

DIGITAL MEDIA WORKSHOP-Flash Animation

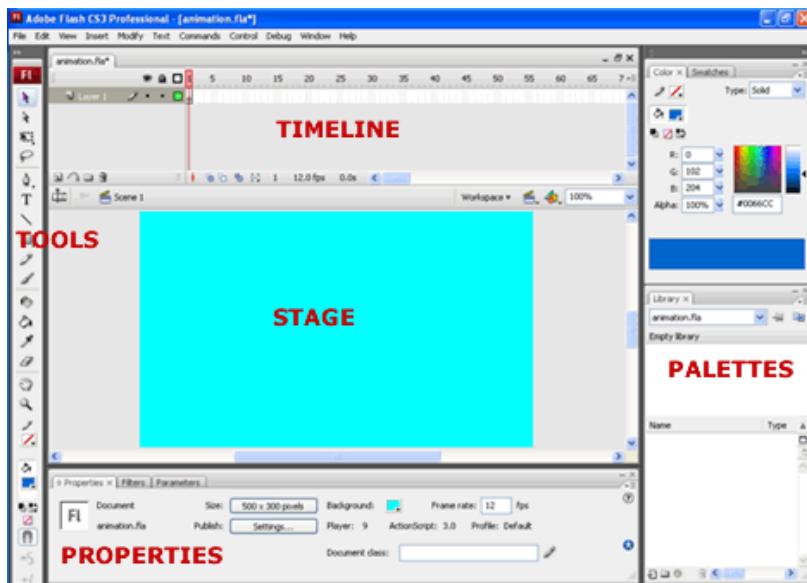
Tonya D. Skinner, Presenter

<http://sites.google.com/site/nce2010skinner/>

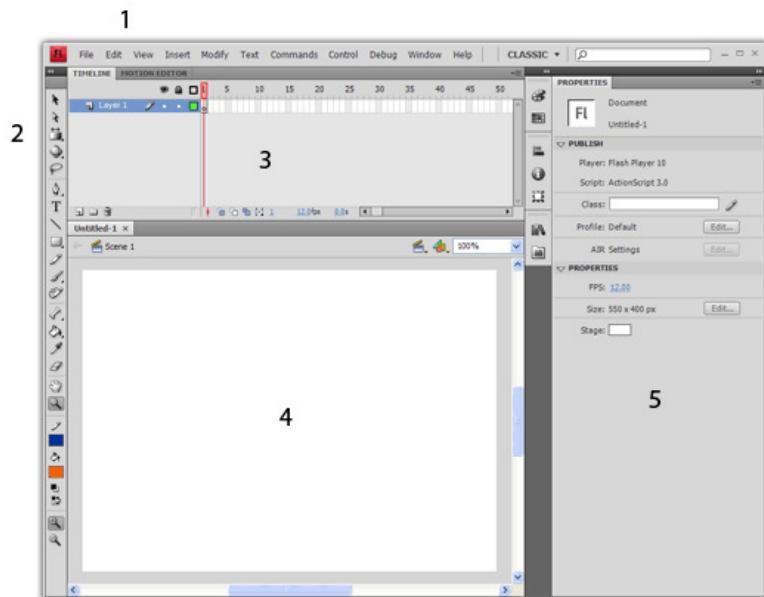
Getting Started

Depending on the version of Flash you are using, panels will be in different places. For the most part, Flash 8 through CS3 will appear mostly the same. When you get to CS4/CS5, the panels are moved around a little bit, namely the Properties panel is not at the bottom anymore and the Timeline is not at the top. It takes a little getting used to, but you should be able to adapt to any of those versions if you know the basics. You can always check out the variations of screen setups, called Workspaces, under the Window>Workspace menu.

Screenshot from Flash CS3



Screenshot from Flash CS4



'Classic' Workspace

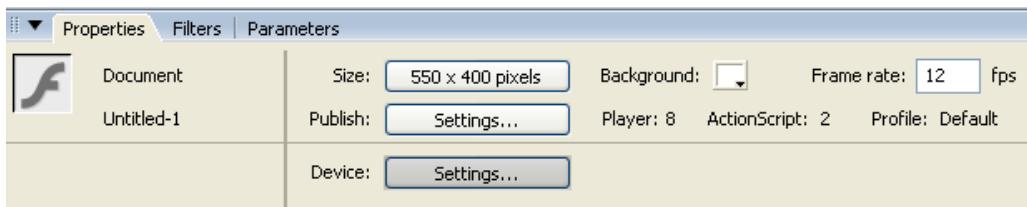
1. Menu Bar
2. Toolbar
3. Timeline
4. Stage
5. Properties Panel

Decisions, Decisions...

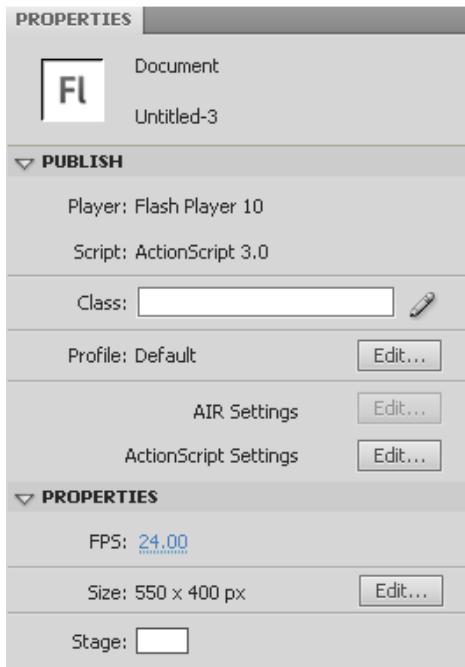
Before you create a new Flash file (FLA), you need to consider a few things:

- What size do you want this animation to be? (can be changed, but objects will not be resized to match if you change your mind later)
- What color do you want the background to be? (can be changed, but it stays the same for the entire project for all scenes)
- What frame rate do you want to use? (can be changed at any time) Higher number of frames per second (fps) means what is on your timeline will play faster.
- What version of ActionScript do you want to use? This is not easily changed in newer versions, so it's a decision you should make at the beginning of the process. You can choose ActionScript 2 or 3 and for the novice user, this actually matters because certain codes for buttons and actions will not work if they are written in the wrong version (NOTE: Flash 8 uses ActionScript 2 by default; CS3 and higher use ActionScript 3 by default)

Default Properties for Flash 8—12 fps, ActionScript 2



Default Properties for Flash CS5—24 fps, ActionScript 3



Your Turn—Part 1

1. Create a new Flash file with Actionscript 3, blue background/stage color, 12 frames per second, and a Stage size of 800px wide by 600px tall. (NOTE: if you are using Flash 8 or earlier, you will not have AS3 as an option and the code would have to be modified later on)
2. Save as CARD.FLA.

Basic Drawing

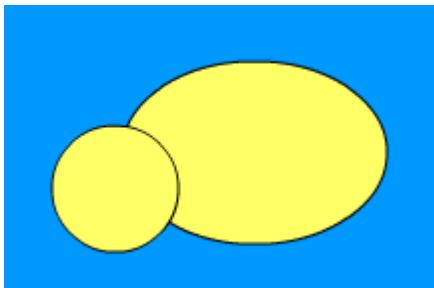
Drawing in Flash is much easier than drawing in some other programs. For one, you don't have to be an artist to get a decent looking drawing because you can utilize tools to bend and shape existing shapes into new ones. And, you can easily combine shapes into one nice, neat shape. If you are going to manipulate or combine shapes, it's a good idea to check to be sure "Object Drawing"  is turned off (the J button will toggle this on/off).

Some strange things about drawing and shapes in Flash:

- Fills (inside color) and Strokes (borders) of shapes are separate pieces. It's a little hard to get used to. Just know that if you decide to pick up a shape and move it around, you have to double click it to select both parts.
- Overlapped shapes eat each other. Well, sorta. If you put a shape over a shape and then move the top shape, the part that was previously hidden will disappear.
- Touching shapes become one shape if there is no stroke or the stroke dividing the shapes is removed. They will then move as one or can be filled in with the Paint Bucket.
- The Paint Bucket  changes the fill color; the Ink Bottle  changes the stroke color.

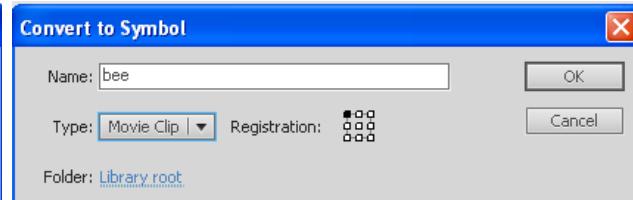
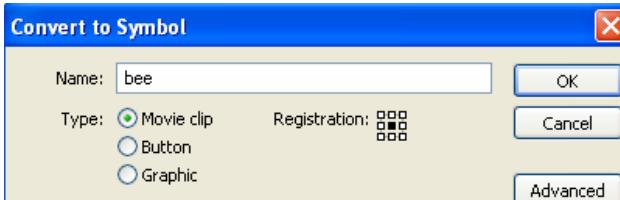
Your Turn—Part 2

3. Select the Oval tool (can press O or in some versions, it hides under the Rectangle tool).
4. Be sure Object Drawing is turned off (.
5. Select yellow as the Fill color and black as the Stroke (border) color. Click and drag to draw these two ovals as shown. Be sure to draw the big one first so the small one is on top.



NOTE: You can also select colors by using the Colors panel, which is available through **Window>Color** (or Color Mixer)

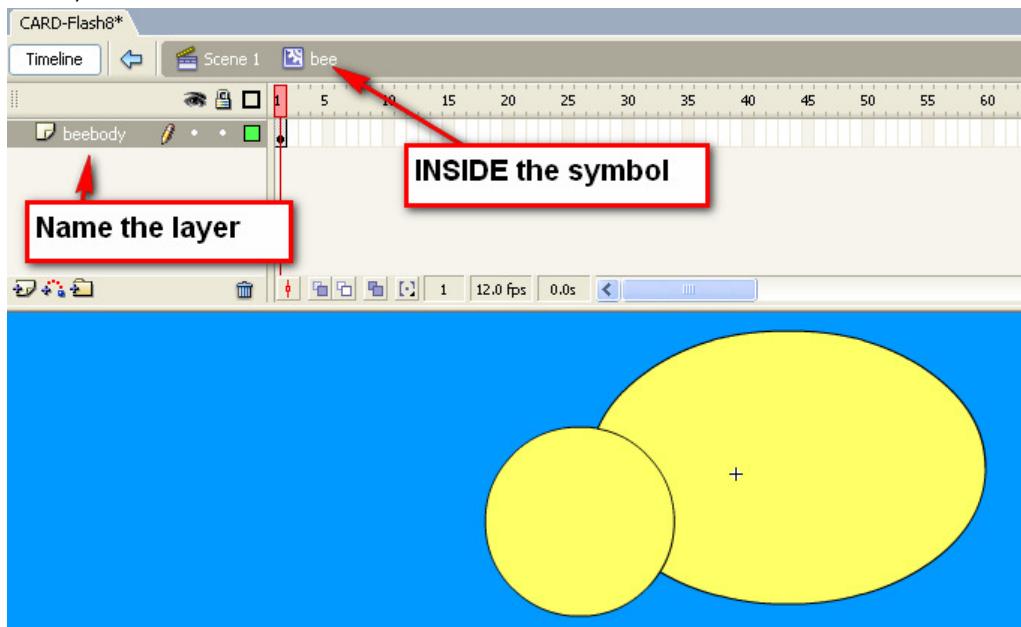
6. It is a good idea to keep drawings and their pieces separate (so you can animate them and such later on). So, unlike we have done at this point, which is just "draw stuff" on the Stage, you typically want to make drawings inside a safe, place. These safe places are called Symbols in Flash. So, let's take our current drawing and convert it to a symbol so we can keep working on it. **Select All** (Control+A or you can take the black arrow tool and just draw a box around everything) and then click **Modify>Convert to Symbol** (or press F8). Name the Symbol bee and set the type to **Movie Clip**. Then, press **OK**.



7. Notice that you now have a blue bounding box around your bee. You can't edit the bee while the bounding box is around it. To edit, we have to get INSIDE the symbol. A symbol has its own Timeline and its own Layers. Double click the symbol OR you can locate the symbol in the **Library** (F11) and bring it up from there. When you double click, you should see the

following at the top of your screen indicating you are editing the bee-- 

8. Here's the screen view (this is Flash 8/CS3; if in CS4/5 and not using **Classic View**, the Timeline may be at the bottom of the screen):



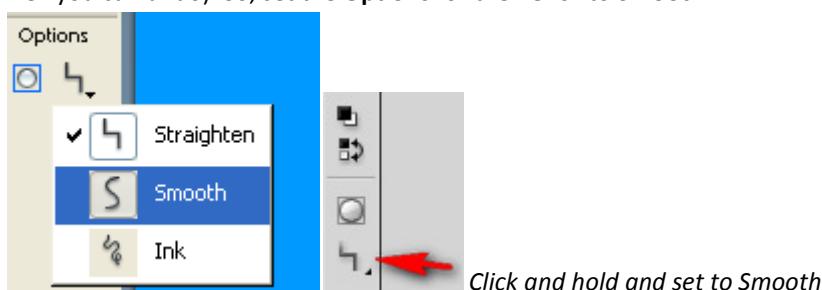
As shown above, **double click** the word **Layer 1** and rename that layer **beebody**. Then, lock the layer so we can't mess it up by pressing the dot under the padlock:



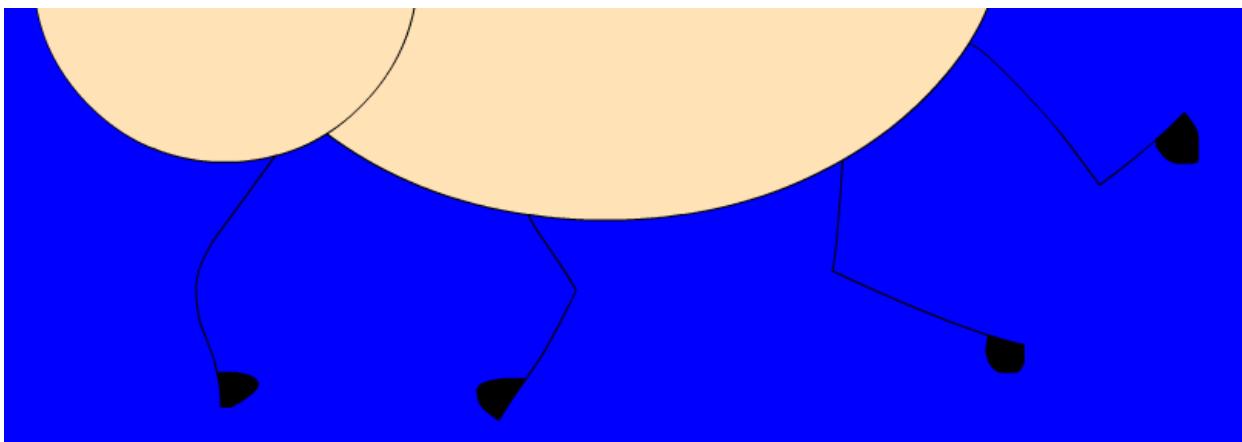
9. Next, press the **New Layer** button below the bee's **Timeline** to add a few more layers. Name them as follows and order them as you see here (just click and drag to reorder):



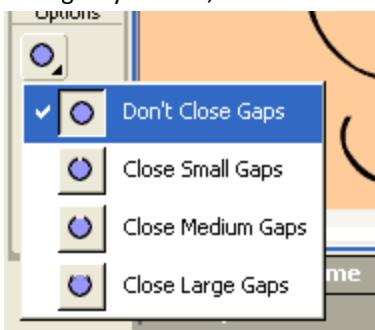
10. Lock all layers except legs. We are going to draw the legs using the **Pencil** tool. Click on the legs layer, select the **Pencil** tool, and then look for the **Options** button. If you draw the legs now, they will get all ugly and pointy (try it if you don't believe me...you can undo). So, set the **Options** for the **Pencil** to **Smooth**.



11. **Zoom** up close (200% or so) and draw in legs. Be sure the "feet" paths are closed or you will have problems filling them in later. Then, **fill in** with the **Paint Bucket**.

