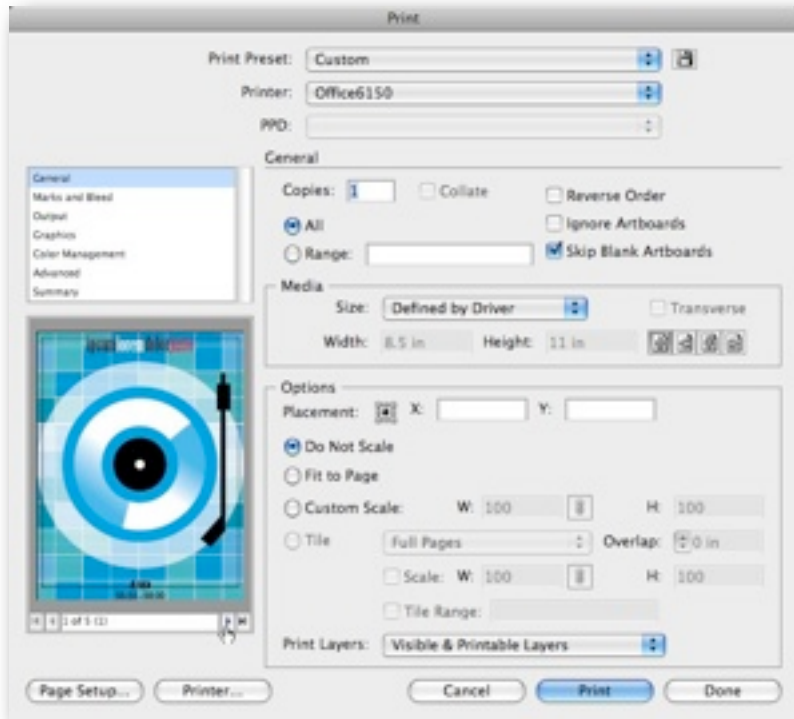


Fig 13:

Mind you, you can create up to 100 artboards per document. Now for the reason why we would do this: output. When we decide to output our document, as pages for print, or a PDF, say, then we will have 5 separate pages. The fifth artboard, which we've just created here, will be its own page, working as a sort of close-up or pull out from the larger original page.

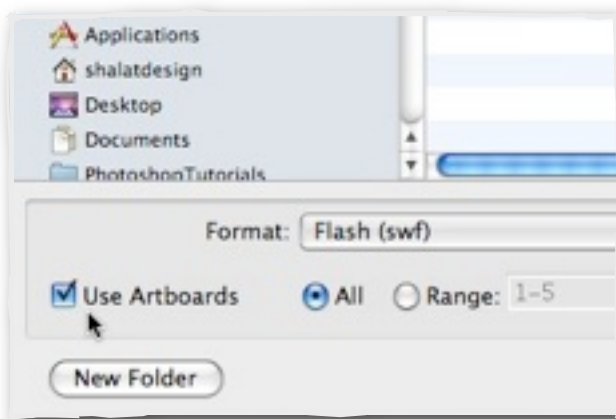
When we decide to print the document, we will also be able to scroll through the pages, previewing each, within the Print Dialog window. (Fig 14)

Fig 14:



Exporting your document (File > Export), however, can result in one large document, similar to what you see in your Illustrator application window if you don't click the "use artboards" checkbox during the export. (see Fig 15).

Fig 15:



The main thing you need to see here is that multiple artboards let you create a complete set of documents within one document. A complete identity program, or simply a portfolio or presentation, all within one singular document, then exported to PDF, or Flash, or just print. Multiple artboards means versatility.

Using the Blob Brush

If you've heard anything about the newer features of Illustrator CS4 or CS5, The Blob Brush had to be one of them. The Blob brush is a sort of short cut tool, that lets you create shapes and closed paths similar in appearance to a calligraphic brush, but it does it in a slightly different, and new manner. Where in earlier versions of AI you'd use a brush to draw a path, which would have a sort of virtual look that in order to make a closed path, you'd have to Expand, this new version goes straight to the Expand part.

Now that probably doesn't make much sense to you, so let's just dive in and show you what I'm talking about. All will become clear.

1. First, open a new document in Illustrator, and set it with only 1 artboard. We'll keep this all simple.
2. Select the original Brush tool (B). From the tool options panel, choose a Brush style of 7pt round.
3. Draw an S shape on the page. It doesn't matter how accurately you draw it, just so that you have a curvy shape.
4. Change your tool to the Direct Selection tool (A), and select the shape you created. Note where the anchor points and path lie. (See Fig 16)

5. Fig 16:



You should see the path line running down the center of the shape, with the effect of the round brush form outside of it.

6. Now locate the Blob Brush in the tool panel.
7. If you happen to be using a tablet and pressure sensitive pen, this will be more effective, but for this simple demonstration, we'll just use the mouse. Draw a simple S shape on the artboard to the right of the other S. Now switch to the Direct selection tool and select the shape. Shift select both shapes and compare them. (Fig 17)

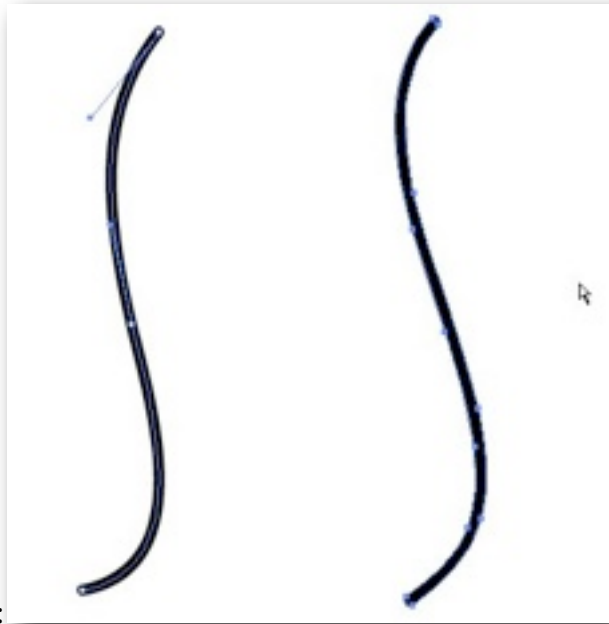


Fig 17:

8. Note the anchor points in the new shape. They are on the outline of the shape, rather than inside. The Blob brush tool creates paths with fills, but no stroke. In essence, the blob brush creates an *already expanded* closed path.

Of course, we're working with just a mouse, and not pressure sensitive palette (although I do recommend one for every illustrator). But even with these limitations, let's look at what we can do to enhance this simple form.

One of the unique qualities of the Blob brush is its liquid aspect. That is, when you draw a second stroke with the tool, if you happen to touch an existing Blob stroke, or cross over it, the two Blob forms are joined, or unified.

Let's try one easy.

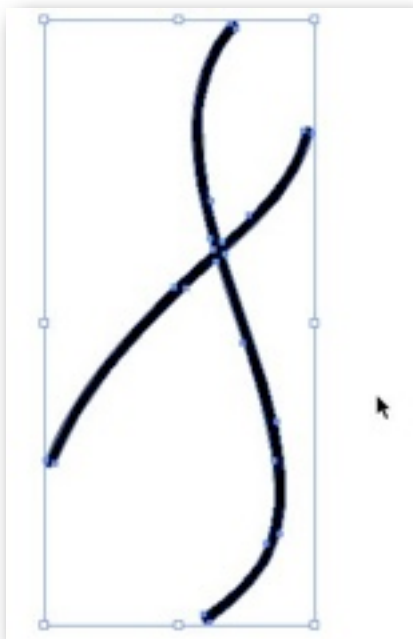
9. Using the Blob brush, now draw a line across the blob "s". (see Fig 18)

Fig 18:



10. Select the cross line with either the Selection tool, or the Direct Selection tool. (Fig. 19)

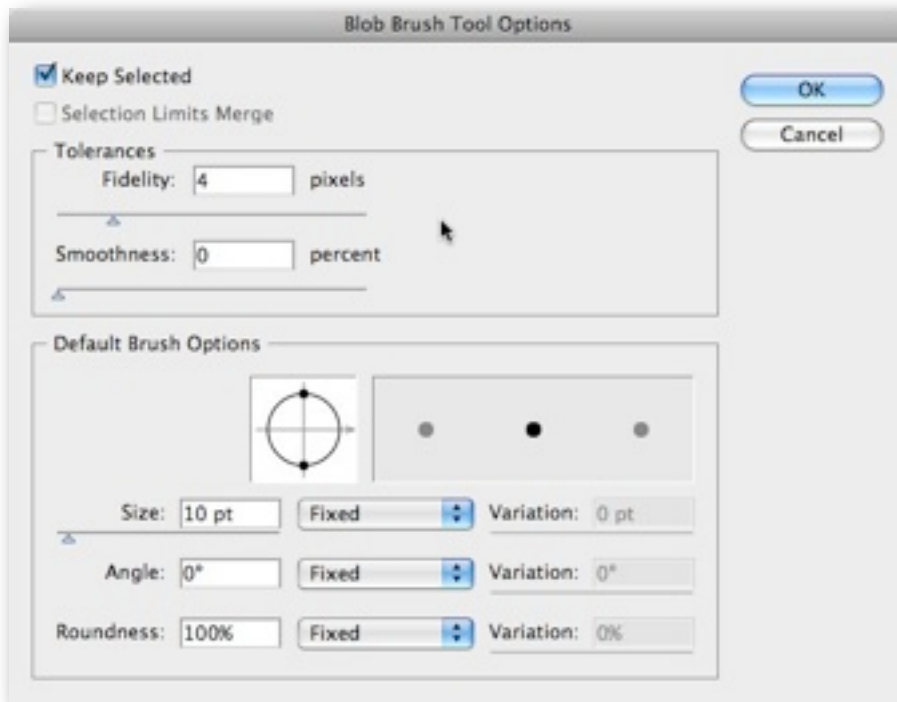
Fig 19:



The combining of closed paths just by drawing them over one another is one of those features that in the long run, will open up many options.

It's more than simply taking the place of one of the Pathfinder functions, as it will allow you to create more complex unified objects without a stop and start, looking for a tool palette. In fact, the Blob brush options (double click on the tool) lets you set the brush to "Keep Selected", which means that when you draw a merged path, all paths are selected and remain selected as you continue to draw. Note that when Keep Selected is active, Selection Limits Merge is disabled.

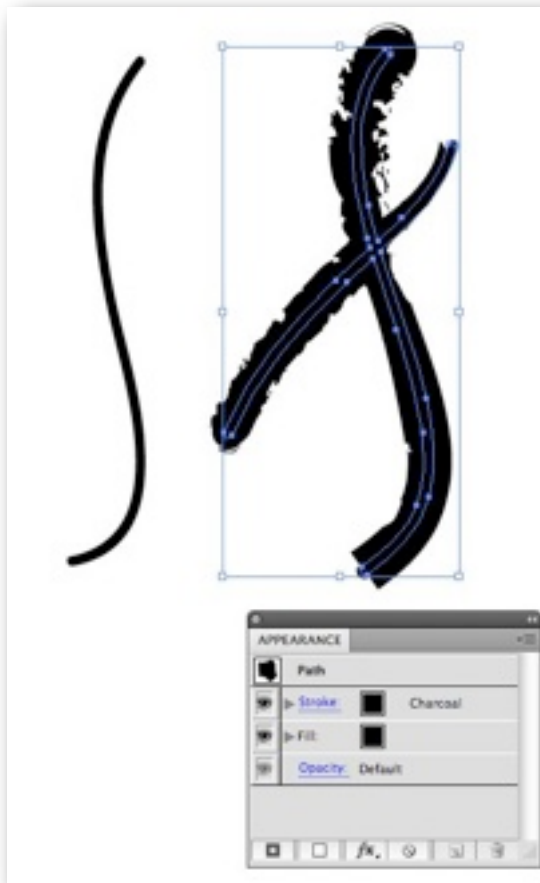
Fig. 20:



This option is useful for viewing all paths that are included in the merged path. Choosing the "Selection Limits Merge" option, which is the default setting, lets you merge only with the selected artwork. If nothing is selected, the Blob Brush merges with any matching paths.

11. Since the Blob brush tool creates paths with fills but no stroke, we can always apply a stroke to the form. Let's do so here. With the Blob form still selected, choose a brush style, like Charcoal, and set the width at 8 pt.

Fig 21:



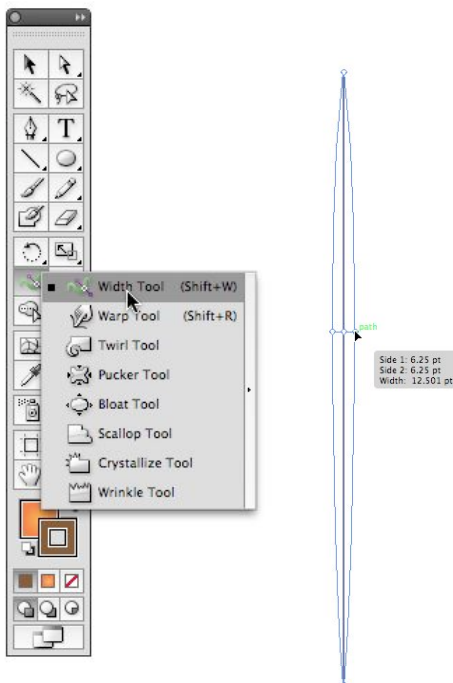
Now, I'm not going to do anything with this form at this point, but just want you to be aware of this feature for later on. I've included the Appearance palette in this picture for a reason. You can track your styles on the form through the Appearance palette. That means you can also revert them to a Basic Appearance, or add effects and filters from there as well.

So that's the basics of the new Blob brush tool.

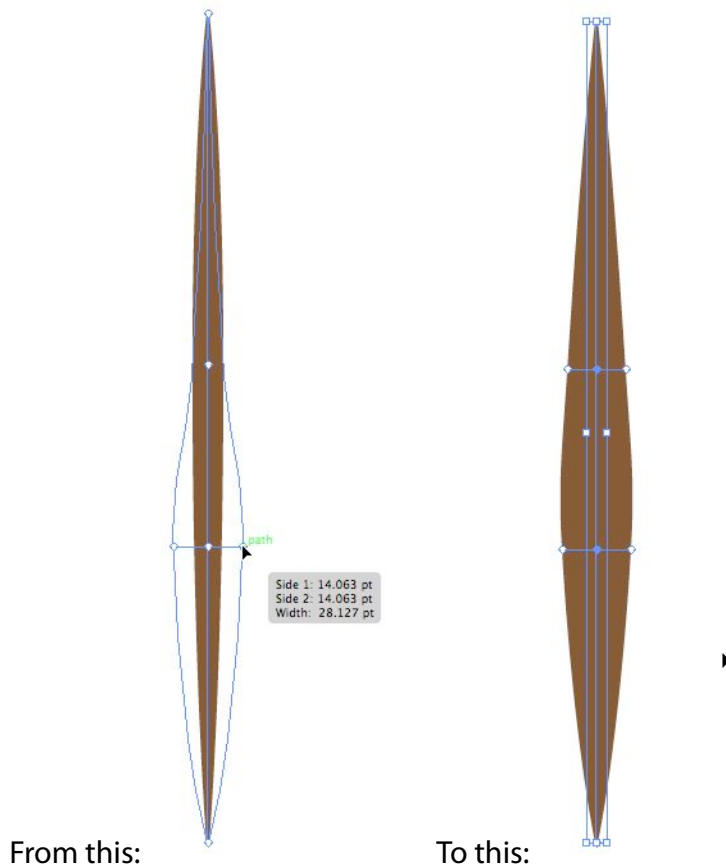
3. Using the Width Tool [Shift + W]

The Width Tool is new to CS5. Coming off of the Blob Tool, I think this one makes a lot more sense, and hopefully you'll find as much use out of it as I do. I think the best way to go about this is to simply show you how it works, then leave the implications to your own imagination.

1. Open a new document.
2. Select the Pen tool [P] and create a simple path., up and down, for instance. Click click.
3. Now select the Width tool [shift + W] from the tools. If you drag out from the tool, while selecting it, you'll see a whole set of optional tools hidden as well. But we're going to deal with just the new Width tool here.



4. Using the Width tool, click on any open area on the path and drag. (see above). When you release, you'll have created a calligraphic shape, much like you would get from a brush. But it's only a single path. The beauty of this is that you can add as many points like this along the path, and manipulate them in or out, thick or thin, as you like.

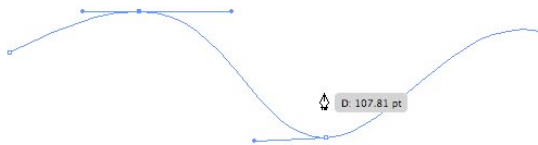


Now that we have the basic idea down, let's see about what we can actually do with this tool, something useful, perhaps, or at least illustration-like.

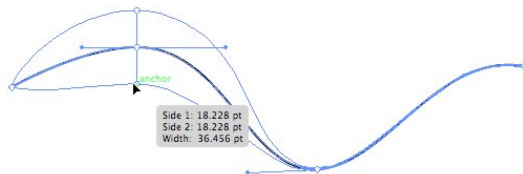
Remember that Orange we created earlier? Well in a minute we'll make another. But this time, we'll have leaves for it.

Making leaves

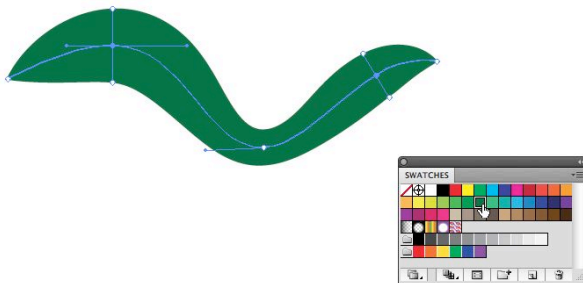
1. Using the Pen Tool, draw a wave shaped path.



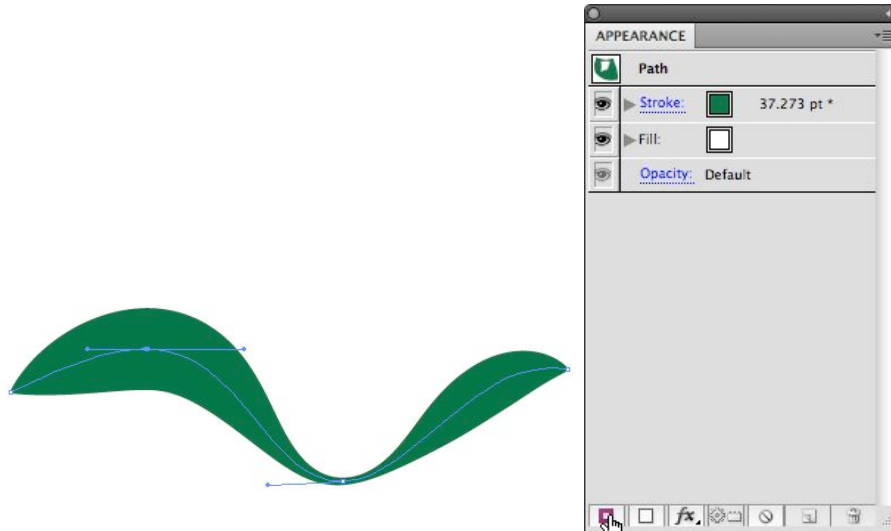
2. Select the Width Tool. On the left rise of the path, select the existing point, and drag it out to thicken the path.