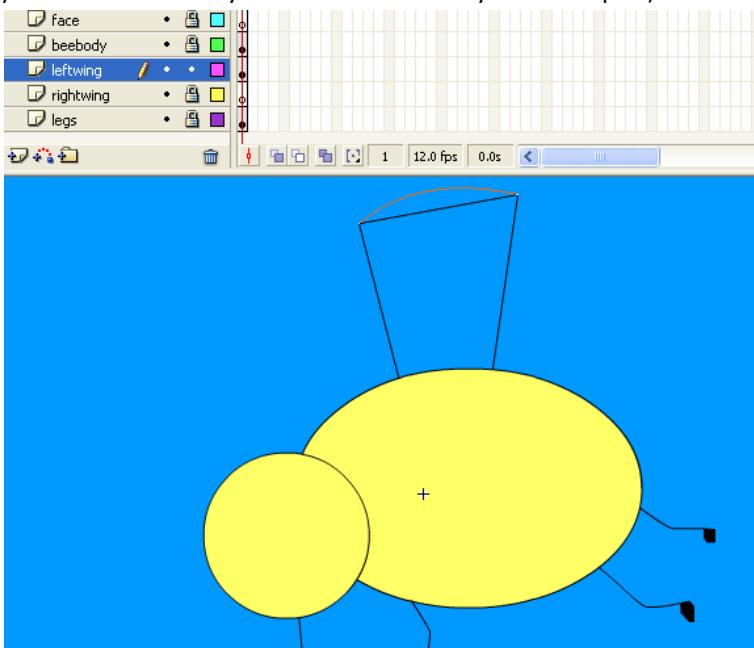


NOTE: If you cannot fill in the foot, you might have a little gap. Just zoom in super close, take your black arrow tool, and point to the end of the line where the problem is and drag it. Or, look for the option to close gaps and try a different setting—by default, it does not close gaps:



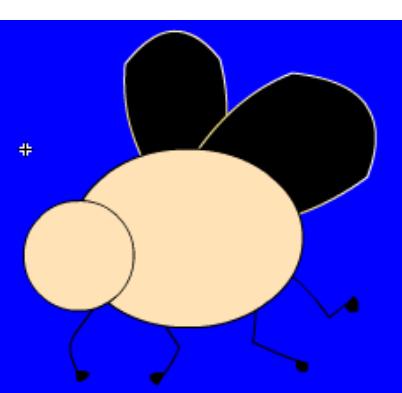
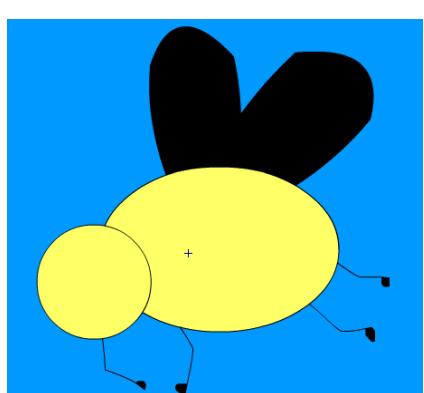
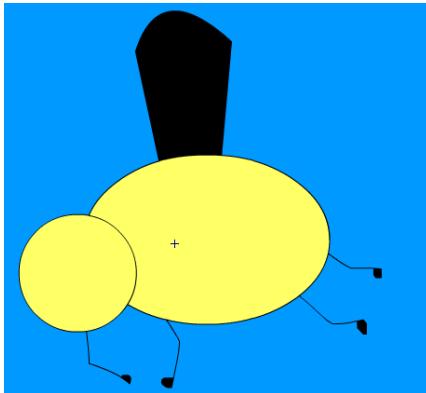
12. Once that's all done, lock the legs layer. Unlock and select the leftwing layer.

13. Now we'll use the Pen  tool to draw. This tool is pretty neat because you just click (think “dot to dots”) where the corners will be (Do not click and drag! Click, let go, click, let go, etc.). Be sure to close off the path (you may have to guess or you can turn the body of the bee off before you do this part).

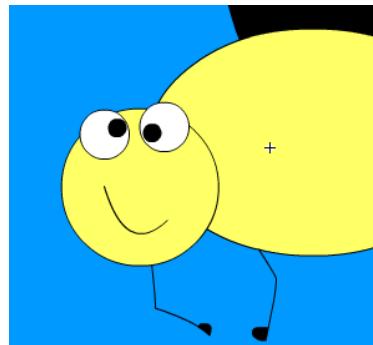
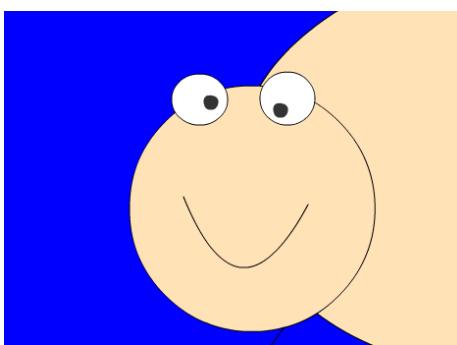


14. In the above illustration, notice how the line has a curve. Well, to make it curve, AFTER you draw in the wing, just point to that segment. Your mouse will have a little curvy line. Just click and drag that curvy line. Continue to **modify** the shape to

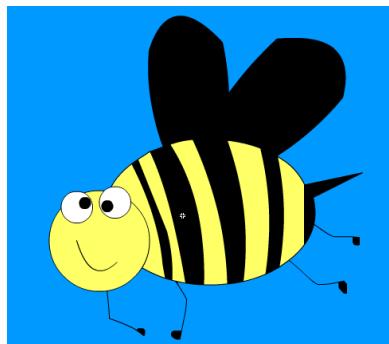
your liking. **Fill** in the wing with color (doesn't matter what color for now).



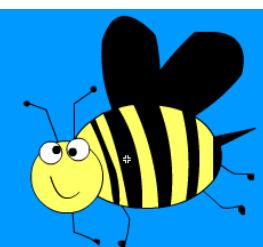
15. Then, **lock** this layer, **unlock** the other wing, and draw it using the same process. Alternatively, you can copy the shape and paste it if you'd like. Turn the visibility off on the beebody layer if needed.
16. Now, lock all layers except the face layer. Using shapes of your choice (I used two circles, a circular paintbrush, and a line that I curved with the black arrow tool), draw a face.



17. Finally, let's "dress up" the body by adding some stripes. Lock all layers except beebody. Then, use the **Line**  tool and draw in sets of lines, fill with black (be sure you have no gaps, so zoom up!), and then use the black arrow tool to point at segments to curve them: (and, if you want, add a stinger)



18. Lastly, add anything else you want to any of the layers (how about some antenna on the face layer?). Science people might want to add a couple more legs. ☺



Finally, **SAVE!!**

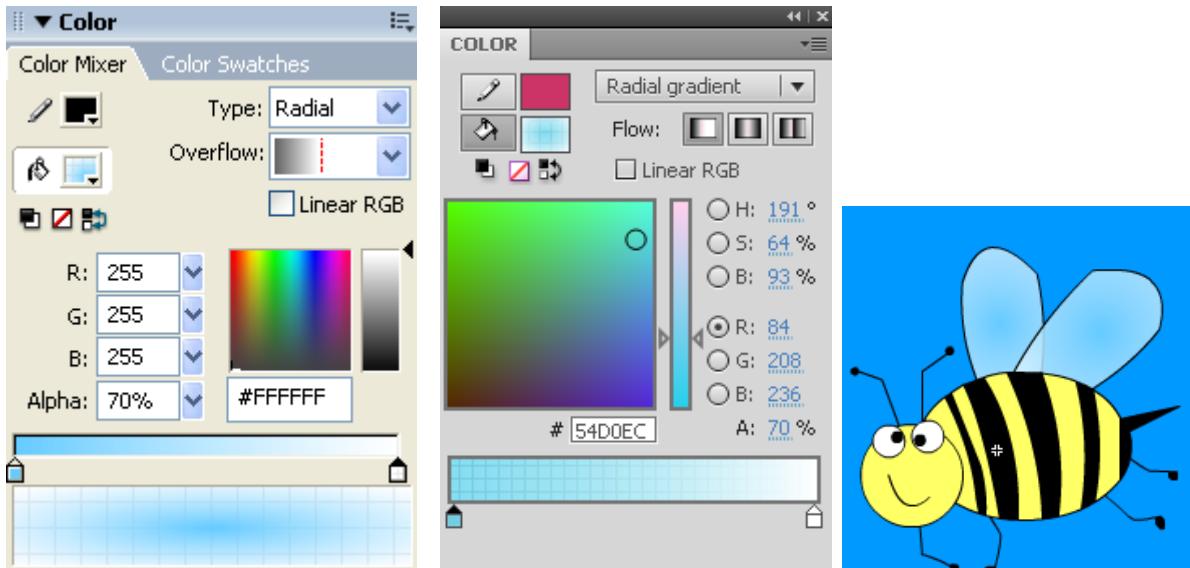
Gradients

Gradients are a little confusing in Flash because it's just hard to find. There is not a button for it. To add a gradient as a fill, you just use the Paint Bucket, like all other fills. The exception is that you use the Color Mixer to do it and you change the normal setting (SOLID) to a gradient type (linear, radial, etc.).

Gradient have multiple colors that blend into each other. Those colors are referred to as "stops" and can be added, deleted, or modified at the bottom of the Color panel.

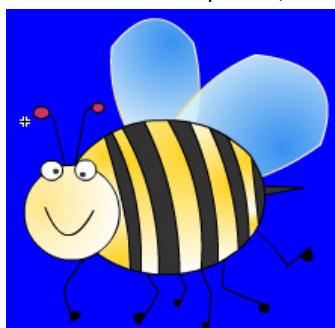
Your Turn—Part 3

19. Remember that we are still working inside the "bee" symbol. At this point, we are going to change the wings to a gradient. Usually, bee wings are somewhat transparent. So, we'll use a white to blue gradient to mimic the color of wing vs. sky.
Lock all layers except the right and left wings.
20. Click the **Paint Bucket** tool and then bring up the **Color** panel (**Window>Color**).
21. Change the settings as follows—radial gradient, light blue to white, with alpha of 70% for each stop:

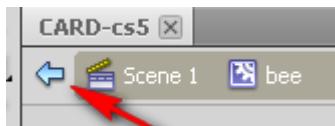


Notice Alpha or A is set to 70%, which sets it to have a little bit of transparency.

22. If you feel so bold, try out a gradient (yellow to orange or something) for the bee's body. Just remember that the body would not be transparent, so the stops would need to be put back to **Alpha** of 100%.



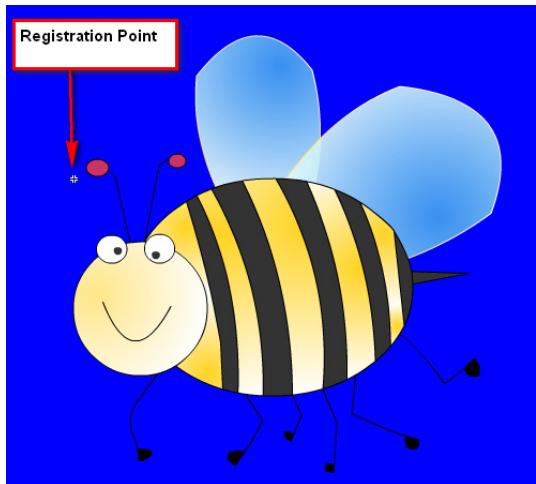
23. Now, exit Symbol editing (we're done with the bee...for now) by clicking the back arrow to return to Scene 1.



24. Save!

Understanding Symbols

You might recall, way back when we started drawing our bee, that we created him as a movie clip Symbol. There are essentially three “symbol types” in Flash—graphic, movie clip, and button. Honestly, I don’t use graphic very often; movie clip does the same thing anyway and more. And, if you decide later on to animate a symbol, it has to be a movie clip anyway. Button is used to create...buttons. They have a very different timeline. We’ll make a button later on.



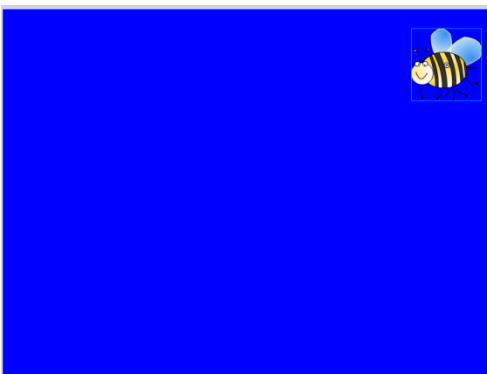
Symbols have what are called Registration Points. They don’t do a whole lot, but if you start to transform, add action, or rotate a symbol, you’ll learn exactly what that registration point does. When you are editing a symbol, the registration point appears as a crosshair.

If your registration point, like this one, is not in the center, you can go back into Symbol editing, select everything (Control+A) and then position your object with the point in the center.

If you are “transforming” a symbol (Free Transform Tool, Q) you will see a white dot, called a transformation point. It’s easy to accidentally move that around, but again, you typically want to keep that in the center as well. So, just a few minor notes to make in your head.

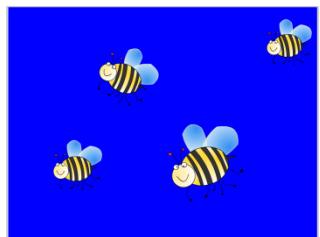
Your Turn—Part 4

25. Now, the bee is huge, so we will use the Free Transform handles (press Q or choose the tool or). You will see transformation handles appear around the bee. Now, hold Shift (so you can’t mess up the aspect ratio) and resize it down using a corner handle. Note that white circle in the middle—that’s the transformation point.
26. Switch back to the black arrow tool (Selection tool, or press V) and position the bee in the top right corner.



27. Now, name that layer (Layer 1) and call it bee.
28. To see what this Flash movie looks like so far, you can test it. Just click **Control>Test Scene**. It will appear in its own little window. Not much happening so far, huh? Exit the preview.
29. Now, just for fun and to illustrate the concept of Symbols, drag more copies of the bee out

of the **Library** (F11). Using the **Transform** tool (Q) resize and rotate them as you please.



Why Symbols Rock

So, you see now that Symbols are reusable content. And, because they are stored in the Library and reusable, they really don't increase file size much. So, that's a good thing. But, the coolest thing is that Symbols can be edited in one place and all instances of that Symbol are updated automatically. So, if I was having a "bad drawing day" I seriously could just make a symbol and call it man and then just draw a stick man until I feel like taking time to draw a real dude. Neato!

Likewise, if you decide to add animation inside a movie clip Symbol, it will apply to all instances. Let's do it!

Your Turn—Part 5

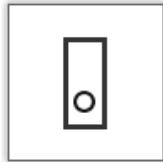
31. So, let's update this bee! One thing he's missing (poor thing) is a nose. So, **double click** on any bee (pick a bee, any bee) and you will go into **Symbol** editing mode. Notice everything else "grays out" a bit and you can see all the "bee layers" on the Timeline, so it's proof you are inside the bee symbol.
32. **Zoom up** on the bee's face (Control and +) and unlock only the face layer. Draw (with any tool—I used a pencil) in a nose-like feature. Then, return to the Scene-- .
33. **Zoom out** (Control and -) so you can see all the bees. Now, they all have little noses!



Frame-by-Frame Animation and Keyframes

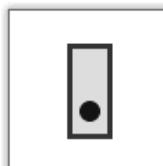
To do the "fun" stuff in Flash, you have to understand how to animate. And, to animate, you must understand keyframes.

First is the **blank keyframe**.



A **blank keyframe** has a **hollow** dot. It represents a frame on the Timeline that is "ready" to hold something. You cannot put objects in frames if they are not blank. If you click on frame 50 and it's not a blank keyframe and you draw something, it will actually show up not in frame 50, but in the first blank keyframe on that layer. And, if that layer has no blank keyframes, it won't draw period. When you create a new layer, it automatically has one blank keyframe in frame 1. Pressing **F6** in an empty frame creates one of these.

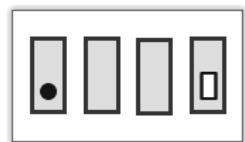
Next is the **keyframe**.



A **keyframe** has a **solid** dot. It represents a frame that has something in it. Blank keyframes turn into these when you put something in them. Pressing **F6** creates one of these if preceded by a frame with content.



Finally, is the **frame span**.

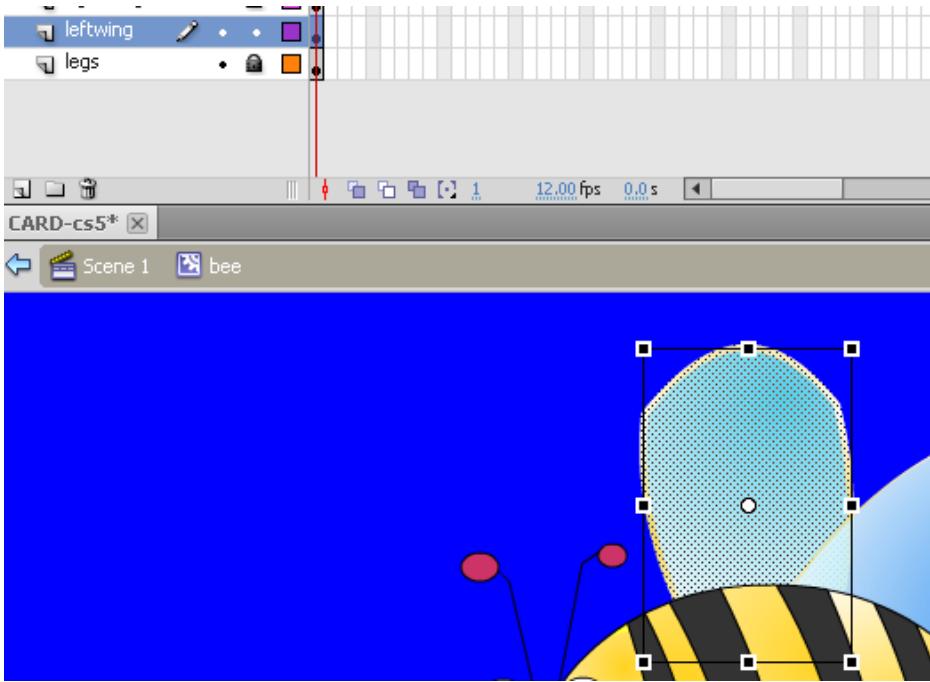


A frame span represents an area where you are basically telling Flash to just "keep that keyframe" going for awhile. If we wanted our bees to stay on the screen for a certain amount of time, we'd insert a frame span (**Insert>Frame**). Pressing **F5** inserts a frame to continue the frame span.