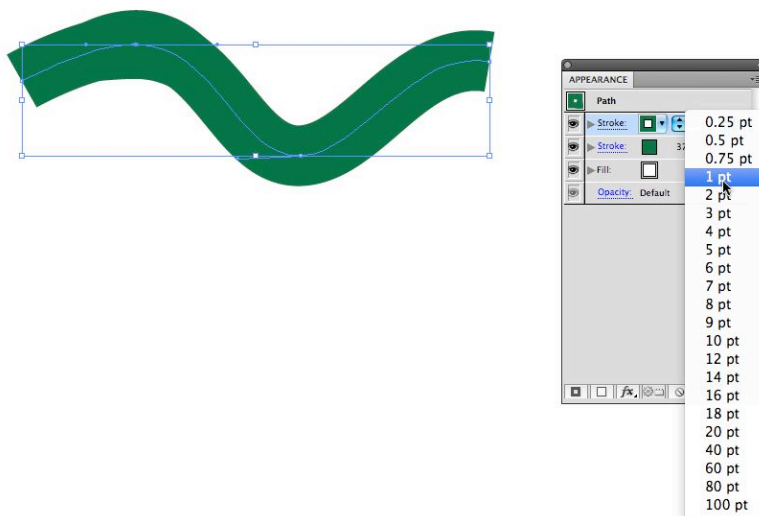
3. Now do the same on the right side rise of the path. The stroke of the path is whatever color you had set previously. Let's make it green here.



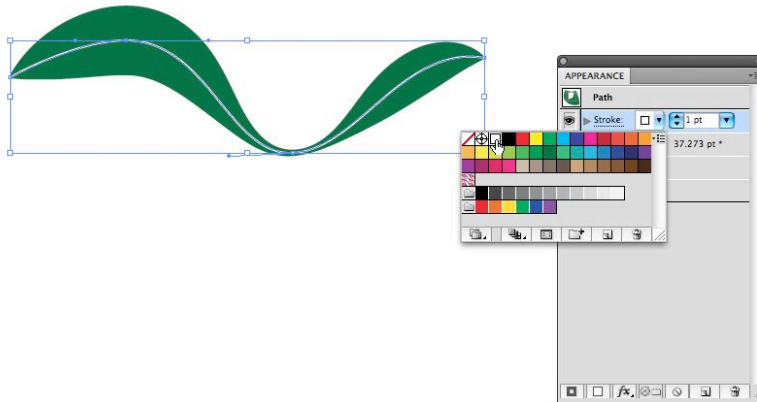
4. Now let's thin it out in the connecting point at the center.



5. Now we need to do some “advanced” work. Open the Appearance panel. Click the icon on the bottom left of the panel, which will add a second stroke on top of our existing path. Since our last path was somewhere in the 30 pt. range, that's what this one will be. So let's change it quickly back to 1pt.

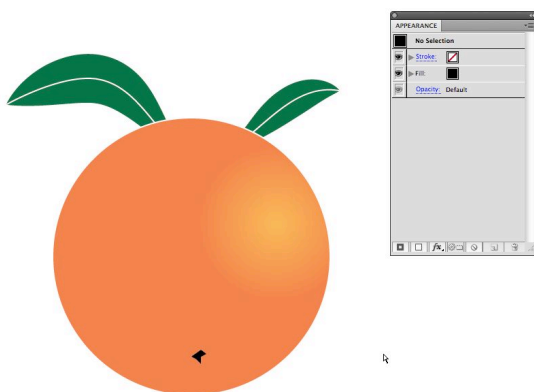


6. Now change the color of the second path to white.

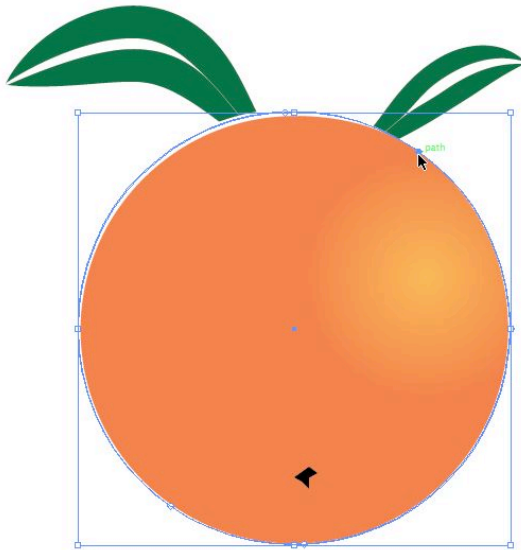


7. Okay, now let's take a step back and call up that orange we created at the beginning of this whole shebang. But we can just create one from scratch very easily. Create a circle, fill it with the radial gradient, from light orange to darker orange. Now create a simple polygon to act as the navel.

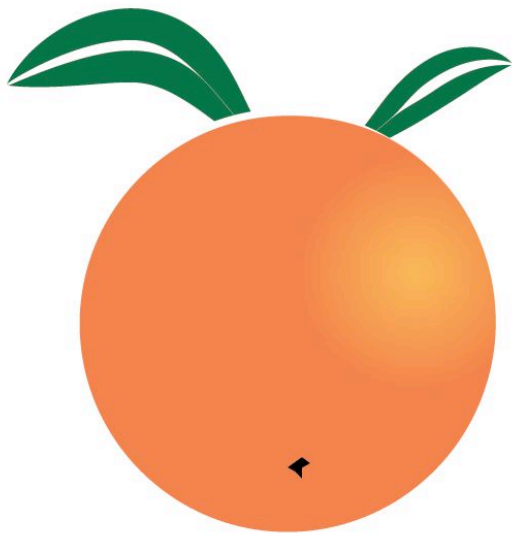
8. Group the orange and its navel, and place it over the leaves.



9. Now let's play a little with the inner stroke on the leaves, using the width tool again.



10. There you have a stylized orange with nice stylized leaves. Simple illustration, advanced technique.



All this needs is a corresponding shadow.

Drawing from Live Trace

Many times when designing a logo, or creating an illustration, we have to rely on existing artwork, and not necessarily good, or even vector format either. That's where Live Trace comes in. Now, don't go moaning about how this is old stuff, and not advanced. Sure, in the past century we used to use a standalone application called Adobe Streamline to do this, and it was pretty darn good. But that's the past. It's over. Move on.

The Live Trace command in both CS3 (where it finally worked) and CS5 (where it still works) is a great starting point for getting raster images into vector art, and further, converting them into Live Paint objects (more on that in the next section).

1. Open a new document, Letter size, RGB, 300 ppi.
2. Place a raster image into your new Illustrator document. (File > Place). We'll place something that should be on everyone's Mac. In the Place dialog box, navigate out to Macintosh HD/Library/Desktop Pictures/Nature/Earth.jpg.
3. Place Earth.jpg on your page. You may have to resize it to fit.
4. Click Live Trace. When the warning comes up about it being too large an image click through, and continue. Placed and resized, your page should look like this:

Fig 22:



Note that when it's selected it has a bounding box with cross lines. That signifies that it's not yet a vector. It's just in preview.

5. The trace controls are all in a row, as it were, in the tool options bar at the top of the window.

The first control to play with is the Threshold. By default it will be set at 128, right in the middle. If you increase that number, sliding it to the right, you'll increase the amount of black in your

image. If you go the other way, and decrease the

number, sliding to the left, you'll find less detail and add more white. Right more black, left more white.

6. But this is a color image, so let's make the vector conversion in color. From the Preset drop down menu, select Color 16. As a rule of thumb, it's better to use fewer colors than many, since printing many color fills within many paths and anchor points, can cause a very slow print. Take a look at the 16 color image (Fig 23).

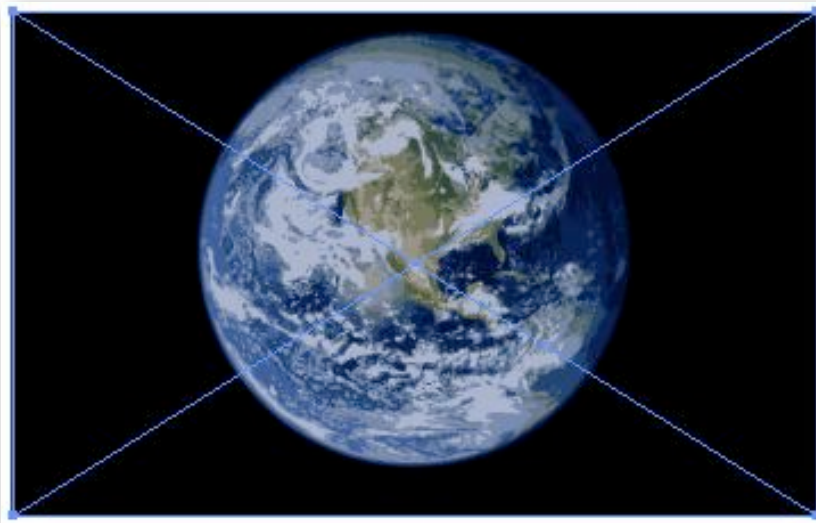


Fig 23:

This is still a Live Trace. By that, you can change your preset to even fewer colors, for instance, or go for more. You can vary the controls and options, and make your own preset. Play around with the various presets. Or...

7. Click on the Tracing Options Dialog (located just to the right of the presets drop down menu). Inside this dialog window, you can make finer adjustments and save as your own preset. Be sure to have the Preview check box selected so that you can see the different effects your adjustments will make. (Fig 24)



Fig 24:

Besides the normal adjustments, like Grayscale or number of colors, note the “Ignore White” check box. When this is selected, any white areas in the final vector will be filled as None, or transparent. That’s an important and in many cases timesaving feature to be aware of.

8. Press Cancel, and we’ll keep the Color 16 setting for the earth.jpg.
9. It’s time to make this image a true vector. Click “Expand”.
10. The result is a vector illustration with a whole lot of anchor points. (Fig 25)

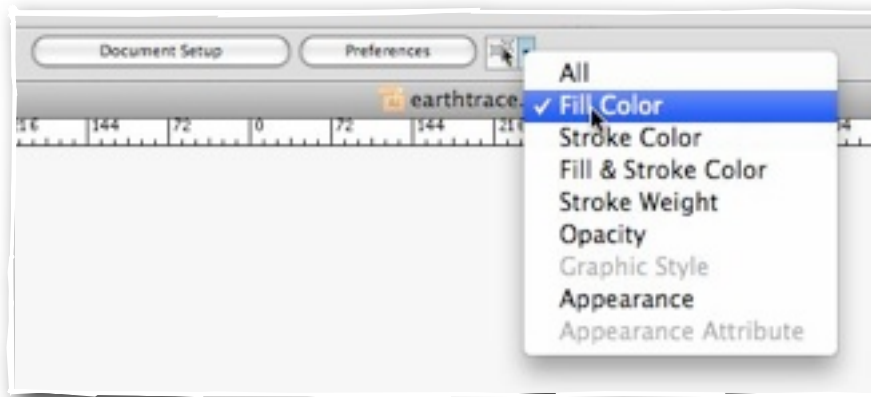
Fig25:



Let’s get rid of the black background area surrounding our globe.

11. Choose the Direct Selection tool (A), and click once in the black area surround the globe. This will make the Fill color in the tool palette Black.
12. Deselect the image by clicking outside of the image.
13. At the top of the document window, to the right of the Preference button is the “Select Similar Options”. Click to reveal the drop down choices, and select Fill Color. (Fig 26)

Fig 26:



This new feature will quickly select all the similarly filled objects on your artboard. Since we designated the fill from our Direct Selection a moment earlier, as the black of the background in this image, all objects with that fill are now selected.

14. Delete the selected parts. If there is an outlying shape, just drag over and delete that as well. You should be left with a globe, with just a small bit of black around the perimeter. Since the image is now a vector, we can refine the image further with our direct selection tool, brushes, and the like, or use it as we have it here. One conversion done.

Fig 27:



Now let's look at another method of conversion, which in turn will lead us into the next section.

For this section, I'll supply an image, called sailboatrace.jpg (you can find it online at <http://shalat.com/dev/mw09/illusttechniques.zip>). I cleverly named the image to simultaneously describe the image, and what we're about to do to that image. Very cunning.

1. In a new blank letter size document, Place sailboatrace.jpg.
2. Click Live Trace.
3. Once in the Live Trace mode, select the Tracing Options button. Check "Preview."
4. Now let's set up the image. In the Adjustments side, set it up as Mode: Color, Max Colors 28. In the Trace Settings, keep the Path Fitting at 2px, then make the Minimum Area 4px. Leave the Corner Angle at 20. And most important now, select Ignore White.

Fig 28:



5. Click Trace.

Now even though we've clicked trace, we're still in the Live Trace function. We don't actually have a vector yet. Our next step is a choice. We could simply click Expand, and have our vector drawing plain and simple. Or we could take this an extra step and click Live Paint, converting our raster image into not just a vector image, but a Live Paint group, opening up some interesting options for further illustrative work. So guess which we're going to do.

6. Right. Click Live Paint. Save the illustration as livepaintboat.ai for now. We'll get back to it in a bit.

Our resulting image is a vector illustration, Live Paint group. Which brings us to our next section, Drawing with Live Paint.

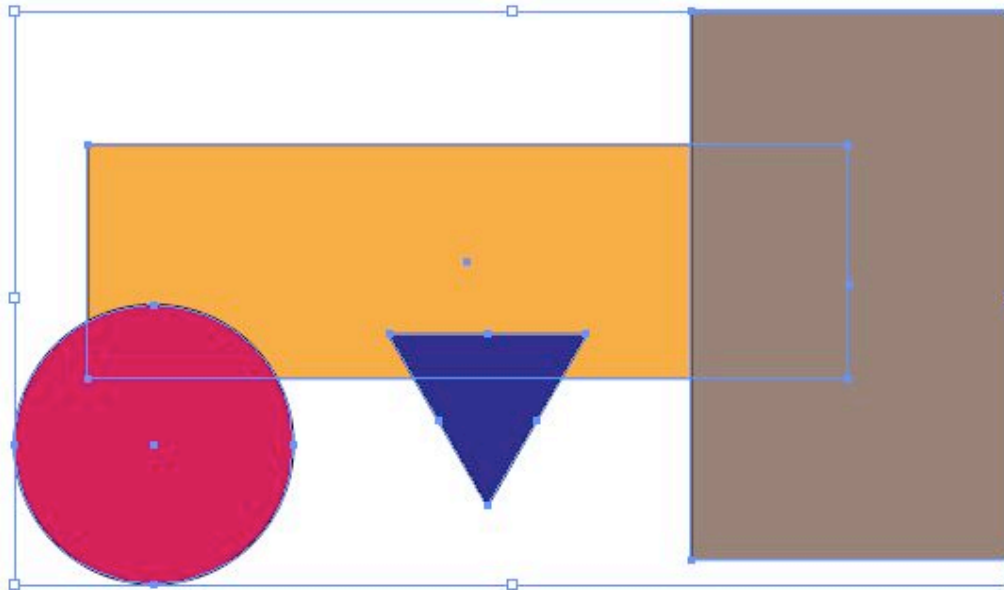
4. Drawing with Live Paint

First, what is Live Paint? Live Paint was first introduced in Illustrator CS2, and continued to improve in CS3, CS4 and now CS5. Live Paint is a method of coloring vector segments in both fills and strokes, without worrying about layers, or stacking orders, treating each Live Paint Group as though it were all on a single flat surface.

Let's start with looking at a normal group of objects.

Here's a simple group of objects:

Fig 29

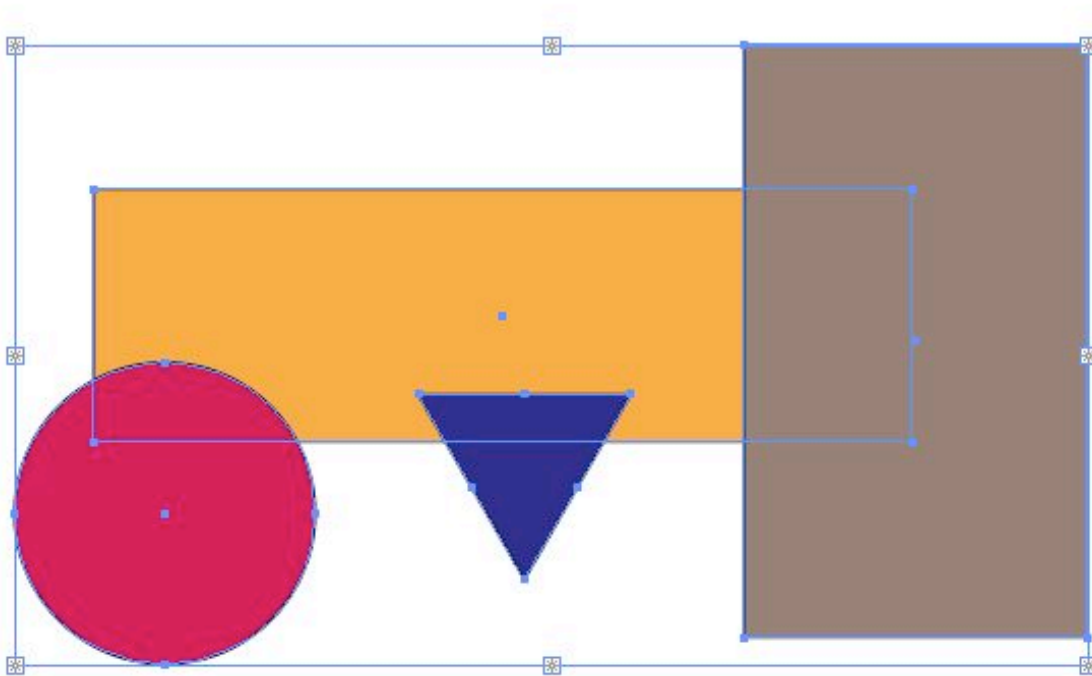


Take note of the normal bounding box. In order to modify individual colors or parts of this group, you would double-click on the group, and enter the isolation mode, where you could then apply different fills, and strokes, change the shapes, or move each shape's position in relation to the other. Then you'd back out of that to the original document.

1. Draw a group of shapes to emulate the one shown above.
2. Choose the Live Paint tool from the tool palette, and click on the simple group of shapes. This will make it a Live Paint group.

Here's the same group of shapes, but as a Live Paint group:

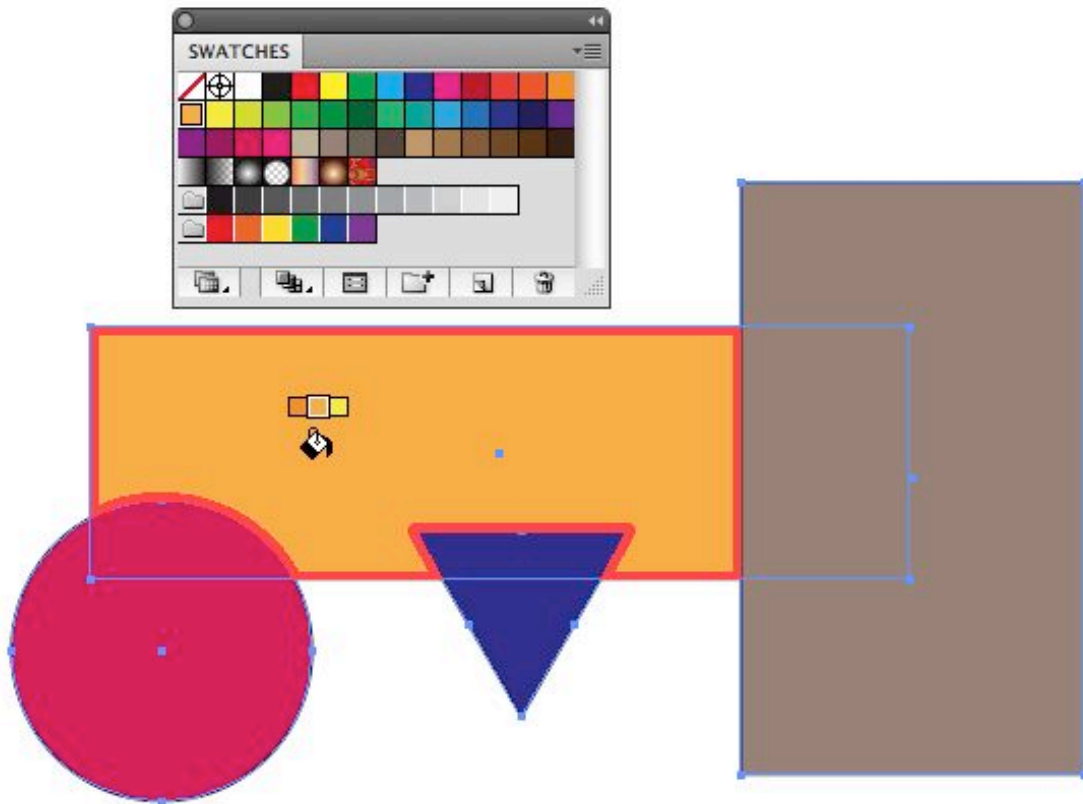
Fig 30



The only visible difference so far here is the sparkle graphic in each of the bounding box's anchor points. But that's just to let you know you have a Live Paint Group, and not an ordinary group.