You can do animation either on the main Timeline or inside symbols. And, whether you do it one way or the other entirely depends on the end goal of your animation.

Your Turn—Part 6

34. We are going to animate the bee's wings. So, pick a bee or **double click** the bee in the **Library** to start editing on the bee's timeline. I like to use the **Library** copy because it will open bigger.
35. Take a look. Right now, we have five layers with five **keyframes** holding various parts of the bee's body. Be sure all layers are locked except for the leftwing layer. Then, click that layer to select the wing. Press Q or click the **Free Transform** button.

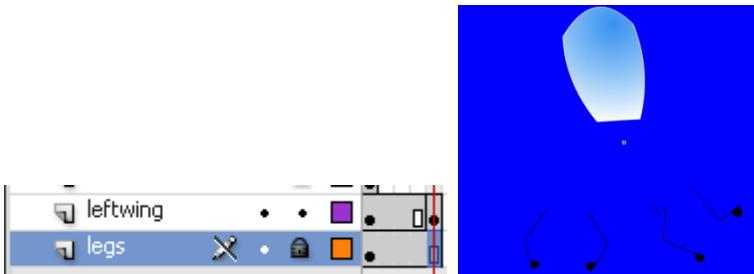


36. Now, at **frame 5** on the leftwing layer, press **F6** to insert a **keyframe**. Why? Well, we want to move the wing at this point so that it appears to flap. Notice when we do this that the rest of the bee disappears. That's because we did not tell those layers to "stay put."



See, the legs layer just has empty frames going on... so we see no legs.

37. To fix that, we need to just insert a regular "stay put" frame on all other layers. So, first click on frame 5 of the legs layer and press **F5** (frame). There are those silly little legs!



Repeat this process for the other layers.

38. Now, we are going to wiggle that leftwing a little bit to make it appear to move. **Rotate** it a little bit and maybe "smash" it a little bit, too. Just use the **transform** handles and "make it your own." Drag the playhead to preview your movement.
39. Next, unlock rightwing (and lock leftwing). In frame 5, press **F6** to insert a **keyframe** so we can make a change. Then, **transform** the right wing to your liking.
40. **Lock** everything back and return to **Scene 1**, out of symbol editing mode. You will see all those bees hanging out again. However, they aren't flapping their wings, are they? How dare them!
41. That's because **Movie Clips** do not play on the **Timeline**. The only way to see them is to **test** the animation. So, click **Control>Test Movie** and take a look.
42. Pretty nifty, huh? It's a little troubling since they all match exactly (attack of the clones) but that's how Symbols work. You could go a step further and make them all blink their eyes or wiggle legs, etc. But, you get the idea. ☺

43. Now, just for grins, take your bottom left bee and flip him so he faces the other way (drag your transform handles beyond the boundary or click **Modify>Transform>Flip Horizontal**).

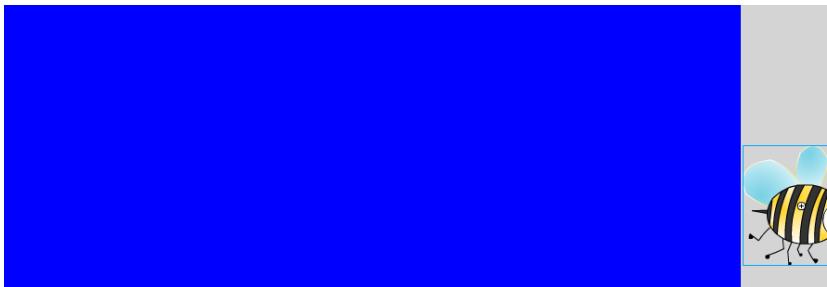
Tweening

One of the most powerful features of Flash is the ability to “tween” an object. This simply means that you decide where something starts—location and transformation (point A) and where and how it ends (point B) using two keyframes and the built in tweening. There are two kinds of tweening—motion and shape tweens. Motion tweens can only be used on symbols. Shape tweens can only be used on shapes or “broken apart” objects.

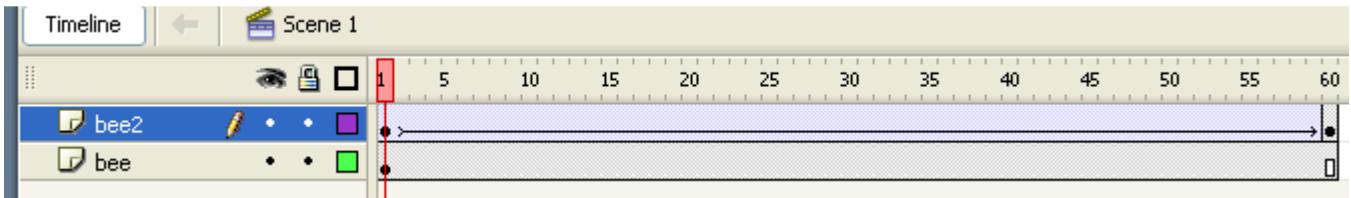
One big thing to note-- Tween only one object per layer. Remember that Flash considers the stroke and the fill to be separate objects. If your path has both, move the stroke and the fill to different layers, and tween them separately but simultaneously. Otherwise, crazy things happen. Trust me.

Your Turn—Part 7

44. Remember that bee facing the opposite direction? Well, we are going to move him to his own layer so he can be tweened. We want him to fly across the screen. So, simply **right click** him and **CUT**.
45. Then, create a **new layer**, name it **bee2**, and **right click** on the Stage and select **PASTE IN PLACE**. This paste option will put him right back where we cut him from. As it is good practice, let's lock the bee layer.
46. To make him zoom across the scene, we have to decide the frame span for the movement. As we are using 12 fps for the speed, it will take him one second to cross 12 frames. So, 60 frames would be (60 divided by 12) five seconds. Insert a **keyframe (F6)** in **frame 60**.
47. Then, click in **frame 60** and move him off the stage to the right.



48. If you test the scene right now, it's all kind of crazy. The other bees disappear, he sits there forever, and then it blinks. We must fix this!
49. First, remember, to make his bee friends “stay up there” we need a frame on there. So, press **F5** by **frame 60** of the bee layer. Now he's not lonely anymore.
50. Finally, let's get him moving gradually by inserting a tween. A few things to note about this:
Flash 8/CS3→ You will only have one “right click” option for tweening—Create Motion Tween. Use that.
Flash CS4/CS5→ You have two options—Create Motion Tween and Create Classic Tween. Choose the Classic option.
51. So, to insert a tween, just click anywhere between the two keyframes on the bee2 layer. Frame 20, for example. It doesn't matter. Then, right click and create the appropriate tween.



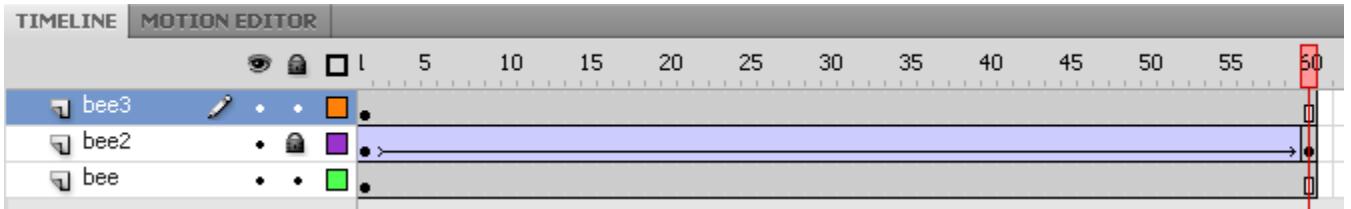
You now should see a long arrow line in a shaded purplish area. That means a tween is happening. **Control>Test Scene** now and watch the magic as the bee flies across the Stage.

Motion Guides

Motion Guides can be used in Flash to give your animation a specific path. For example, if you want the bee to buzz around in a circle, you can specify this in a motion guide. This is also one area that changed quite a bit from version CS3 to CS4. This tutorial will show you both ways just in case you don't have the newest version. And, you can still use the "old fashioned" way in the new versions, but the "new way" is actually much more fabulous.

Your Turn—Part 8

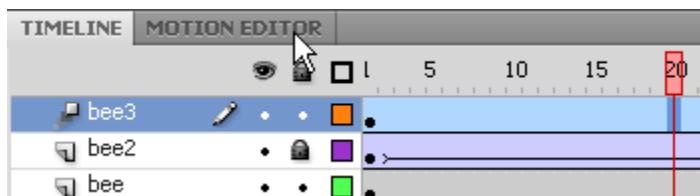
52. Let's take another bee and give him his own layer. Cut your top right bee, create a new layer (bee3) and paste him in place.



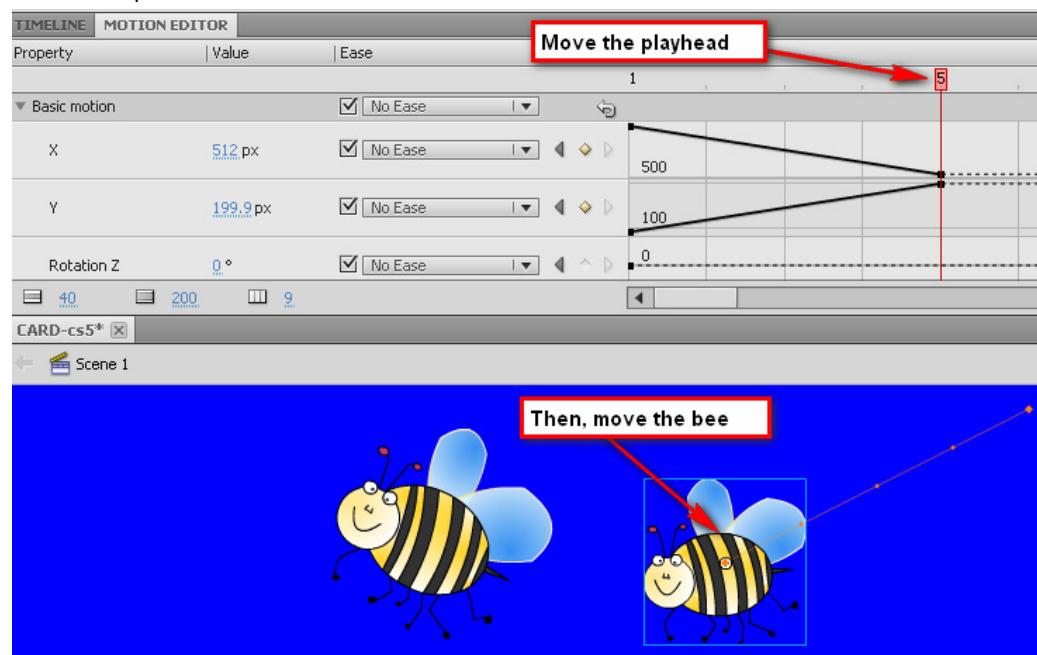
Insert a **frame** at the end of the sequence so he stays on the screen (**F5**).

53. Now, this tutorial will take detour. Follow the appropriate steps for your version of Flash:

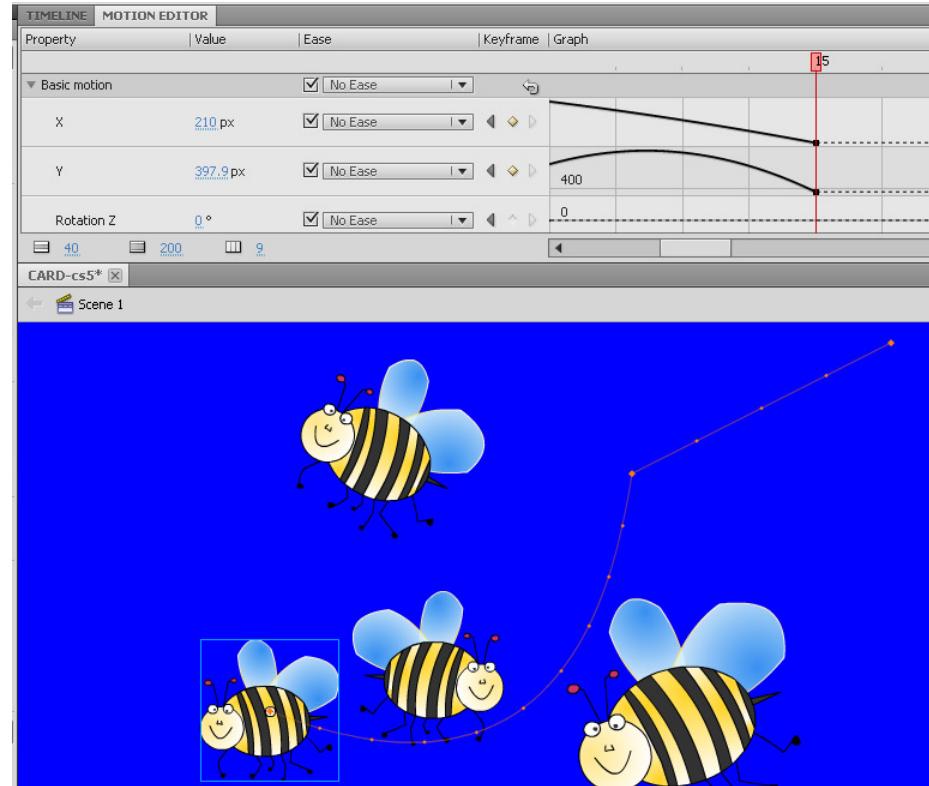
- Flash CS4/CS5:** At this point, you will insert a "new" **Motion Tween**. This will allow you to refine the animation specifically to your liking using the **Motion Editor**. Pick any frame (frame 2 is good) on the bee3 layer, right click, and select **Create Motion Tween**. The line will turn blue. Then, click the **Motion Editor** tab right next to the Timeline tab:



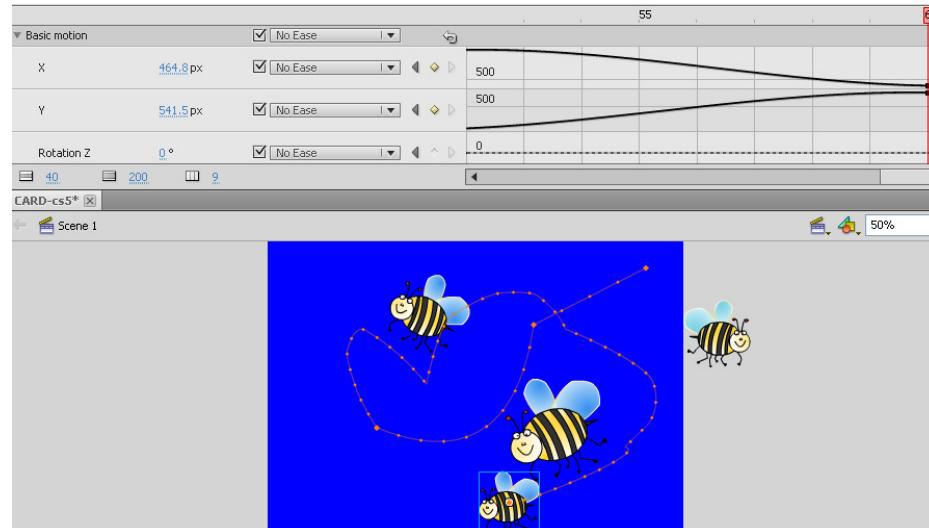
- if you expand that entire tab, you'll see Basic motion, Transformation, and Eases. There are tons of options in here. And the nice thing is that you don't have to insert keyframes along the way. It just "knows" based on how you move the red playhead line. Very handy. So, move the Playhead to frame 5 and then reposition the bee:



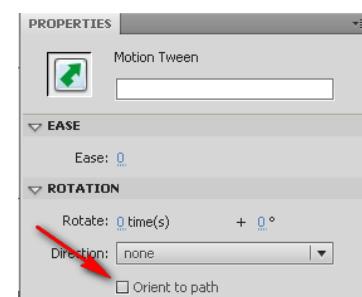
- ii. Next, scrub the Playhead to about frame 15 and then repeat. Move the bee. But this time, after you move him, point to the line between the points (don't click it) and notice the "curvy" mouse pointer. Click and drag to curve the path:



- iii. Finally, drag Playhead to frame 60 and finish your Motion path. I'm going to go crazy on this one and draw curves all over the place:

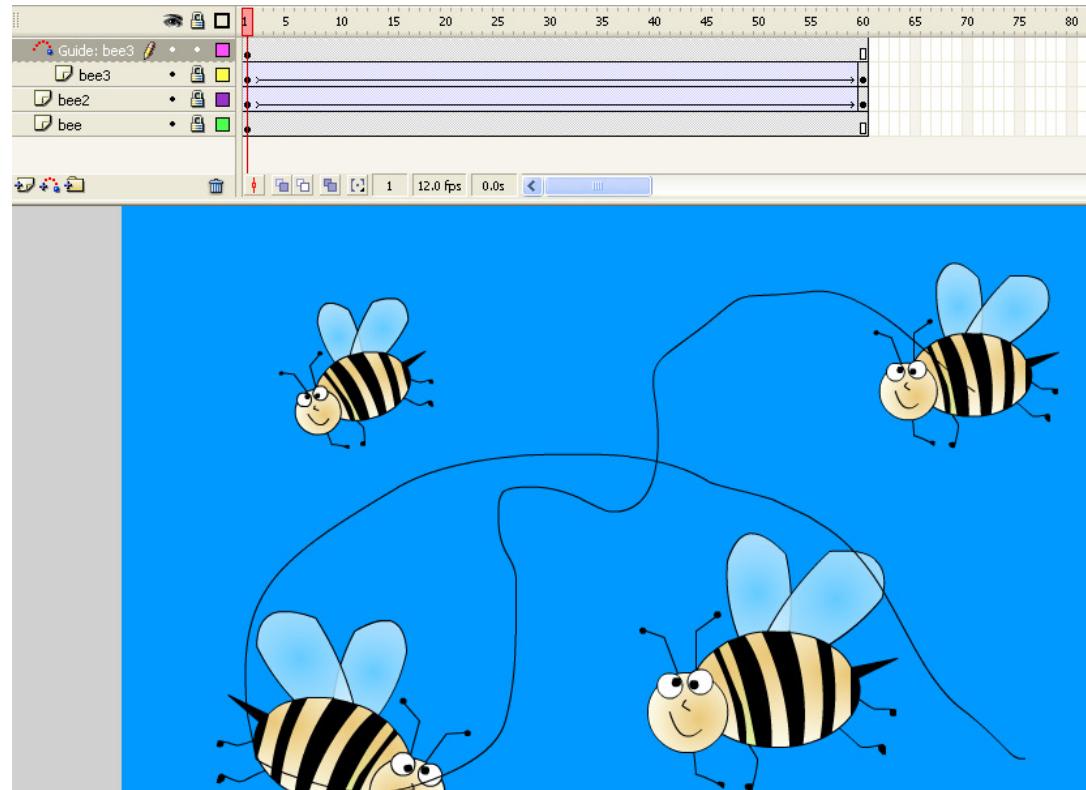


- iv. Now, **Control>Test Scene**. Looks pretty good, but notice how he is all "prim and proper" and stays straight the whole time? Let's fix that.
v. You can set any tween to have the symbol so that it orients itself to the path. Go back to the **Timeline** view and in the **Properties** panel, click **Orient to Path** (you may need to click on the timeline in the blue tweeny area first).
vi. **Test the scene** again and cackle in amazement. ☺ SAVE!

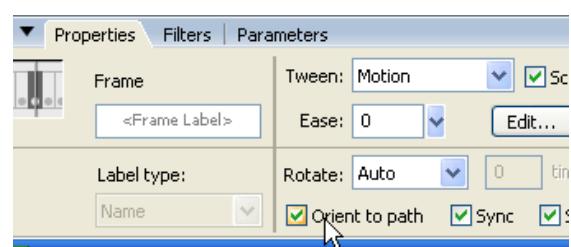


b. **Flash 8/CS3:** This version doesn't have a fancy Motion Editor, so we have to create the path old school. And, it's sometimes problematic.

- i. In this version, you need to end the path with a **keyframe**. So, at **frame 60** on **bee3**, insert a **keyframe** (F6) so a black dot appears. Then, click on that frame and reposition the bee to his ending point (lower right corner).
- ii. Click somewhere between those two keyframes on **bee3** and **right click>Create Motion Tween**. It will tween, but not in the way you want (mine just flies straight down).
- iii. To fix that, we need an official Motion Guide. Right click the **bee3** layer (where the word is) and select **Add Motion Guide**. You'll see a little guide layer with a line on it.
- iv. Lock the **bee3** layer so you don't mess it up (and all layers, really) except the Guide layer.
- v. Now, drag the Playhead to frame 1 and then use a pencil and draw a path for the bee.



- vi. Now, **lock** the **Guide** layer and **unlock** the **bee3** layer to position the bee at the ends of the guide.
- vii. Click the **Selection tool** (black arrow) and be sure your bee is "stuck" to the end of the line in frame 1. He should snap to it (if not, check to see if **View>Snapping>Snap to Guides** is checked).
- viii. Then, **click in frame 60** and do the same thing. Be sure he's lined up with the path (the registration point should be at the end of the line). Drag the playhead when you think it's good to see if he follows the path. Hopefully he will. If not, zoom up closer, pull him off, and try again. Sometimes it takes a few times (which is probably why they changed this in newer versions!).
- ix. Finally, click in the **Properties** panel and check the **Orient to Path** button to make sure he actually turns to follow the line. Be sure you are clicked in a frame somewhere during the motion tween.
- x. Note the guides do not show on playback. **Test the scene** again and pat yourself on the back. ☺ **SAVE!**



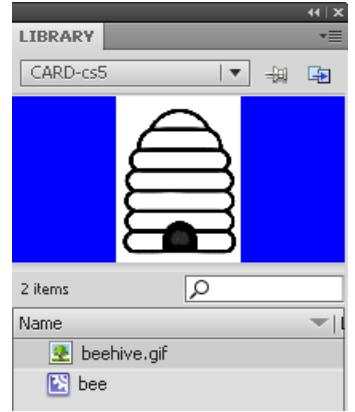
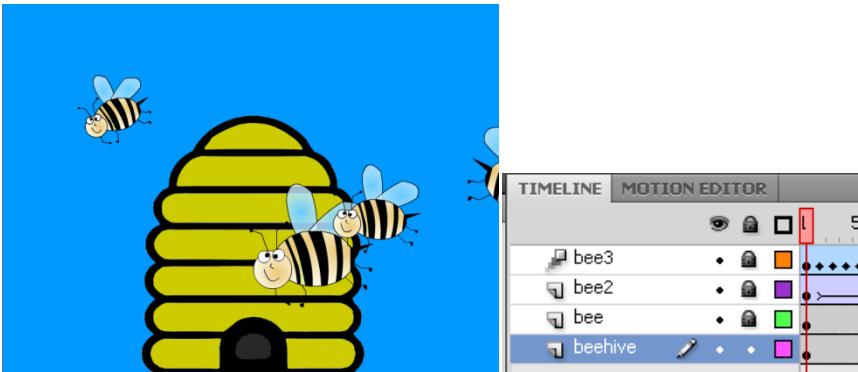
Bring on the Clipart

Tired of drawing everything? You can actually import clipart images (referred to by Flash as bitmap images) or really just about any other image for use. However, you cannot edit them or do much to them because they are not symbols.

Clipart is useful for some Flash designers because there is a special option called **Trace Bitmap** that allows you to take a bitmap image and convert it to shapes and lines. When this happens, you can then recolor the object or make changes to it.

Your Turn—Part 9

54. In your data files is a file called beehive. To bring this image into Flash, click **File>Import>Import to Library** and browse for the file. It should now be housed in the **Library** (F11).
55. I've found lineart is easiest to work with in Flash. For this beehive, let's use the **Trace Bitmap** feature, remove the white background, and make the hive an appropriate color. So, first, make a **new layer**, name it beehive, and **drag** it out. It's rather large.
56. Now, click **Modify>Bitmap>Trace Bitmap**. This "traces" the bitmap and turns it into a series of "painted" colors (a vector, actually). You can play around with the settings, but the defaults will work with this simple image quite well.
57. Click on the **white** background and press **delete**. Then, use the **Paint Bucket** and fill in the white spots with an appropriate hive color.
58. Finally, **lock** all layers except the beehive layer. Then, select the hive (**Control+A**) and convert it to a **movie clip symbol** called **hive** (**F8**).
59. Reposition the beehive layer to be lower than everything (in the background, essentially).



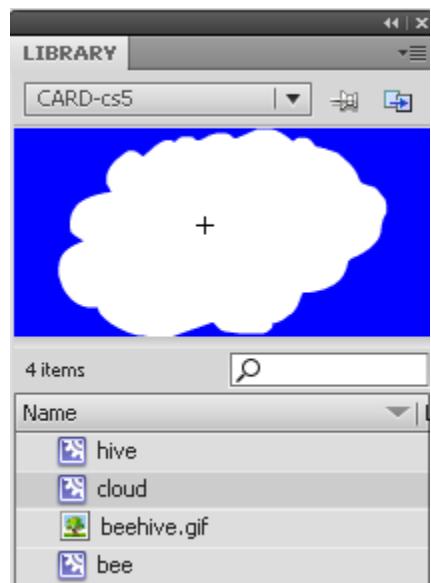
60. And, let's make the whole thing a little longer before it loops by inserting a **frame** on all **layers** in **frame 80 (F5)**.
61. Save!

Shape Tweens

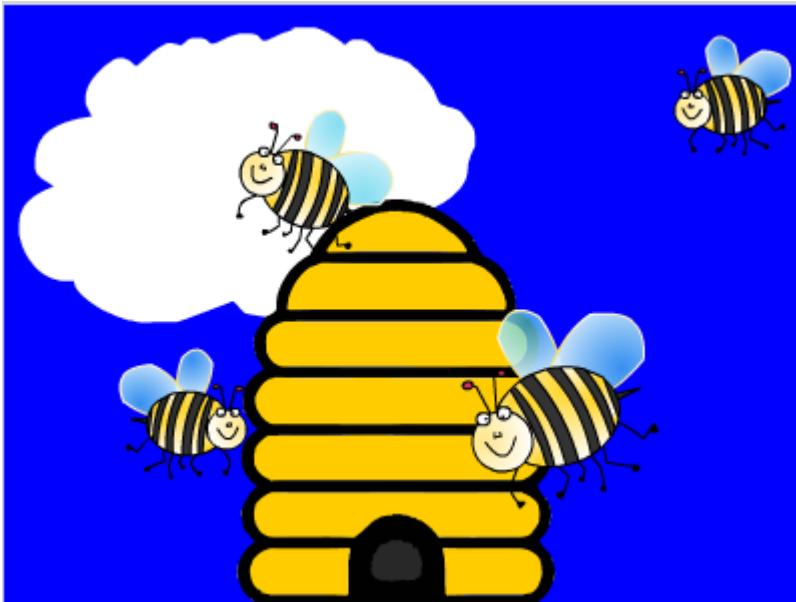
I honestly use shape tweens very little. They tend to do strange things. However, they are a feature of Flash and we should acknowledge that. So, just know this... you can shape tween anything that is "broken apart" (has that gray speckled selection on it when you click on it) and you can break apart anything by pressing **Control+B**. It doesn't mean you should, though. Personally, I do not use strokes when I use shape tweens because they go crazy. And, it's easiest to actually manipulate the starting shape and just change its position, reshape it using the black or white arrows or transform tools, or change its color. Those things will typically work just fine.

Your Turn—Part 10

62. Let's create an animated cloud to put in the background. Create a **new layer**, call it **cloud**, and **move** it to the bottom of the layer stack on the Timeline. **Lock** all other layers.
63. Now, create a new Symbol—**Insert>New Symbol** (set to Movie Clip) named **cloud**. Now, to create it using a **Shape** tween!
64. Use the **Paintbrush** set to white and draw a cloud. Then, fill it in with the same color using the **Paint Bucket**.
65. With a looping shape tween, it's a good idea to have the starting and ending frames be the same. So, insert a **keyframe at frame 30 (F6)** but make no changes.
66. Then, insert a **keyframe at frame 15**. We'll make the changes here, in the middle. We want these to be subtle cloud changes, so it won't be too extreme.
67. While on **frame 15**, use the **Selection arrow** (black arrow), click off the cloud, and then point to the curves. Reposition (use the curvy mouse pointer) parts. Not too much. Just a few places.
68. Now, **right click** on the **Timeline** between the first two keyframes and **Create Shape Tween**. Repeat between the last two. You will see shaded green areas on the Timeline. (NOTE: Flash 8/CS3 does not have shape tween on the right click menu and must be selected from the Properties panel under the Tween option—set to Shape)



69. **Return to Scene 1**. Drag the cloud out of the **Library** onto the cloud layer you created. **Test Scene**.



There you have it. It's a Shape Tween. Not the greatest thing since sliced bread, but you might come up with neat uses for it in creating simple animations, such as web banners.

70. **Save!**

Don't Change All My Symbols!

Remember that we discussed how updating one symbol updates all of them? Well, what if you don't want to?

You can "copy" a symbol and disconnect it from the group. To do so, you use the **Library**. Simply right click a symbol in the Library, **Duplicate** it, and give it a new name. Then, you will have two identical but unrelated symbols that you can make changes to. When you double click to edit one, it will not affect the other(s).

Your Turn—Part 11

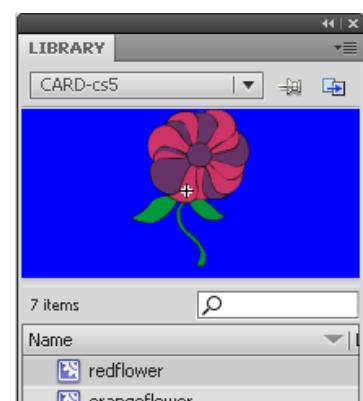
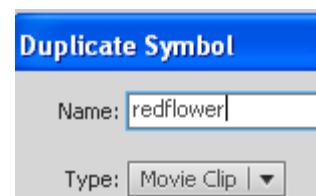
71. In your data files is a file called flower-clipart-01. To bring this image into Flash, click **File>Import>Import to Library** and browse for the file. It should now be housed in the **Library** (F11).
72. Create a new movie clip symbol (**Insert>New Symbol**) and name it orange flower. Drag the flower into this new symbol and use Trace Bitmap (**Modify>Bitmap>Trace Bitmap**). Remove the background like before and erase the text. Then, return to the scene.
73. Create a new layer called flowers. Position near the bottom of the stack, in front of the clouds. Drag two copies of the orange flower symbol to the Stage. Flip one horizontally and scale as you desire.



74. Now, let's create a different colored flower. To do so, in the **Library**, right click orangeflower's movie clip and select **Duplicate**. Then, give it the name redflower.
75. In the **Library**, **double-click** the redflower movie clip and use the **Paint Bucket** to recolor the flower as you desire.
76. Finally, drag a few copies of the red flower out to the flowers layer.
NOTE: You can "copy" a flower by holding Alt while dragging!



Beautiful! Save!

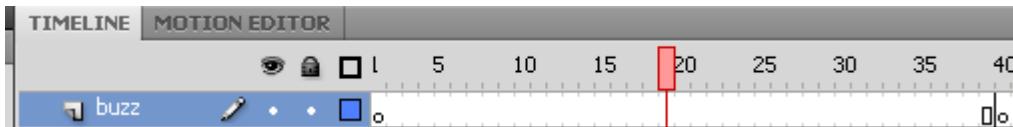


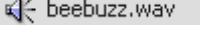
Sound!

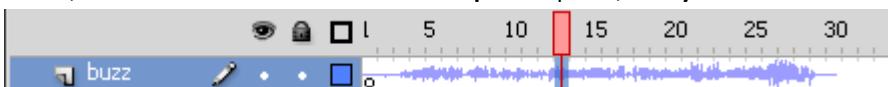
What's some multimedia without sound, right? You can easily import sound files into Flash to use in projects. There are numerous ways to do it, and we'll only cover the "easy" way in this session. However, you can add sound many different (and more complicated) ways. Many sound file types are acceptable, though my best luck has been with WAV files. Some MP3 files will not work, so it's important to test your file (just try to import it) before you get too deep into a project. Like all other objects, you will import sound to your Library where it will stay until you drag it in to use it.

Your Turn—Part 12

77. Create a new layer called buzz and move it to the top of the stack of layers. Lock all other layers. Then, insert a **blank keyframe** at **frame 40**. We want to have a sound play for a little bit and then play again so we need two different "starting" frames.