When I choose the Live Paint tool and place the cursor over the Live Paint Group, my cursor shows three swatches. If you look, from left to right, at the preceding swatch, then the center swatch, then the third swatch, and then compare that to the actual Swatches palette, you'll see that the Live Paint cursor swatches are in the same order.

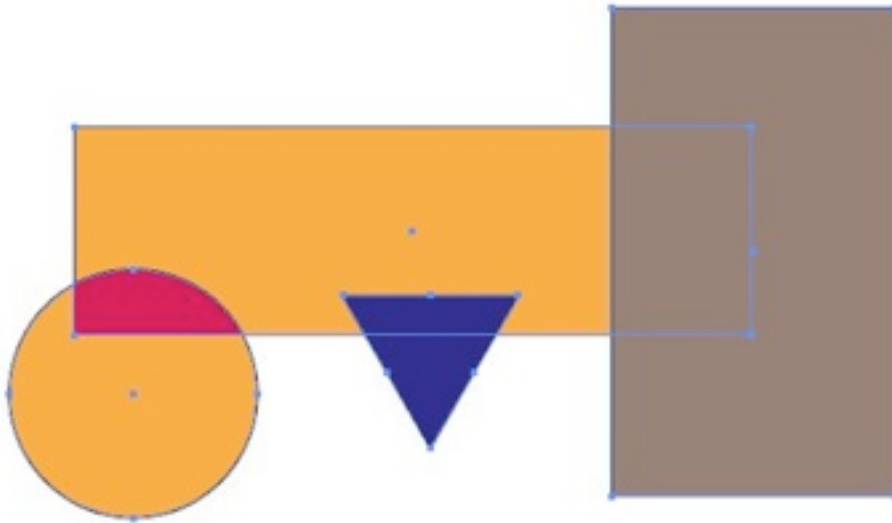
Fig 31:



Let's play with this group a bit to see a few of the proclivities of Live Paint.

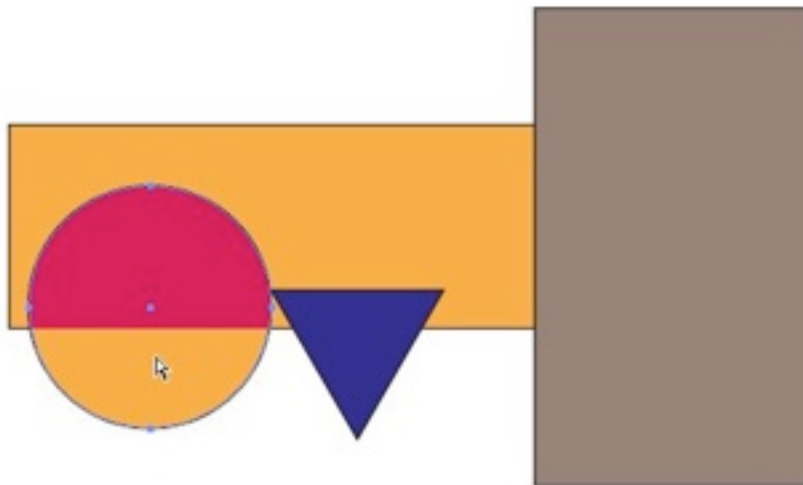
1. To make sure the bucket will pour the correct color, hold the Option key while hovering your cursor over the center rectangle. The center swatch is the active pouring color.
2. Move your cursor to the lower part of the red circle.

3. Click to pour the orange color into the red area. Your group should look like Fig 32:



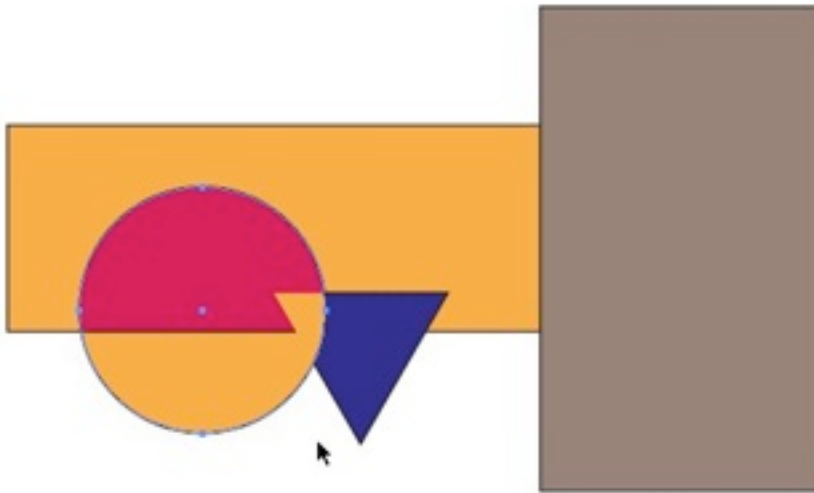
4. Now to show what makes this “Live” switch your tool to the Direct Selection tool (A), and click inside the area we just colored orange.
5. Click and drag the shape up into the rectangle.

Fig 33:



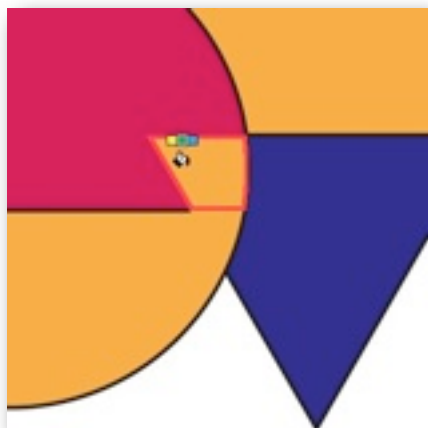
Now slide the circle over to the right so that it intersects the triangle.

Fig 34:



The shapes and their fills are fluid. Live Paint Groups treat each area of polygons and shapes as different segments. As you move your Live Paint tool over the group, the various segments are highlighted. Each segment can be filled or stroked on the fly. (Our in seminar discussion will go into this in more depth than here on the printed page).

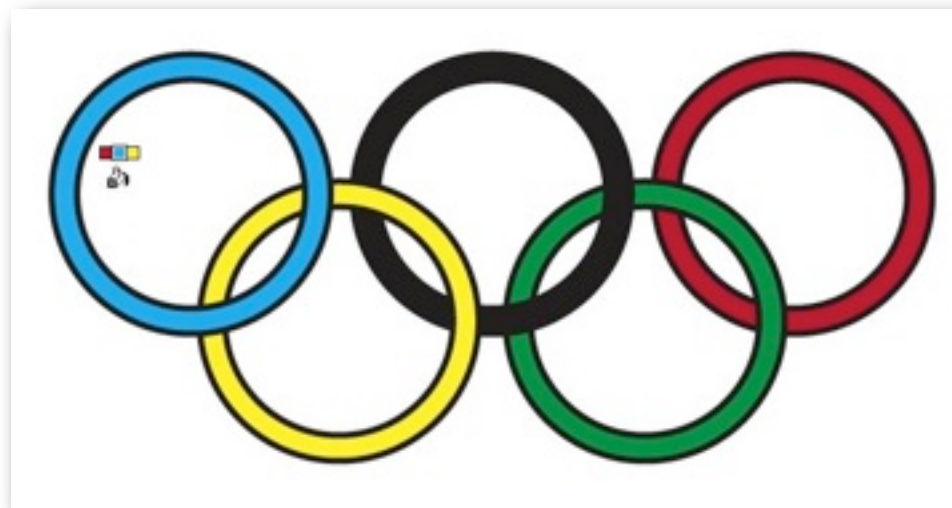
Fig 35:



So by now you may be saying to yourself, well that's all cool but what's so great about it? I mean, what can I use it for?

In order to show you a real time use, let's start with a graphic that should be familiar to all of us. The example of the Olympics logo has been used for this purpose by both Deke McClelland and Mordy Golding before, and it is such a clear example of practical use that we're going to borrow it as the example here too.

Fig 36:

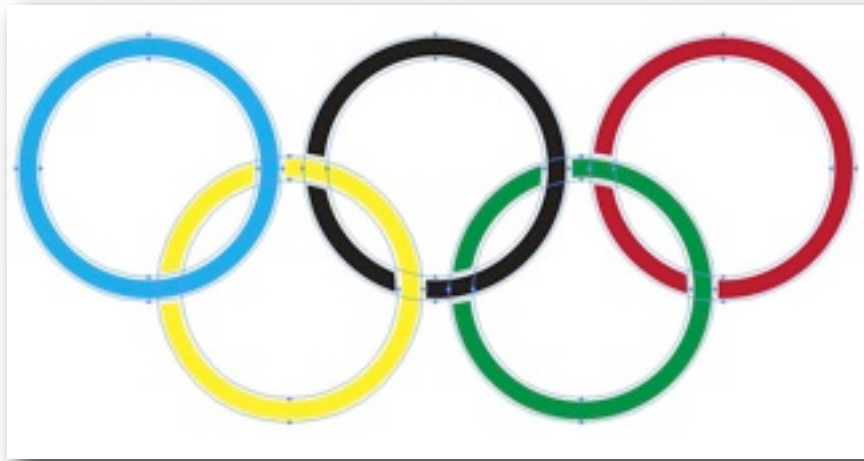


This is a starting point, but it's not a correct logo. The circles in the logo interlock, whereas here they just lay one on top of another. We'll use the Live Paint tool to make them interlock. You can download the file I've created for this at <http://shalat.com/dev/mw09/olympics.zip>

You'll note that in the Swatches palette I've established a color group specific for the rings. Also note that in each of the five colors for the rings, there is a small triangle on the lower right corner of each swatch. That means these are Global colors. More on that later.

1. First thing we want to do is change the black stroke to white. Select the whole group and change the stroke to white.

Fig 37:



2. Choose the Live Paint tool from the tool palette. Position the tool where the lower part of the blue circle meets the yellow. Using the right arrow button, cycle through till you have the global yellow as the center swatch on the Live Paint bucket. Now pour the yellow into the segment where they two circles cross.

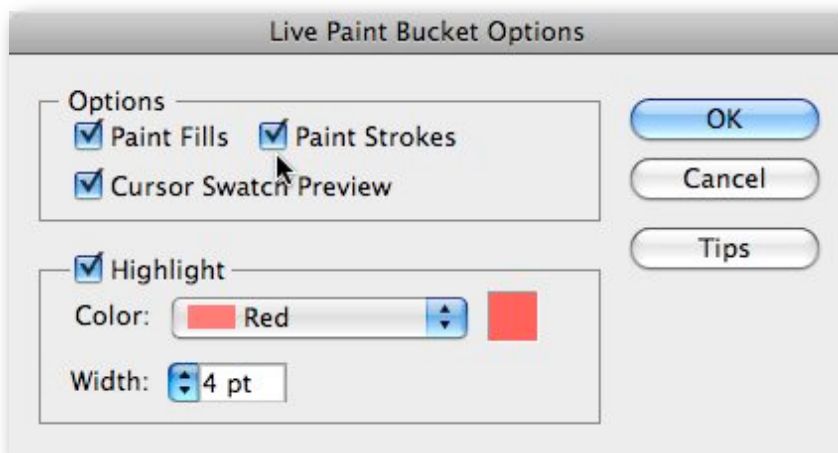


Fig 38:

That takes care of a fill, but we still have to work on the strokes. By default, the Live Paint tool will work on fills.

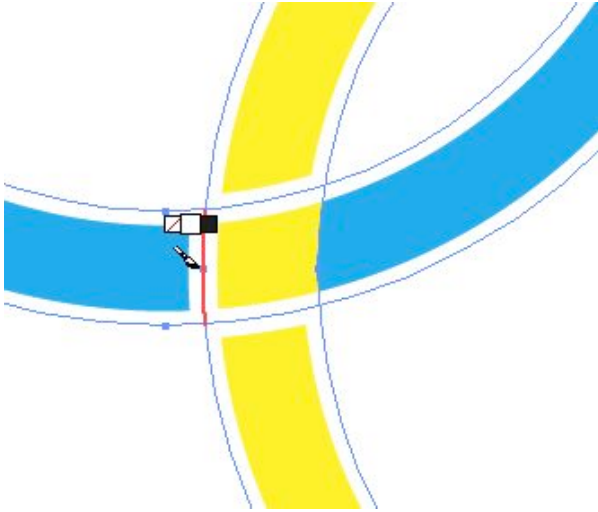
3. Double click on the Live Paint tool icon in the tool palette. In the ensuing Live Paint Bucket Options window, select Paint Strokes and click OK.

Fig 39:



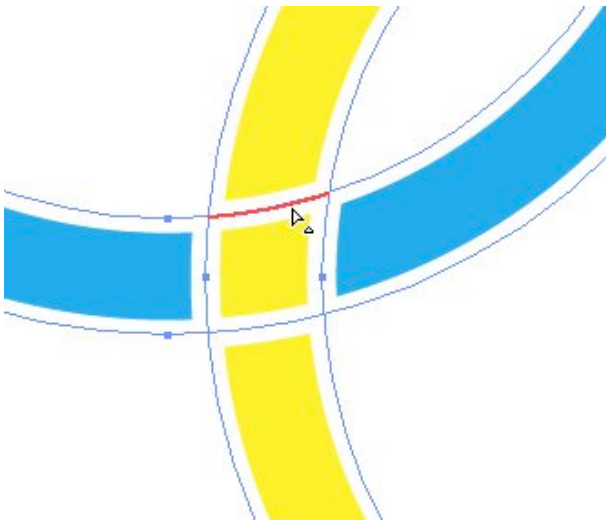
4. Now when you position your cursor over a stroke segment, the Live Paint tool becomes a brush, ready to apply a color to a stroke. Position the cursor over the stroke on the yellow circle (see fig 40) and apply a white stroke. If the swatch isn't on white, you can select stroke from the tool palette, then from the Swatch palette select white (you could also scroll through all the swatches until you arrive at the white swatch, but hey, we haven't got all day).

Fig 40:

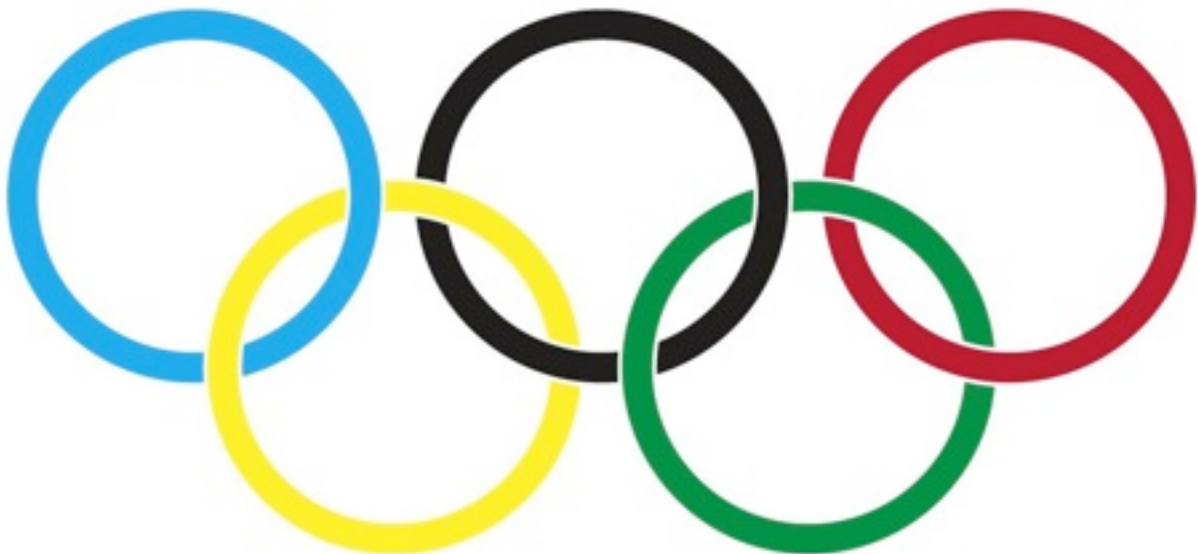


5. Now to the same to the stroke on the right.
6. Both strokes white, let's remove the crossing strokes on the top and bottom of our little yellow segment. In the tool palette, locate and choose the Live Paint Selection tool (one icon below the Live Paint tool).
7. Select the affronting stroke segments and delete them.

Fig 41:



- Continue to go through the same process on each of the lower crossings of the green and red circles so that the circles overlap in the correct fashion.



There you have a practical use of the Live Paint tool. So next time you need to create the Olympics logo, you'll be prepared. I'm sure that's a frequent occurrence. But just in case you have time to fill in between those occasions, let's do one more quick exercise using these tools.

1. Open a new document.
2. In the center of the single artboard, type "LOGO design". Put a hard return between the words. Use a generic font, like Myriad, at around 114pt. That's a good size.

Fig 45:



Now let's add some life to this type.

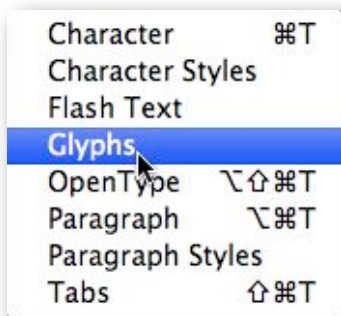
3. Make the word "LOGO" something heavy and industrial. In the following image I used Stencil. The word "design", on the other hand should have a more lyrical quality. And for purposes of this demonstration, I insist you use Bickham Script Pro. Bickham Script is an OpenType font, and has a good amount of alternative glyphs and ligatures. You'll see what I mean in a minute.

Fig 46:



4. Now, as I was saying a moment ago about Glyphs...select Window > Type > Glyphs.

Fig 47:



5. When the Glyphs palette opens, choose Alternates for Current Selection from the drop down menu.

Fig 48:



6. Select the letter “d” in design. In the Glyphs palette, you should see a number of alternate glyphs for that character. Select the sixth form from the left and double click.

Fig 49:



The “d” in design should now show that alternate form rather than the original standard letter form.

7. Now play around with the “s”, the “l”, “g” and “n”.

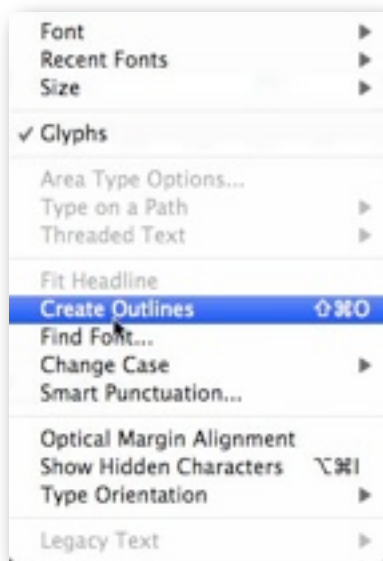
Fig 50:



Swellegant.

8. With both the words LOGO and design outfitted so nicely, it's time to make them graphics elements. Choose Type > Create Outlines.

Fig 51:



9. Select the words, which are now a Group, and Ungroup them (Shift+Command+G). Now select the “design” as a unit, and drag it over the “LOGO”, as I have in Fig 52. We want to

make sure the loopy ascenders of the alternate glyphs cross over the heavy glyphs of LOGO.

Fig 52:



10. With “design” still selected, change its fill to something that contrasts the black. I’ve used a convenient Red.

Fig 53:



If you choose another color, that’s fine. Just make sure that its a strong, contrast with whatever color you have set for LOGO.

11. Select both LOGO and design (essentially Select All).

12. Choose the Live Paint tool. Click on a blank area to make the elements a Live Paint Group.

Fig 54:



13. Now we should look at our forms and decide which parts go in front and which go behind.

Position the Bucket over any area of Black in the LOGO letters. Hold down the Option key, and the bucket will become a dropper. Click once, to fill the Bucket with the exact Black that is contained in the LOGO. Now fill the segments you want to hide with the Black. In some cases, you may need to make a piece of the LOGO black into the Red from "design".