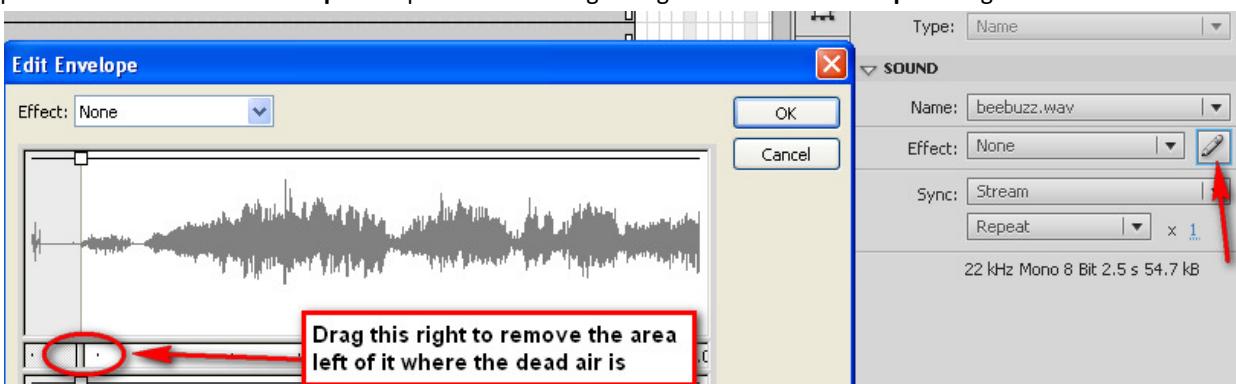
78. **File>Import>Import to Library** and browse for the beebuzz.wav file. It will appear in the Library with a little speaker icon next to it so you can tell it is a sound. 
79. Next, click on **frame 1** and just **drag the sound** out onto the **Stage**. When you let go, you should see a **waveform** representing your sound appear on the **Timeline** during the duration of the sound. You won't hear it. NOTE: If you want to hear it, click in the waveform and in the **Properties** panel, set **Sync to Stream**.



80. Now click in the **blank keyframe** on **40** and **repeat** this process. You will now see two waveforms. **Save** and **Test Scene** to check it out. NOTE: If you change your mind about a sound, you can remove it in the **Properties** panel:

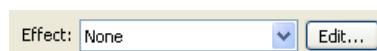


81. You can also edit sound in Flash, including adding a Fade in/out or removing "dead air" or trimming a clip. Simply click the pencil under **Sound** in the **Properties** panel and making changes to the **Edit Envelope** dialog box:



Other effects are also available in the Effect drop down menu. Changes only affect that particular sound in those frames, not every instance of the sound in the project.

NOTE: In Flash 8/CS3, the panel doesn't have a pencil. Instead, it's the Edit menu:



Scenes

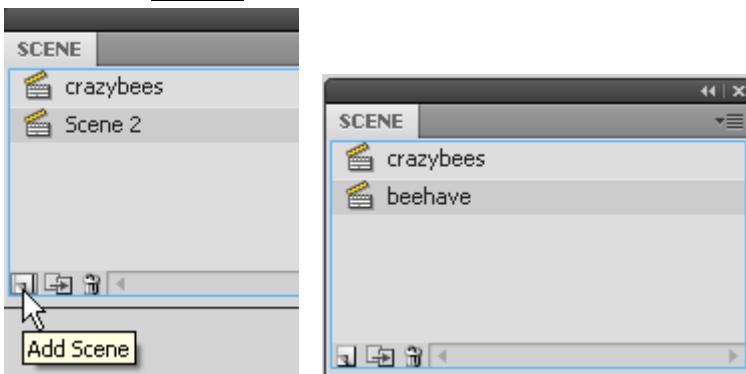
In Flash, you can create multiple scenes for action. As it is, with what we are creating so far, that first scene is pretty full of stuff. It would be distracting to keep going out to frame 100 or 200 or 500 and continue animating. Or, if you wanted to start removing bees, you'd insert many keyframes and start deleting things. It would be very confusing.

So, scenes help with this. To access the Scene panel, where you can add, delete, rename, or reorder scenes, you go to **Window>Other Panels>Scene**.

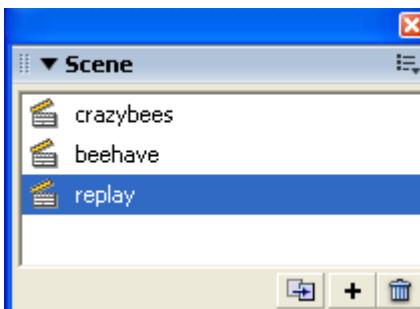
Scenes play in the order listed. You can also add special commands (called ActionScript) to make your file NOT go to the next scene so that you can allow users to navigate using buttons. But, one thing at a time!

Your Turn—Part 12

82. Open the **Scenes** panel and rename **Scene 1** to be crazybees. It's the same as renaming a layer—double click it, type it, and press Enter.
83. Press the little paper icon in the bottom left corner to add a new scene. Name the second scene beehave.

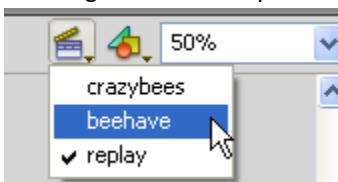


84. We will not reorder these scenes, but you change the order the same way as reordering layers—just click and drag.
85. Add one final scene to the end and call it replay. Then, close the **Scene** panel.



Notice that in older versions, the plus sign is used to add new scenes.

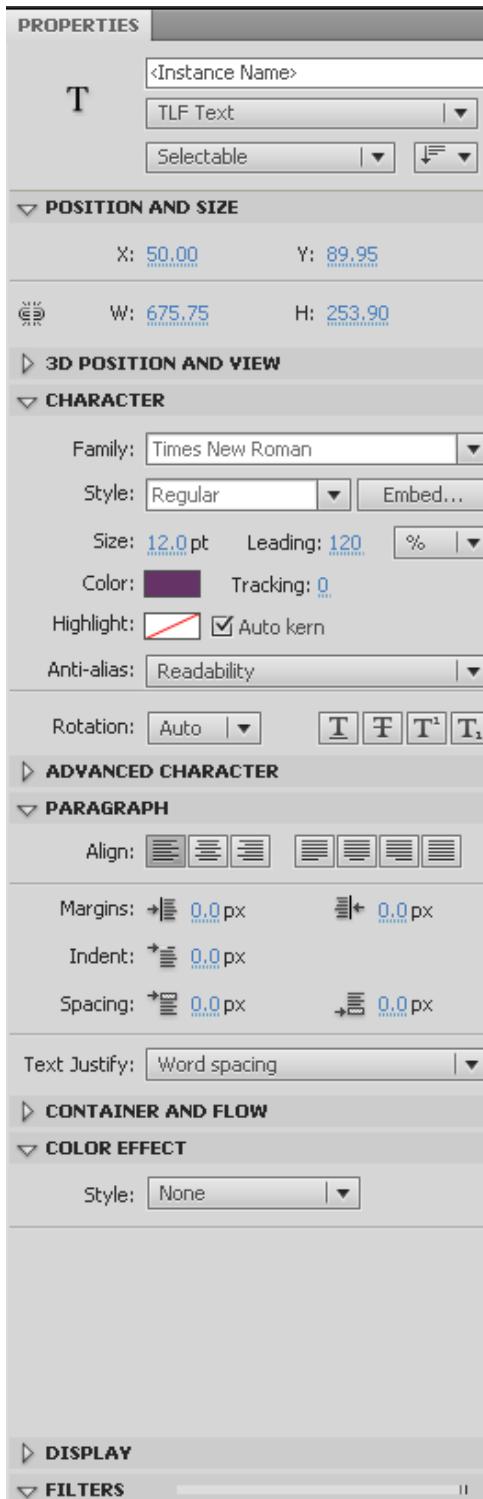
86. To change which scene you are working on, look for the clapboard icon and press it.



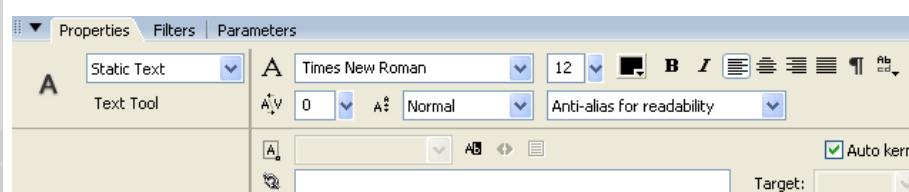
Let's go to the beehave scene next. Select it and **Save**.

Text

So far, we've only used bitmaps or drawn items. But, text is important, too. To insert text, you use the **Text Tool** (a capital A in older versions and a capital T in newer ones). The newer versions have MANY more options for working with text.



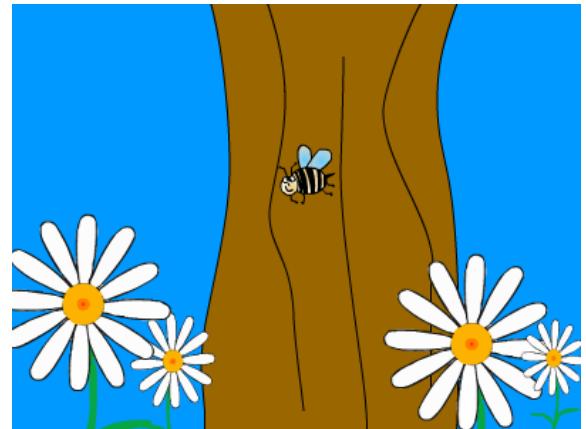
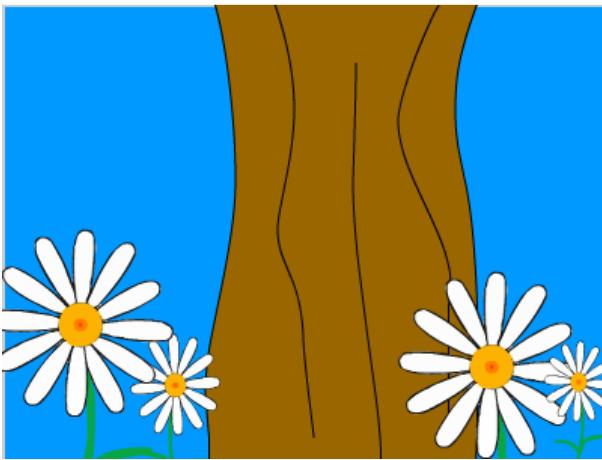
The big tall box is the panel for text in CS5; below is the panel in Flash 8. Big difference!



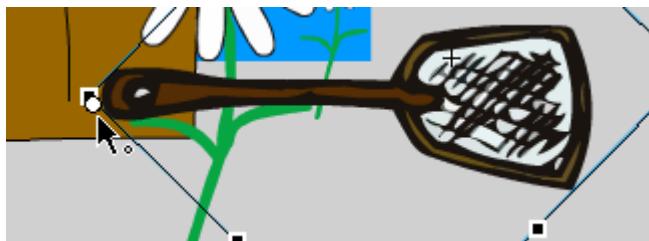
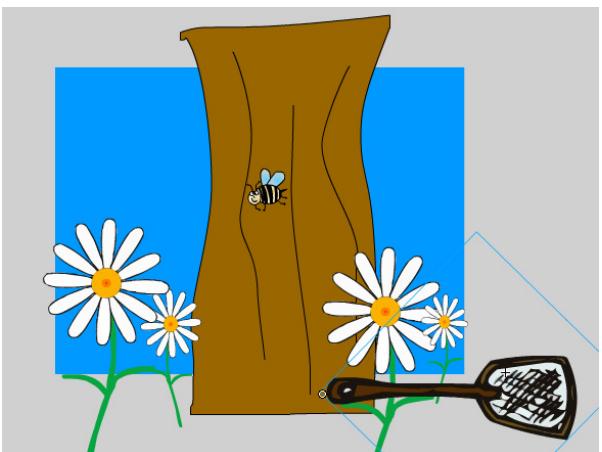
The main thing to remember about text is that if you wish to make changes to it, select it (highlight it) first. Also, don't try to resize text by resizing the box; use the size slider button to resize the font.

Your Turn—Part 13

87. **REVIEW:** In this new scene, before we get going on adding text, let's do a few things you should know how to do based on the previous lessons.
88. **Rename Layer 1** in the beehave scene to be background.
89. On this layer, **draw** the trunk of a tree. Use the **Pencil** tool to draw it and **fill** it with brown. I also added a few lines with the pencil tool afterward for effect.
90. Next, **import** the file daisy-clipart-01 to the **Library**. Then, create a **new movie clip symbol (Insert>New Symbol)** called daisy, drag the bitmap file into this new symbol, **Trace Bitmap** (settings will need to be modified a little on this one—try 50 for color threshold, 5 px for minimum area, tight curve fit, and few corners), and remove the background and text. Return to the scene. **Drag** a few copies of the daisy movie clip out to the background layer. Lock the layer.

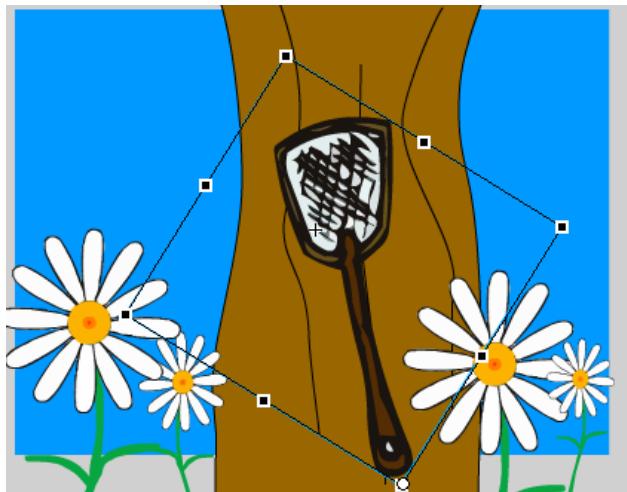


91. Now, we'll have the bee fly in. So, create a new layer named bee. **Drag** the bee out and position off stage at right. Insert a **keyframe** (F6) at **frame 30** and position the bee in the center of the tree. Insert a **Classic Tween** (or older versions, Motion Tween) between the frames so he flies into place. (if you can't guess on position, you can insert a frame—F5—on the background)
92. Create a new layer called swatter. Then, lock all other layers.
93. Create a new movie clip symbol (**Insert>New Symbol**) called swat. **Import** the Fly_Swatter.jpg image to the **Library**, **Drag** it in. **Trace Bitmap** and remove the extra stuff and white background. Return to the beehave scene.
94. On the swatter layer, insert a **blank keyframe (F6)** on **frame 30**. **Drag** the swat movie clip onto the stage in this frame. Resize/rotate as shown below.



95. Before we go further, be sure your transformation point is at the bottom of the handle. To be sure, just activate **Free Transform (Q)** and move the white dot to the corner if it's not already there. It will rotate from this axis.

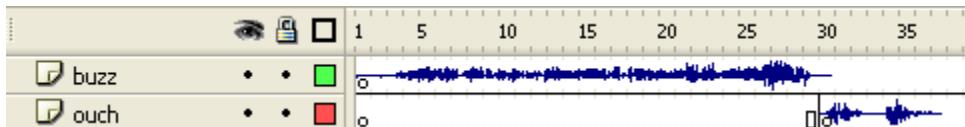
96. Insert a **keyframe** (F6) at **frame 35** on the swatter layer. Then, in that frame, **rotate** (Q) the flyswatter up.



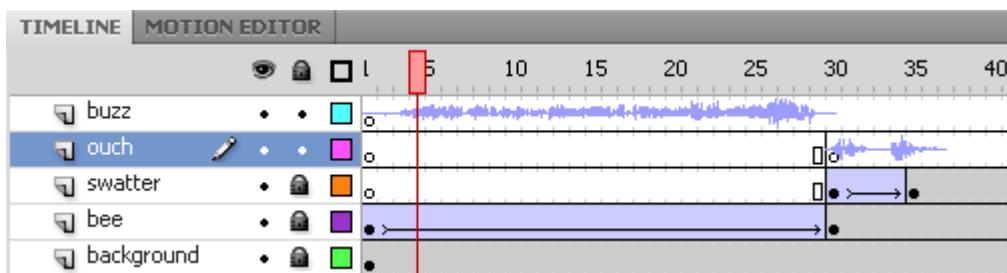
97. Insert a **Classic Tween** (older versions, Motion Tween) between those frames (**right click** up there on the Timeline).

98. Insert a **frame** (F5) at frame 125 on all layers. **Test Scene**. It should “swat” the fly. Make any changes necessary (placement of the bee, for example). **Save!**

99. **Create two more layers** for sounds as shown below (lock other layers). On the buzz layer, pull in the beebuzz sound. For the ouch layer, insert a **blank keyframe** (F6) at 30 and **drag** in the bonk sound at frame 30 (**Import to Library** first).



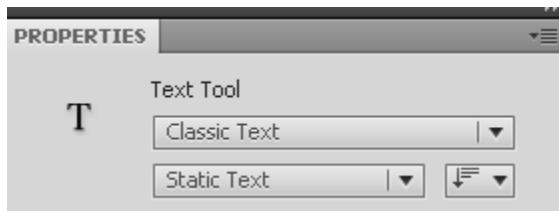
100. **Test and Save!**



That was a pretty good review! How did you do?