Fig 55:



14. As you work your way across the forms, you'll start to see how you're wrapping the ascenders form design in and out of the heavy LOGO letters. With your final result, you should have an elegant example of how to use the Live Paint tool for extraordinary design.

Fig 56:



5. Cooler Color Control with Kuler

You'll find the files we need for this section in the download

<http://shalat.com/dev/mw09/illustechniques.zip>

One of the best things to come down the pike in a long time started out as an experimental website from Adobe, called Kuler. I'm still not sure how they want us to pronounce it, whether it's *koo-ler* or *kuh-ler*. Obviously some developer engineers don't have much practice with elegance in language, or how to make clear a homophonic pun. But be that as it may, I'll call it Kuler. Oh, sorry. Pronounce that *koo-ler*.

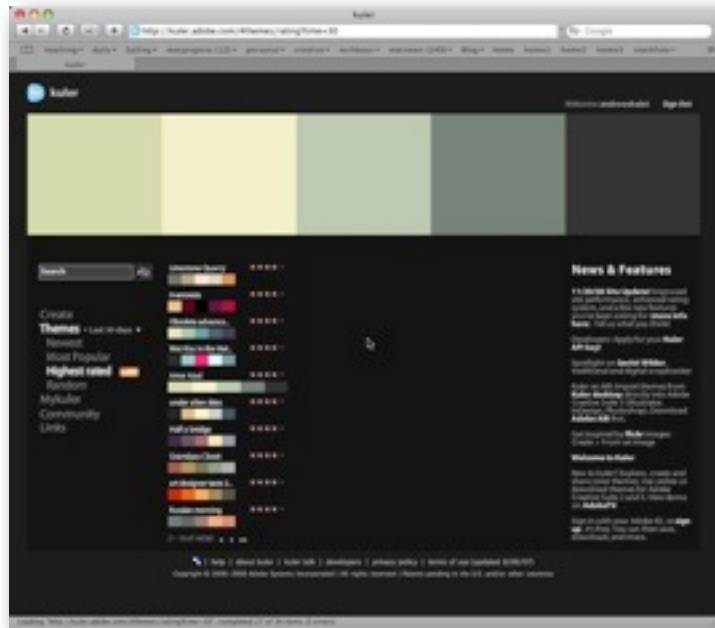
Kuler grew from just being an esoteric website to an integral part of the color controls *inside* Illustrator itself. But in order for us to get a good understanding of this excellent tool, we'll start with the online site, and see how we can pull the color themes from the Kuler site (<http://kuler.adobe.com>) into our live illustrator workflow.

The Kuler site is pretty intuitive. It's a good idea to get an Adobe ID (it's free) so that you can save any color schemes you create, and so that you have access to all the other online assets that Adobe has to offer.

When you open Kuler, you'll be greeted by a color group of five swatches, and below that a number of links. On the left are the navigation links. The second column has examples of color sets developed by other users. The third column has more information about the selected color set, that is simultaneously stretched across the top. The next column is a set of buttons that let you add color sets to favorites, download a set, or make adjustments. Finally, the last column is just some news and other palaver from Adobe.

Let's take a quick walkthrough the online site.

Fig 57:



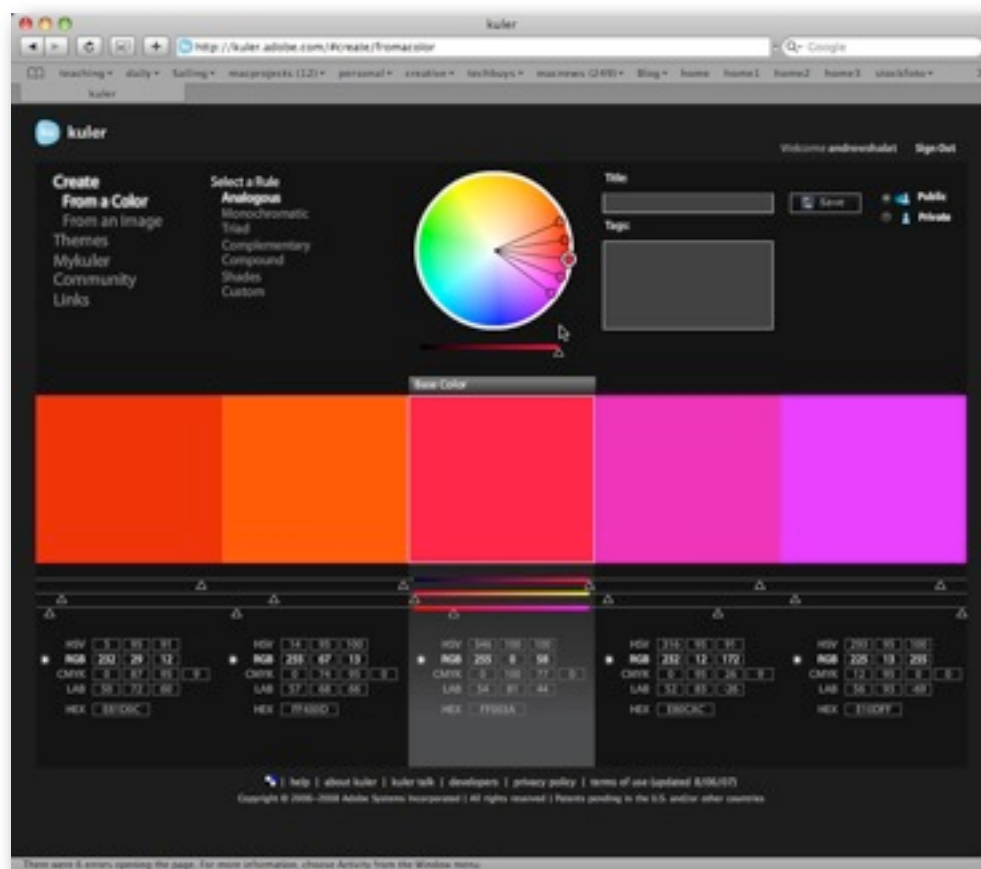
Before you do anything else, click on the large color set at the top. It will fill the screen, letting you really assess the harmony of these swatches. After you've perused that, you can and should explore this site. Click on the Links, or Community. Check out the Themes, root around the various parts.

After you've seen what others have done, looked at the Links and eavesdropped on the community, it's time to create your own color set.

1. Click on Create.
2. The currently selected color set will be the one you first see in the Create area. Creating a new color set has to do with what are called Harmony rules. We'll see Harmony rules in a moment when we open up Illustrator's Color guide palette.

3. You have some choices here as to how to proceed. By default you'll create your color set From a Color. The next column to the right then gives you some more choices. These are the harmony rules in action. Click on Analogous, and see how the stems in the color wheel adjust. Then click your way through each of the subsequent rules, from Monochromatic to Triad to Complementary, and so on. With each different rule, the corresponding arms on the color wheel adjust. One color in the color wheel is highlighted. That's the Base color. You can at any time select a different base color by clicking on one of the large swatches and then choosing "Set as Base Color". It's pretty simple stuff really. The Kuler engine does all the hard work. All you have to do is point it in the direction you want to explore.

Fig 58:



As you go through the various adjustments available via the harmony rules, you can then start playing directly on the color wheel itself. Grab any of the color circles at the end of arms, and move them around. Drag them in or out, or around. This is the real fun part. Depending on the rule you're working under, the other colors will work in a corresponding manner. When you are satisfied (momentarily, I'm sure), take a look at the large swatches below the wheel. You'll see a bit of further adjustments, and information.

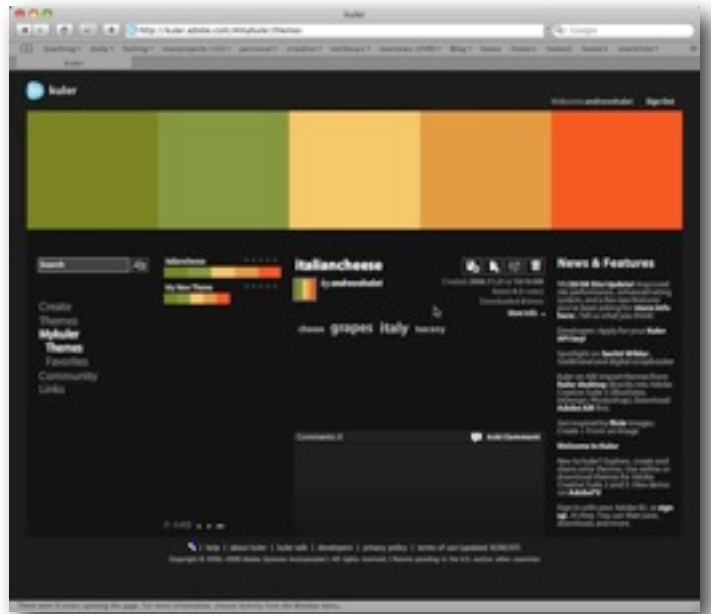
Fig 59:



This is one of the best utilities of Kuler. The comprehensive color information you get with any swatch you create opens up the world of color transfer and translation from one medium to another. If you're developing a logo for a company, for instance, and you want to have the correct formula for the corporate color, all you need to do is put the color into your color set on Kuler, and read the corresponding formulas for *RGB* (Red, Green, Blue), *CMYK* (Cyan, Magenta, Yellow, Black), *HEX* (hexadecimal values from RGB for the web), as well as *LAB* (Luminance, A and B channels) and *HSV* (Hue, Saturation and Value or Lightness).

Fig 61:

So we have our color set, named italiancheese, derived, appropriately enough, from an image of, uh, italian cheese. We've saved it, named it, given it tags, and now we want to download it. When you do download the set, it will be called italiancheese.ase. Put it somewhere on your computer that will be easily accessible.



We now have saved our color set, and we want to put it to use. So let's open a file where we can do just that.

From the zip file (<http://shalat.com/dev/mw09/illustechniques.zip>) locate the FOOD.ai file.

This is just an illustration I did some years back for a client. These were preliminary sketches for their logo, and were refined beyond the state you now see them here. But for the purposes of this instruction, they should work fine.

Fig 62:

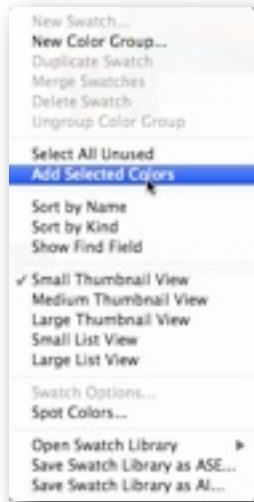


1. Select all the image elements on the artboard. Fig 62a:



2. Open the Swatches palette, and from the disclosure button on the upper right, select “Add Selected Colors”. (see fig 63).

Fig 63:



This is simple way to have any inherited images come directly into your Swatch palette. But if you look closely, you'll note that these newly imported colors have an extra feature. The little triangle in the lower right corner of each of your newly imported swatches signifies that these new colors are Global. That in turn means that if you apply them to an element, and then through the swatch palette, you adjust or change that color, they will change in a corresponding manner in every element to which they've been applied.

This is too good to just leave out there in the general swatch population, so we're going to want to do something about that.

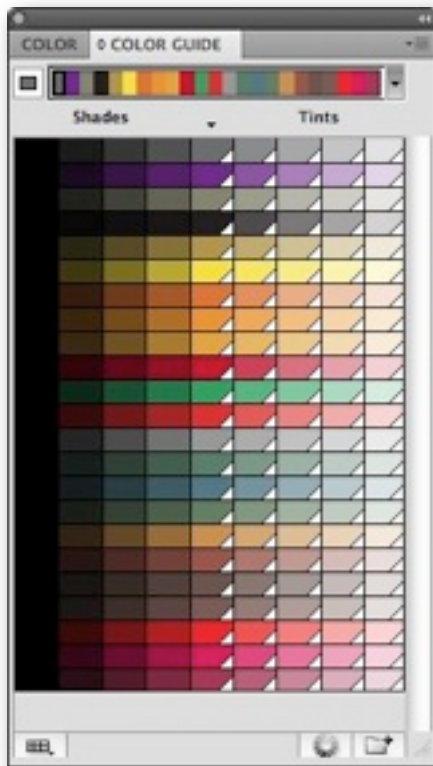
Fig 64:



3. Select the newly added global colors, and while still inside the Swatches palette, click on the New Color Group icon. You've now created a new color set. This is significant for several reasons. First, it will give you an easy access to those new colors, but more importantly, the color sets are accessible form within the Kuler color Guide palette, as we'll see in a minute.

4. Select the new color set.

5. Open the Color Guide palette. Fig 65:



The Color Guide is the doorway to all those Kuler controls we discovered online. As you can see, the top area shows the complete color set. Click on the arrow on the right of the set, and you'll see harmony rules that you should understand from your foray in Kuler online.

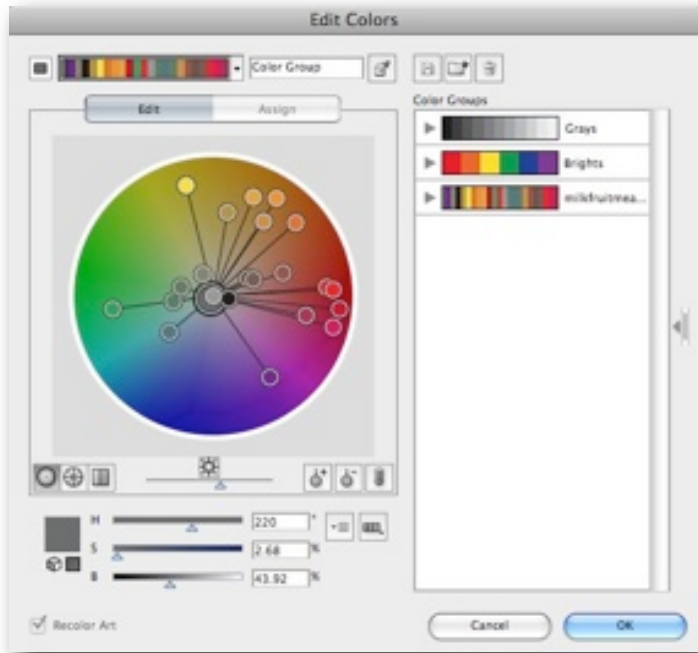
Fig 65a:



The plethora of color swatches below your harmony rule are acceptable and related shades and tints of your color set. Note that the Shades are not global, but the Tints are.

6. Let's enter the Kuler wheel house. Click the gradated icon on the bottom of the Color Guide palette.

Here we have a representation of our color set, in that now familiar Kuler color wheel. That means we have all the controls and adjustments available to us here that we had on the color wheel online. Fig 66:



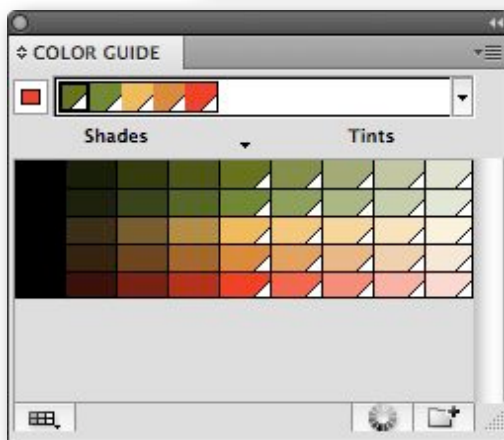
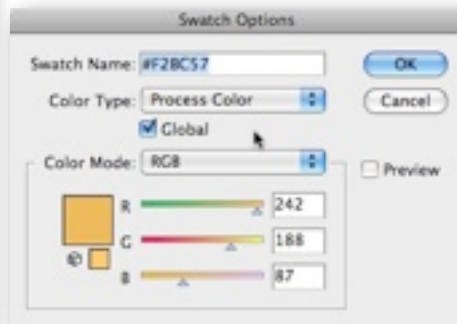
We can play around in here and there are a number of controls which we'll go into in the live seminar, to explain all those icons and adjustment sliders on the bottom. But for now, play all you want, but finally click either Cancel or OK to bring us back out to our Illustrator document.

7. Return to the Swatches palette and click the disclosure control at the upper right. Select *Open Swatch Library*, and from there drill down to *Other Library...*
8. Locate the *italiancheese.ase* file that you downloaded from the Kuler site. Fig 67:



The color set comes into your Swatches palette, ready to go, in its own folder. But...note that the colors are not Global. That's an easy fix.

9. Double click on each individual swatch in the set, and make sure to make them Global. Once they're Global colors, and all is right with the world, open the Color Guide and click open the Color wheel (remember that little icon on the bottom)



10. Here's where some of the color fun really starts. Select the italiancheese colors, and the wheel will limit your colors to just those colors.

Fig 70:



This is the part that gets most confusing, since it's where we adjust and assign colors so that we can replace our color sets wholesale, just by replacing one set with another.

11. Select the images on the artboard.
12. Return to the Color Guide, and click on the colorwheel icon.

13. Now we're confronted with a new interface. The Assign controls let us assign different colors to our existing colors. So rather than just adjusting the colors in the wheel, we can actually assign specific colors from existing color sets, other color sets in fact. Think about it. That means, we can create SPOT color seps from our Illustrator documents. Whoa.

The current colors shows us what our original illustration contains. To the right are the colors we want to change them to.

14. From the Preset drop down menu, select italiancheese. Now the 25 colors of your original can be changed to the five specific colors of italiancheese. Or any other color set. Try replacing the limit to Brights, for instance. As you do this, keep an eye on your original illustration, and watch its automatic changes.

Fig 71:

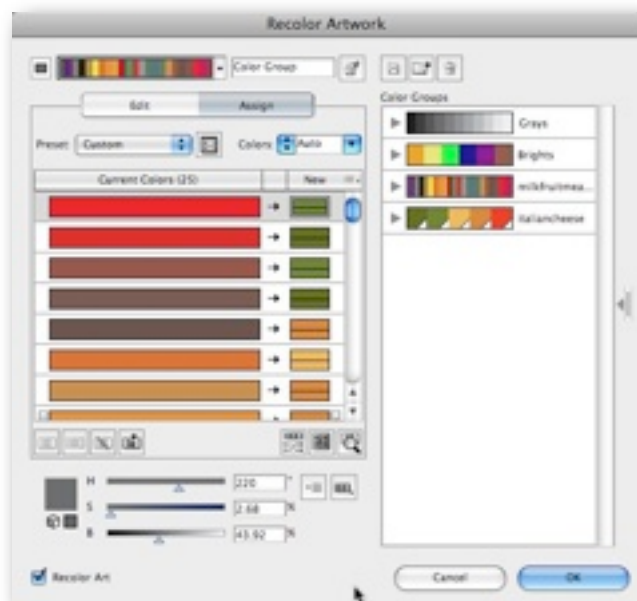
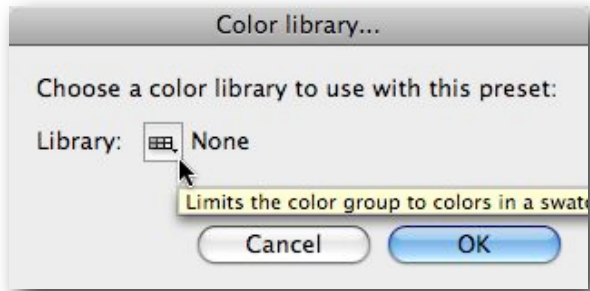


Fig 71a:



You can designate any of the color shades, tints, or color sets you like, to limit your color transitions. There's a lot of play in this aspect of Kuler, and it gets confusing. But when you start to use it, it becomes, just as most things in Illustrator, rather second nature.

Fig 72:



Now if you think about it, you can also select from the Preset a color book, like say, Pantone Uncoated. So you can assign specific inks to what was previously an RGB or CMYK image. Or, in terms of just color design, you could just shift the whole illustration into a different tone. The power of the Kuler color control is pretty much limitless. Fig 73:



I hope this guide gives you some of the highlights and helps you to delve deeper and gain a better skill set for your Illustrator use in the future. Remember, when you get to a point where you're not comfortable with the tools, dive in. That's where you'll really discover something.

-Andrew Shalat