More on Text

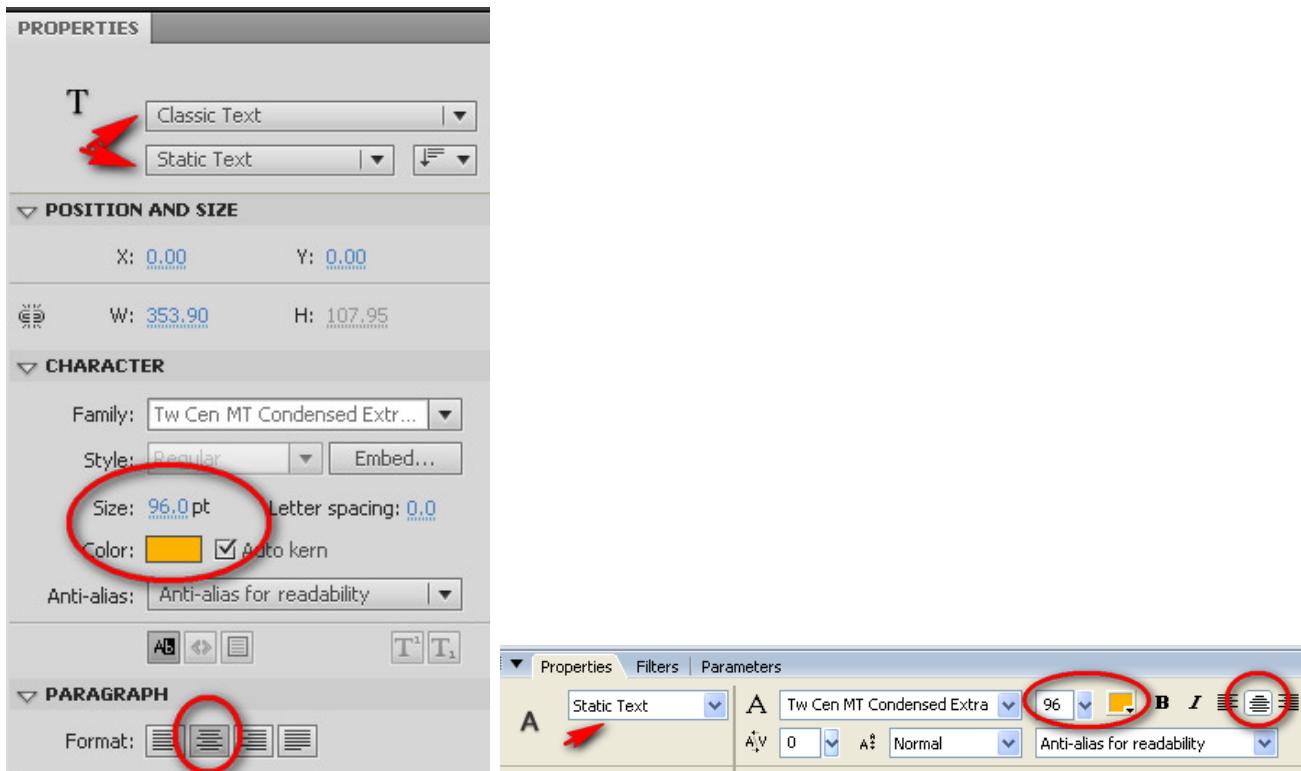
One big change in the newest version is the use of TLF text in Flash files. This will sometimes cause errors, so for beginners, it's probably best to set text to "**Classic Text**" and then **Static Text** as shown below:



TLF text is pretty neat. You can use special “classes” with ActionScript to animate this special kind of text. You are also given the really super long character Properties (shown earlier) where you can change lots of things. However, if you are starting out and not utilizing any of those features, Classic/Static Text is all that is necessary to just use and tween basic text. Before we move on, click the text tool and set this as shown above.

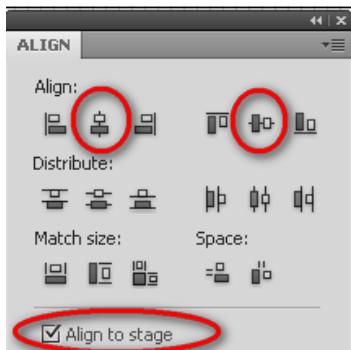
Your Turn—Part 14

101. Create a **new layer** called beehave. **Lock** remaining layers.
102. Insert a **blank keyframe** on **frame 35**.
103. Use the **Text** tool and a clear font, size 96, in the gold color from the center of the daisy (use eyedropper). Type the word **BEEhave!** Set the text properties to be centered:



104. Switch to the **Selection tool** (black arrow) and click the text box. Then, convert the text to a **movie clip symbol**—**F8**. Call it text.

105. Position the text centered on the stage using the Align panel. **Window> Align**. Set as follows:

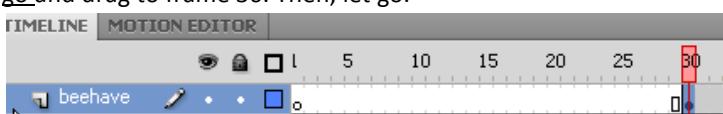


Be sure to check “Align to Stage” before pressing the two buttons!

106. Use the Quick Transform handles (Q) and resize the symbol as shown:

107. We don't want this text to begin on screen, so let's move the keyframe.

To do that, click on the keyframe 1 and let go. Then, click and don't let go and drag to frame 30. Then, let go.

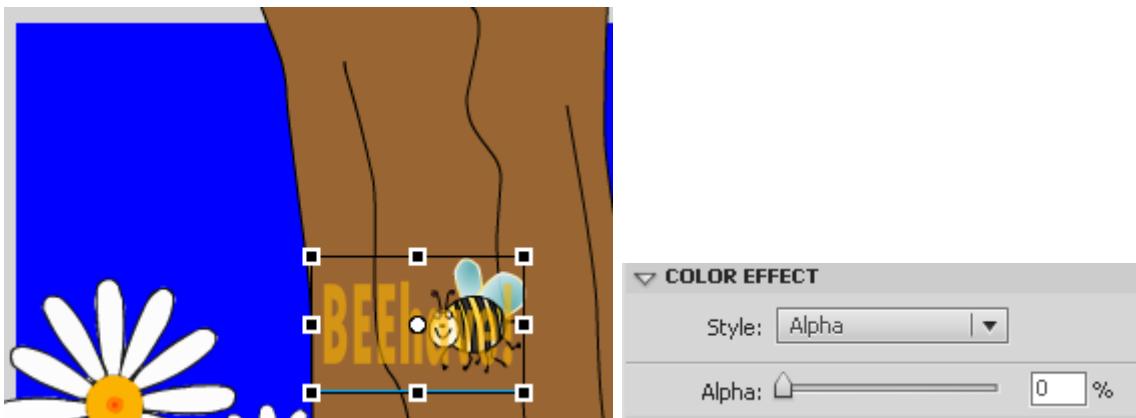




108. Now, insert **keyframes** at 35, 40, and 45 (F6).

109. Make the following changes to each of those keyframes:

frame 30—click the text and **resize** using the handles (Q). Then, in the **Properties** panel, set **Color Effect** to **Alpha** of **0**, which is invisible.



frame 35—leave as is (big)

frame 40—resize and place in top left corner

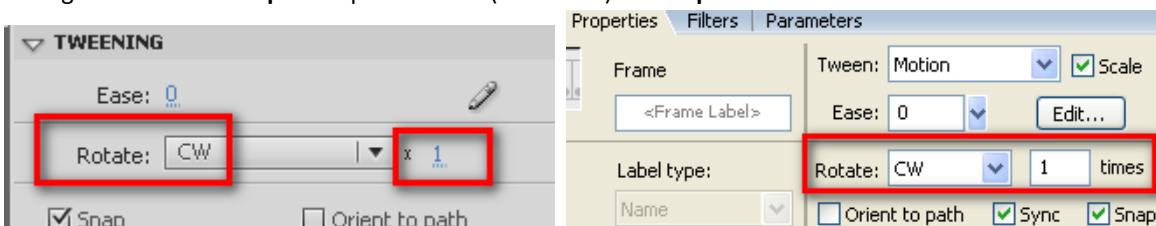


frame 45—resize and angle in corner



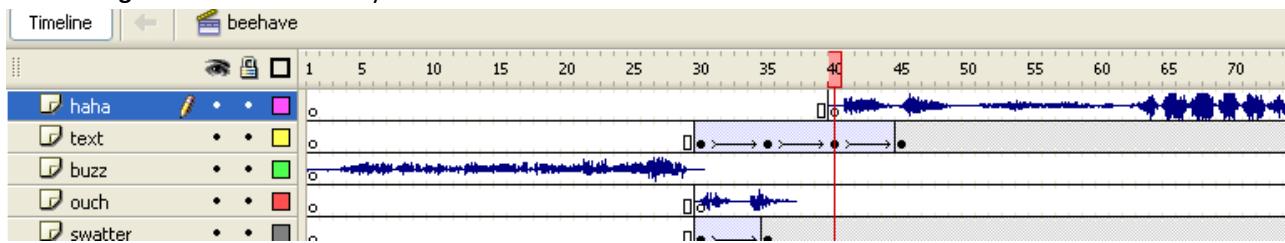
110. Now, between each of those **keyframes**, insert **Classic Tweens** by right clicking between keyframes (old versions, Motion Tween).

111. One little change. Between frames **40** and **45**, let's add a **spin**. That can be done by clicking in the purple **tween** area and setting **Rotate** in the **Properties** panel to **CW** (Clockwise) and **1 spin**.



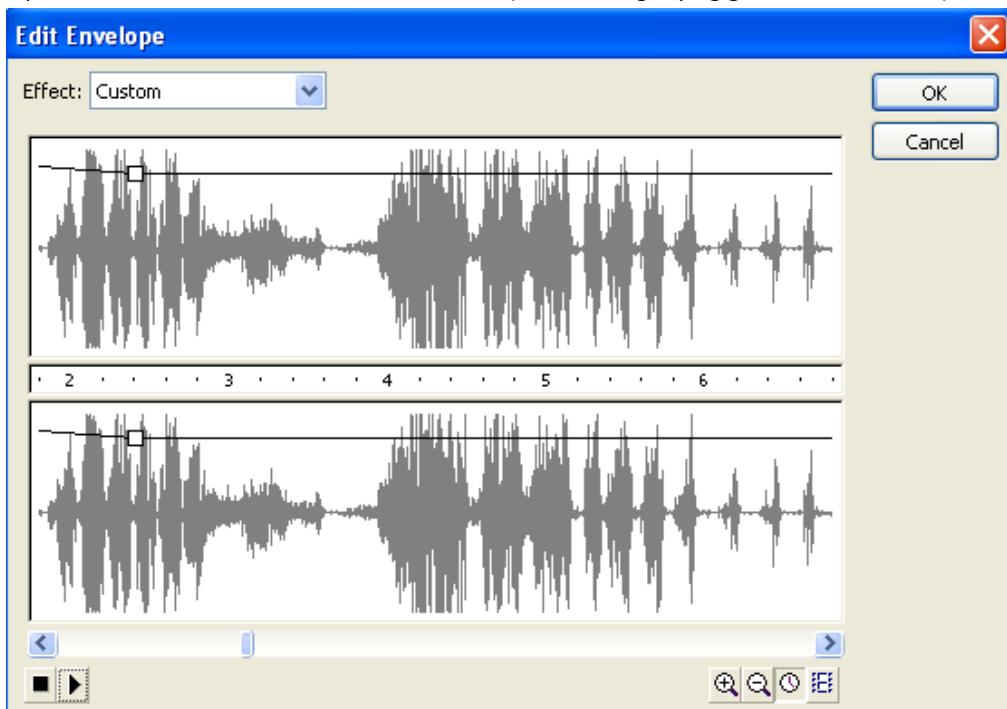
112.Press **Enter** to preview or **Test Scene. Save!**

113.Finally, create one more layer called haha. **Import** the sound behave.wav to the **Library**. Insert a **blank keyframe** at frame **40** and **drag** the sound onto the layer.



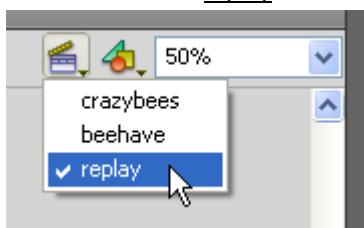
114.**Save** and **test** one more time!

115.It's pretty loud. Actually, if you look at the waveform closely, the audio "clips". So, fix that by lowering the levels. Click in the **behave/haha** sound and click the pencil (or Edit in previous versions) in the **Properties** panel to edit the sound. Bring the top lines down as shown to lower the volume: (use the magnifying glasses to zoom out)



If you are satisfied with the volume (press the play button to preview), we're all done with this scene.

116.Switch to the final replay scene.



Flash Buttons

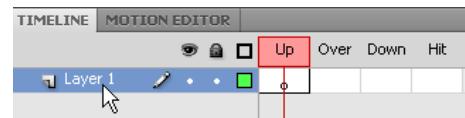
Unlike other symbols that have timelines, buttons have four button states instead. They are:

Up → The appearance of the button when the pointer is not over it.

Over → The appearance of the button when you place the pointer over it.

Down → The appearance of the button when you click on it.

Hit → Defines the area that will respond to a click of the mouse.



You can still drag sounds into the various button states and you can drag symbols into the button as well. As a matter of fact, it's a good idea to create the main part of the button as a symbol first and then add the text on a separate layer within the button. Let's make that happen.

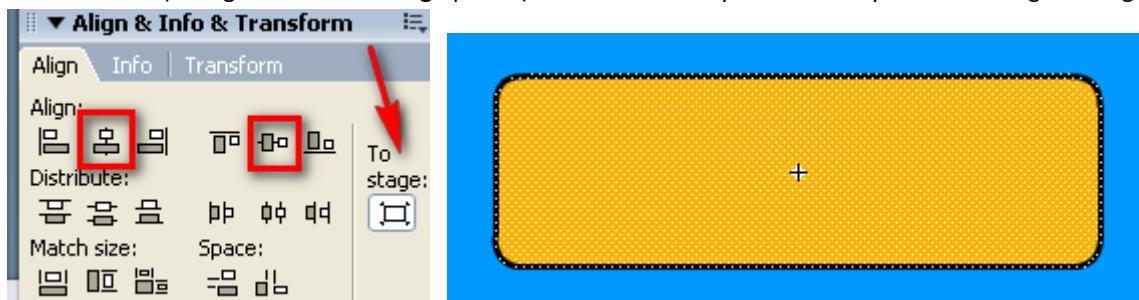
Your Turn—Part 15

117. Create a **new movie clip symbol** (**Insert>New Symbol**) called buttonbox. Inside, draw a shape for the button with a stroke and fill of your choice. To give the corners a rounded look, set the Rectangle Options in the Properties panel before you draw:



it's a button in older versions→

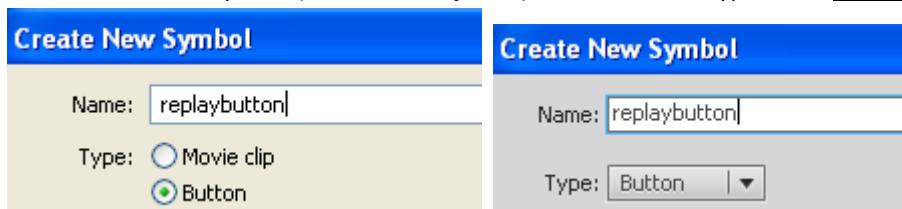
118. After drawing the shape, **double click** it with the **Selection tool** to select it. Then, center align it to the Stage (very important for all buttons!) using the **Window>Align** panel (center horizontally and vertically and set to align to stage).



It will be centered on the registration point.

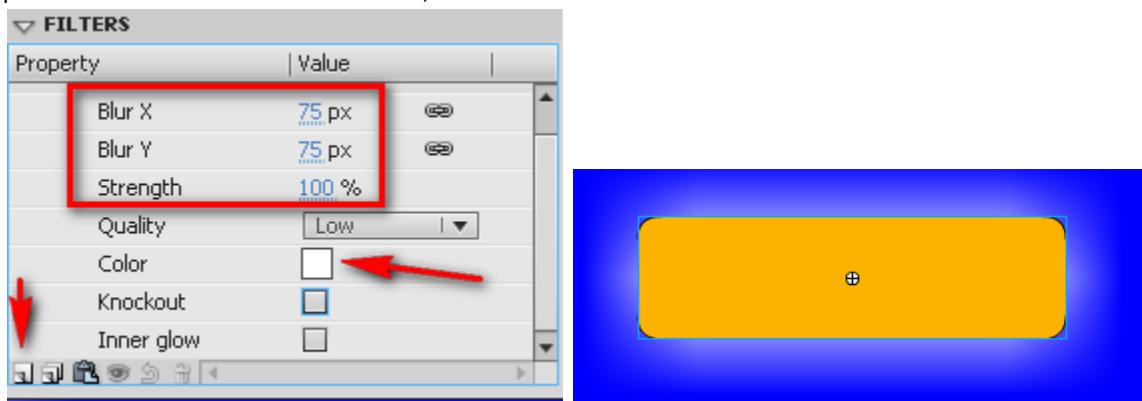
119. Return to the **Scene**.

120. Next, create a new symbol (**Insert>New Symbol**) that is a **button** type called replaybutton.

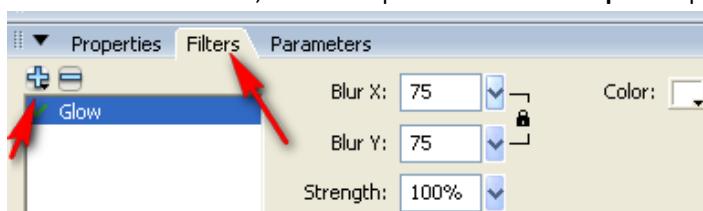


121. In the **UP** frame, drag the buttonbox movie clip in. **Center** it using the **Align** panel.

122. Press **F6** in the **OVER** frame to copy the symbol to that frame and make it ready for change. We will add a **Filter** to this frame so that when you are pointing to it, the button glows. To do this, click the Filter drop down in the Properties panel, press the first button and choose Glow, and set the color and blur values.



NOTE: In older versions, this is in a panel beside the **Properties** panel

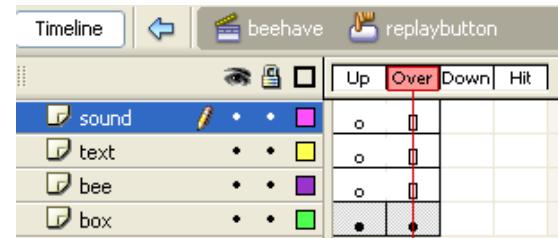


NOTE: Flash has several filters you can apply to movie clips—blur, glow, bevel, and shadow. You can add more than one filter to a symbol.

123. Now, label that layer box and lock it.

124. Create three new layers inside the button—text, sound, and bee.

125. On the bee layer, insert a **keyframe** (F6) in the **OVER** state. Then, bring in **two** copies of your bee movie clip and size/position as shown, leaving room for the text:



126. On the text layer on the **UP** state, create the words **REPLAY** in a font and style of your choice.



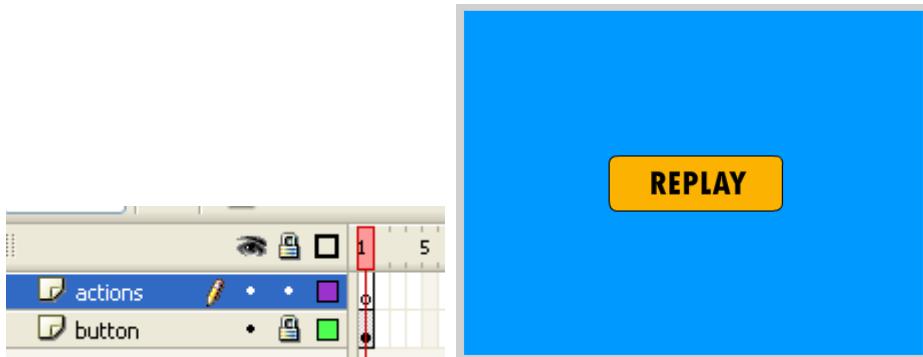
127. Import the sound file to the **Library** called groovy. Insert a **blank keyframe** (F6) on the sound layer in the **OVER** state. Then, drag the sound in.

128.Finally, press **F5** to insert a **frame** on all **HIT** states.



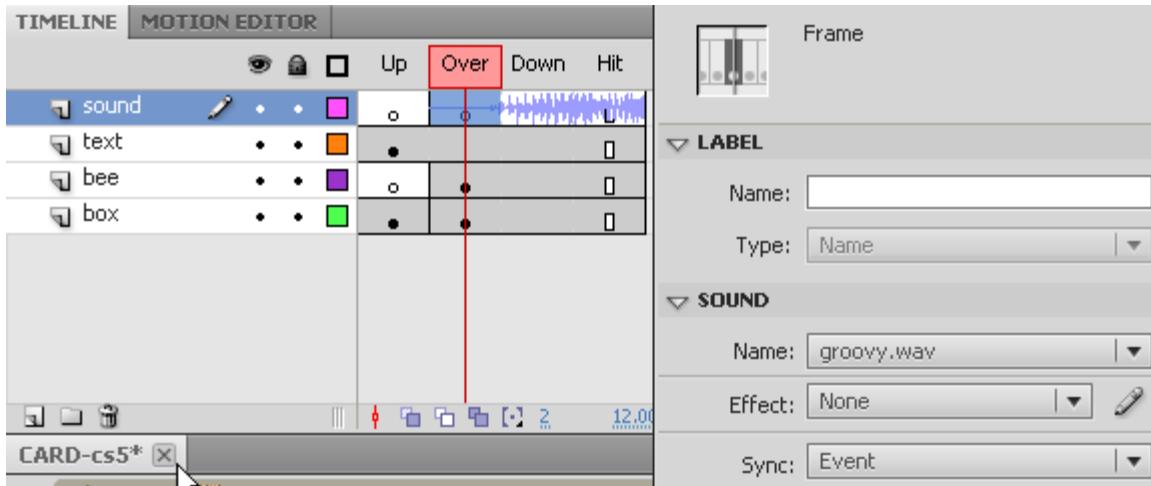
129.Save and return to the scene.

130.Create **two** layers—actions and button. Drag the replaybutton to the Stage on the appropriate layer and then **lock** it.



131.If you **save** and **test**, everything should work except 1) Your sound doesn't play and 2) Your button doesn't go anywhere.

132.Since this is a button, the Sync for the sound must be set to Event. Clicking a button is considered an "event" in Flash. So, inside the button, click on the waveform and set the **Sync** to **Event** in the **Properties** panel.



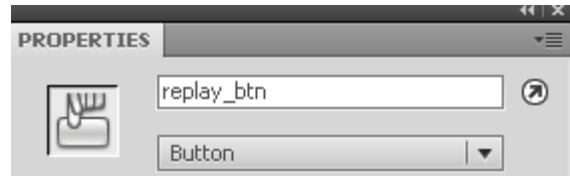
133.Return to the scene.

134.Press **Control+Enter** to test the entire movie. You will notice that the movie does not stop to give us the opportunity to press the button in the last scene. Also, we haven't told the button where to go either. That's up next.

Actions

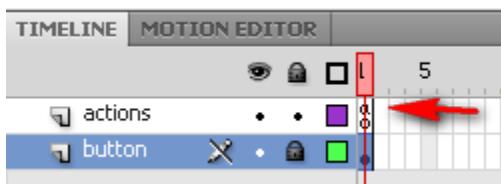
The power in Flash is the use of ActionScript. It's a programming language used to tell Flash objects what to do. It can also control the Timeline.

To add **Actions**, you must use the **Actions** panel, accessed by pressing **F9**. Probably the most common action is the stop action:



To attach actions to objects/movie clips/buttons, you must give the item an **instance name**. This is done in the **Properties** panel when you are **clicked on** the object.

You can tell if ActionScript is in a scene or not by the presence of a little lower case "a" on the timeline:



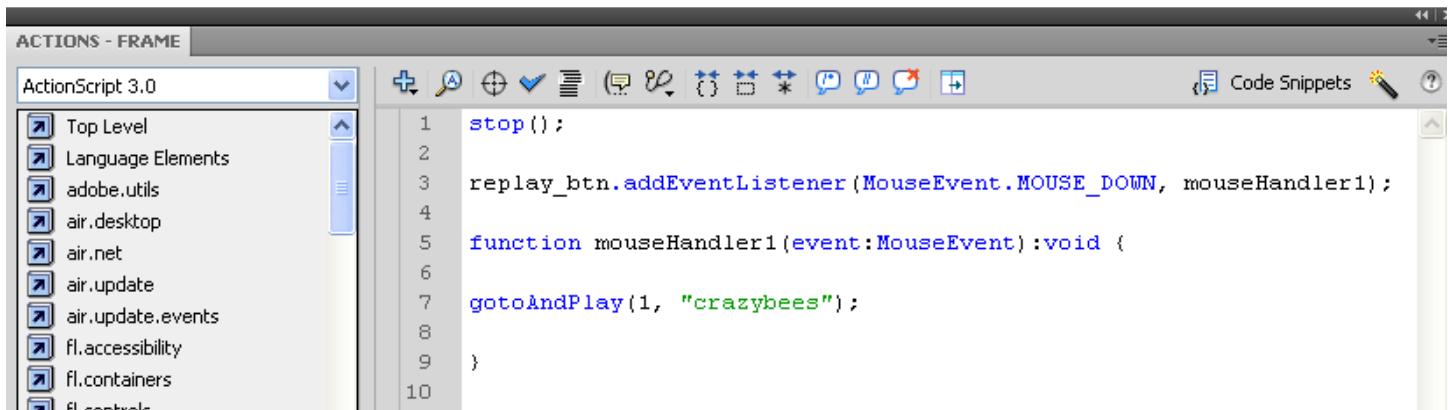
Your Turn—Part 16

135. We should be at the main **Timeline** in the replay scene. The button layer should be locked. Click on the actions layer. Open the **Actions** panel (F9).



136. Now, you must type in the code to control the button. First, we have to "give the button" an ActionScript name. It's not the same as its Library name. So, we'll make something up... just call it **replay_btn** in the code below. Depending on your version of Flash and ActionScript, the code varies.

Flash CS4/CS5 or any version using ActionScript 3.0, here's the code:



The screenshot shows the "ACTIONS - FRAME" panel in Flash CS4/CS5. The left sidebar lists "ActionScript 3.0" with categories like Top Level, Language Elements, adobe.utils, air.desktop, etc. The main pane contains the following ActionScript 3.0 code:

```
1 stop();
2
3 replay_btn.addEventListener(MouseEvent.MOUSE_DOWN, mouseHandler1);
4
5 function mouseHandler1(event:MouseEvent):void {
6
7 gotoAndPlay(1, "crazybees");
8
9 }
```

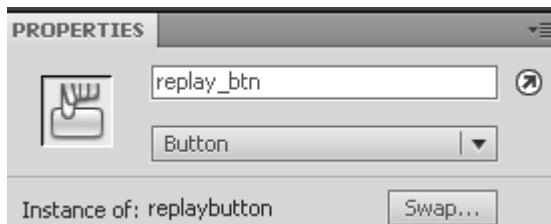
Flash 8 or any version using ActionScript 2.0, here's the code: (be sure Script Assist is turned off)



The screenshot shows the "Actions - Frame" panel in Flash 8. The left sidebar lists "ActionScript 1.0 & 2.0" with categories like Global Functions, Global Properties, Operators, Statements. The main pane contains the following ActionScript 2.0 code:

```
1 stop();
2 replay_btn.onRelease = function() {
3 gotoAndPlay("crazybees", 1);
4 }
```

137. Now, it won't work yet. We have to actually assign that **instance name** we mentioned (replay_btn) to an object (in this case, our button). So, **click on the button** (unlock first). In the **Properties** panel, type in replay_btn as the **Instance name** in the white box.

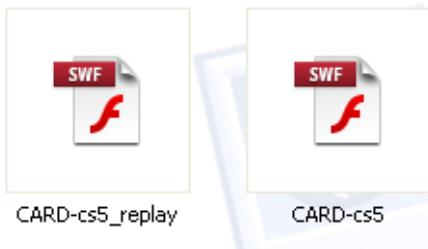


138. Now, if there are no errors (cross your fingers), your project should stop and the button should function. Press **Control+Enter** to check it out.

139. That's it! **Save** and close!

A Few Notes

Every time you **Test Scene** or **Test Movie**, you actually create a Flash SWF file, the default "publish" format. These are the types of files that can be embedded onto webpages or PowerPoint files. If you look in your folder, you will see several:

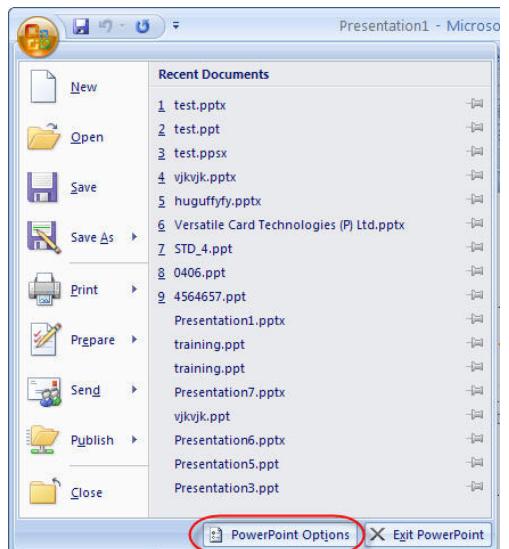
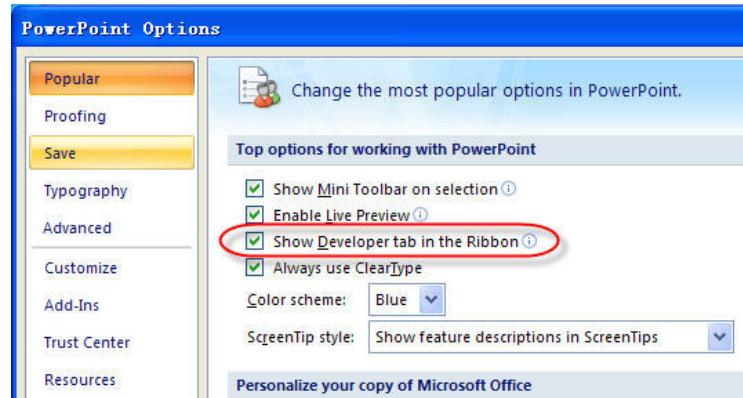


You can also specify the export format under **File>Publish Settings**.

Inserting SWF files in PowerPoint

Ensure the Flash Player is installed on your computer, and then follow the steps below:

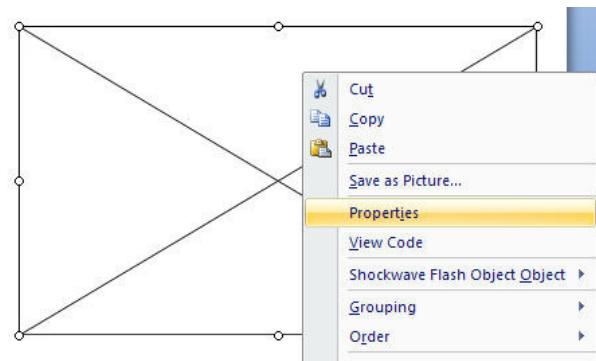
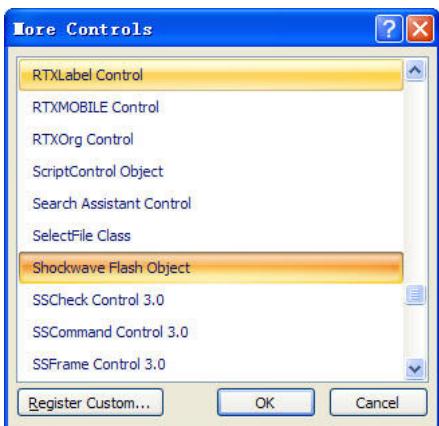
Click **Microsoft Office Button** on the top left corner, click “**PowerPoint Options**” at the bottom of the panel > go to the “PowerPoint Options” window > click “**Popular**” on the left column > select “**Show Developer tab in the Ribbon**” on the right column > click “**OK**” at the bottom



On the “**Developer**” tab > go to “**Controls**” group > Click the icon of hammer and nail for “**More Controls**” > go to the “**More Controls**” window



On the “**More Controls**” window > select “**Shockwave Flash Object**” in the list > click “**OK**” at the bottom > use your pointer to drag on the slide to draw and resize the control



Right click the control you drew > click “**Properties**” in the right-click menu > go to the “**Properties**” window

On the alphabetic tab > click the “Movie” property > type the full drive path in the value column (the blank cell next to Movie), including the file name (e.g. C:\Documents and Settings\tskinner\Desktop\FlashWkshop\Card.swf) or URL (including http://).

ShockwaveFlash1 ShockwaveFlash	
Alphabetic Categorized	
(Name)	ShockwaveFlash1
AlignMode	0
AllowFullScreen	false
AllowNetworking	all
AllowScriptAccess	
BackgroundColor	-1
Base	
BGColor	
DeviceFont	False
EmbedMovie	True
FlashVars	
FrameNum	-1
Height	276
left	72
Loop	True
Menu	True
Movie	C:\Documents and Settings\tskinner\Desktop\FlashWkshop\Card-Flash8.swf
MovieData	
Playing	True
Profile	False

NOTE: If you save the PowerPoint first, you can just type the filename with the .swf extension in the Movie box and it will work. If saving to show on a different station, just be sure the presentation and the SWF files are in the same folder and do not add the path. The source file must be available. You cannot run the PowerPoint without the SWF file (the animation will not play).

To make the Flash play automatically when the slide is displayed, set the “Playing” property to “True”; To embed the Flash into PowerPoint, set “Embed Movie” property to “True.”

Finally close the “Properties” box and save your presentation. View the slideshow (F5) and all should work. Sounds should work and buttons will be clickable, just as if it was on a webpage. Pretty nifty!

Animated GIFs in Flash

Flash can be used to create GIF animations and not just SWF embeddable files. GIF animations can be placed directly on a webpage or in a PowerPoint file and will animate when previewed on the website or presentation. Basic animations can be created in Flash and published as GIF files for these purposes.

Reasons not to use SWF:

- slows page load
- Flash plug-in is required to view

Reasons to use SWF:

- if you need something interactive
- if you need audio
- if the animation is complex

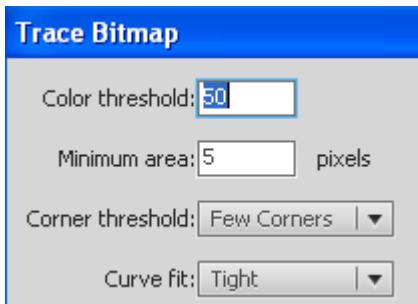
If an animated GIF will do the job, consider publishing to this format.

Your Turn—Animated GIF in Flash

1. This time, we'll create a new Flash file to be used on a PowerPoint that is a simple animation. We will then export this animation in animated GIF format. So, start a **new** Flash file (AS3 is fine). **Save** as question.
2. In the **Properties** panel, set the **frames per second** to **24**, **size** to 200px by 200px and a **background of black**.

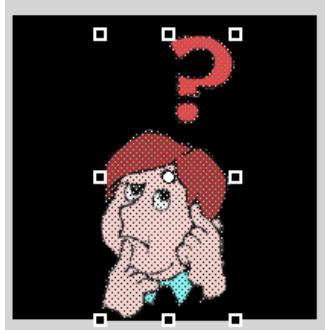


3. Next, to make this go faster, let's import a graphic rather than draw our own. **Import** the file (**File>Import>Import to Library**) called boy_confused.gif to the **Library**. Press F11 if your Library isn't visible.
4. To make this editable, pull the clipart over to the **Stage** and **Trace Bitmap** (**Modify>Bitmap>Trace Bitmap**) with the following settings:



Then, remove the white background (click with black arrow and delete).

5. Select all (**Control+A**) and press **Q** to activate the **Transform** controls. Size and position as follows:



6. Now, select **ONLY** the red question mark (just draw around it) and **convert** that to a **movie clip symbol** (**F8**) called question. Double click it to go into symbol editing mode.
7. Insert a **keyframe** (**F6**) at **frame 3** and rotate a little to the left; insert a **keyframe** at **frame 5** and rotate back to the middle; insert a **keyframe** at **frame 7** and rotate to the right.

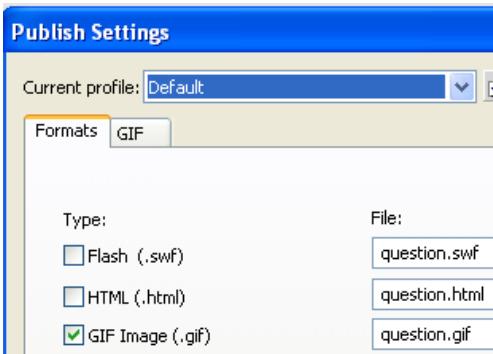


8. Then, return to the Scene.
9. **Zoom** up to **400%** and we're going to just make him blink on the main timeline. Simply insert a **keyframe** at **30** (**F6**).

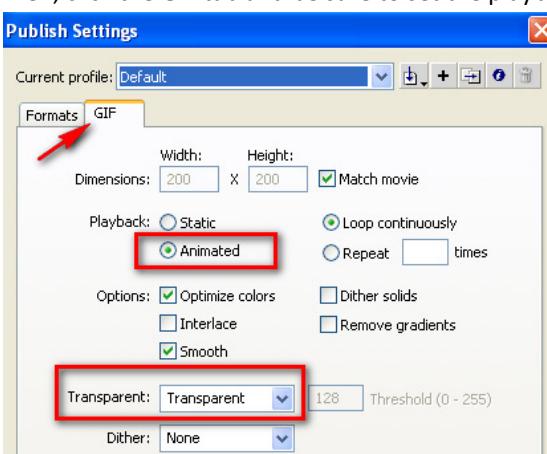
10. Now, use the **eyedropper** to sample his flesh color and use a **paintbrush** to paint away as shown:



11. If you look at it now, it looks strange because the blink is too fast. So, to make the eye stay closed longer, just insert a frame (F5) at frame 34 or so and the animation will be smoother.
 12. Save! **Control+Enter** to test the movie!
 13. Since this is really not a “movie” so much as it is an animation, we need to prepare it to be used on a presentation or website. Click on **File>Publish Settings**:



14. Then, click the **GIF** tab and be sure to set the playback to be **Animated** and the Transparency to **Transparent**.



15. Click **PUBLISH** and it will save a copy of the animated gif (question.gif) to the project folder.
 16. Now, it is ready to insert onto a webpage or a PowerPoint. From **PowerPoint**, just simply insert as you would any other graphic file—**Insert tab>Picture** and browse for the file. You will notice the background is transparent (we just used black to be sure we didn't have any white pieces left over from the beginning background...it's a good trick) and when you play the slideshow, it animates.

Masks

A more “advanced” Flash technique is using masking. Masking means that you “hide” part of the Stage or part of an object on the stage, much like you “hide” part of your face when wearing a Halloween mask. An example of a web banner that uses masking is located here-- http://www.simplygraphix.com/portfolio_webbanners.html (check out the first USA Green Card example)

Masks are really quite easy to create. You simply put the “mask area” (in the form of a shape or you can paint brush the area) on a higher layer than the object you wish to mask, right click that layer, and set it to Mask. That’s really all there is to it!

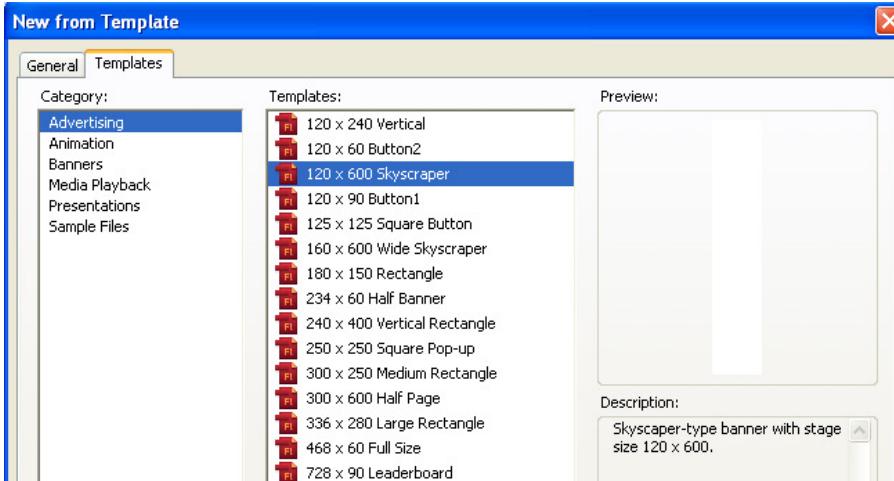
Your Turn—Web Banner with Flash

1. We’re going to create a quick banner for a website. First, let’s create a tall banner. Standard web banner sizes are:
(from <http://www.designerstoolbox.com/designresources/banners/>)

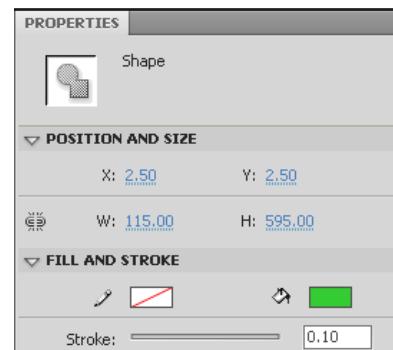
Standard Web Banners

Size	Style	Gif Weight	Flash Weight
468 x 60	Full Banner	20 KB	30 KB
728 x 90	Leaderboard	25 KB	35 KB
336 x 280	Square	25 KB	35 KB
300 x 250	Square	25 KB	35 KB
250 x 250	Square	25 KB	35 KB
160 x 600	Skyscraper	20 KB	30 KB
120 x 600	Skyscraper	20 KB	30 KB

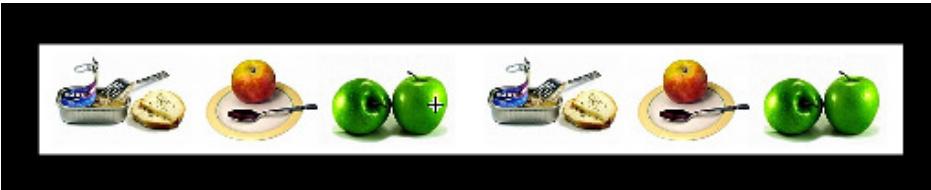
So, create a new Flash file (AS3) with a **width of 120** and **height of 600** (a “skyscraper” format). Or, you can create a new file from a Flash template and select that from the list:



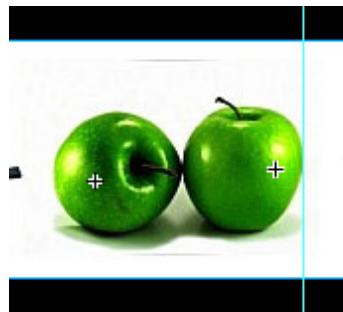
2. Set the background of the **Stage** to black (**Properties** panel).
3. Then, draw a green **rectangle** (**NO STROKE**). Double click the **rectangle** and set the **size** to 115 W by 595 H (**Properties** panel). Align to the Stage with the **Align** panel (**Window> Align**).
4. Dress up the rectangle however you’d like (shapes, lines, etc.) and add your name or a company name.



- The images we are using are from Carlos Porto's portfolio and free to use with acknowledgment, so here's his address:
http://www.freedishdigitalphotos.net/images/view_photog.php?photogid=345
 To save time, I have already put a few of these photos together in Photoshop. The file is called food.jpg and should be imported to the **Library** in Flash (**File>Import>Import to Library**).
- Now, we are going to create scrolling food. However, to add a tween to the food, the food group has to be a symbol. So, create a new movie clip symbol called doublefood (**Insert>New Symbol**) and drag the food.jpg file over into the symbol. Then, drag a second copy and put it right next to it so that there is no seam:



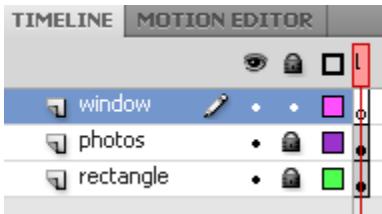
- Return to the **Stage**.
- Now, we have to create the scrolling food using that doublefood symbol. So, create another new movie clip symbol (**Insert>New Symbol**) and name it scrollfood. Drag the doublefood symbol onto the Stage of this symbol.
- Now, we have to line up the apples so that they are in the same spot (the first set and the last set) when they tween. Otherwise, it will jump a little at the end of the animation. So, turn on the **Ruler** (**View>Rulers**) and then drag a guide out from the left vertical ruler and line it up with the far right edge of the first set of apples.



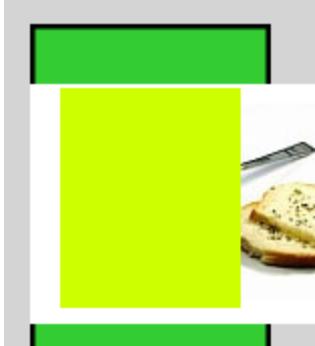
- Now, insert a **keyframe** at 50 (**F6**). Hold **Shift** and **drag** the banner left until the second set of apples lines up on that **guide**. Then, drag the **playhead** just to make sure it doesn't jump.
- Now, insert a **Classic Tween** (Motion Tween in older versions) between those two frames (right click between them on the Timeline).
- Finally, so that one frame of green apples doesn't repeat when it replays, just insert a **keyframe** (**F6**) in **frame 49**; then delete (right click, Remove Frame) **frame 50**.
- Return to the **Scene**. Make a new layer called photos. Drag **scrollfood** out and position as shown at right→
- Test Scene**. It should scroll nicely. However, we want a "window" (or mask, as they are called) to show the pictures through so they don't take over the whole top of the banner.



15. Create a new layer on top and call it window. Lock the rest of the layers.

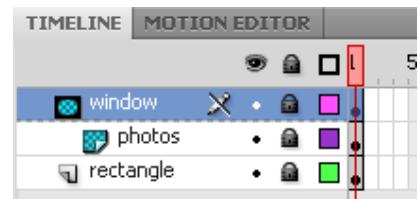


16. Now, draw a **rectangle** (color does not matter) over the area where you want the window:



17. The last step is super easy. To activate the “window” (mask), simply **right click** the window layer and select **Mask** from the menu. That’s really it.

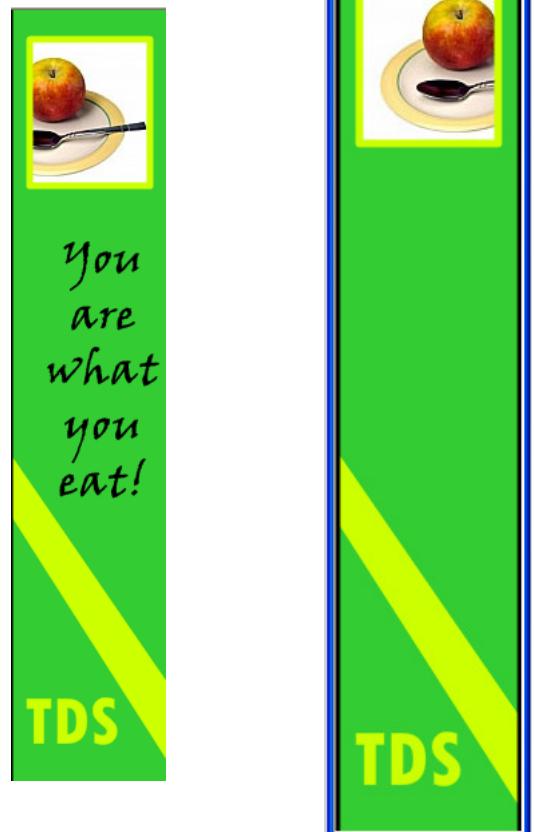
Notice the appearance of the mask layer. And, it locked the layers. You can still edit them if you unlock, but for the mask to work, you do have to lock them back before testing the scene or publishing the animation.



18. **Test Scene.** It should work well now. If you wanted to go a step further, you could add a text layer and animate some text, add a new layer and put a border around the masked area, or whatever you desire. But, that’s the basic setup for creating a scrolling image and a mask in Flash.

19. To use on a website, either publish as an **animated GIF** or as a **SWF** and follow the instructions in your program for inserting the appropriate file type.

20. **Save** and you’re done!



NOTES/ACKNOWLEDGEMENTS/RESOURCES USED

Adobe Flash for Beginners—Graphics & Animation

<http://www.bill-morrison.com/class/adobe-flash/1-graphics-animation/index.html>

How to draw a cartoon bee

<http://www.how-to-draw-funny-cartoons.com/cartoon-bee.html>

Beehive

<http://www.daniellesplace.com/Images4/beehive72.gif>

Buzzing Sound

http://resources.bravenet.com/audio_clips/sound_effects/animal - bee_or_fly_buzz/listen/

Fly Swatter

http://www1.free-clipart.net/gallery2/clipart/Household/Miscellaneous/Fly_Swatter.jpg

Austin Powers clip “Oh behave”

http://resources.bravenet.com/audio_clips/movies_tv/austin_powers - oh_behave_yeah_yeah_baby/listen/

Oh Groovy Baby clip

<http://www.moviesounds.com/austin.html>

Flower Cliparts

<http://www.clipartspace.com/flower-clipart.htm>

Bonk Sound

<http://www.grsites.com/archive/sounds/view/1618/>

Confused Boy

http://www.hasslefreeclipart.com/clipart_school/boy_confused.html

ActionScript Notes

--Link to URLs

AS2

```
monkey_btn.onRelease = function() {
    getURL("http://www.flashtthusiast.com");
};
```

AS3

```
monkey_btn.addEventListener(MouseEvent.MOUSE_DOWN, mouseDownHandler);
function mouseDownHandler(event:MouseEvent):void {
    navigateToURL(new URLRequest("http://www.flashtthusiast.com/"));
}
```

--Link to Scenes/Frames

AS2

```
mbutton1.onRelease = function() {
    gotoAndStop(2, "monkeyScene");
};
```

AS3

```
stop();

mbutton1.addEventListener(MouseEvent.MOUSE_DOWN, mouseHandler1);

function mouseHandler1(event:MouseEvent):void {
    gotoAndStop(2, "monkeyScene");
}
```

--Sound (play throughout, start automatically)

AS3

```
var music:Sound = new Sound(new URLRequest("song.mp3"));

music.play();
```