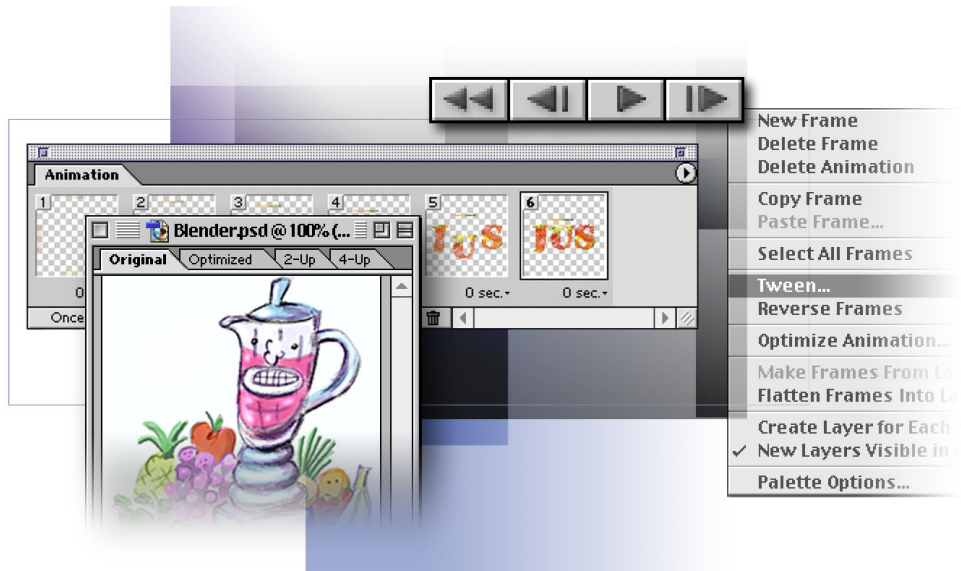


16 Creating Animated Images for the Web



To add dynamic content to your Web page, use Adobe ImageReady to create animated GIF images from a single image. Compact in file size, animated GIFs display and play in most Web browsers. ImageReady provides an easy and convenient way to create imaginative animations.

In this lesson, you'll learn how to do the following:

- Open a multilayered image to use as the basis for the animation.
- Use the Layers palette and Animation palette together to create animation sequences.
- Make changes to single frames, multiple frames, and an entire animation.
- Use the Tween command to create smooth transitions between different settings for layer opacity and position.
- Preview animations in Adobe ImageReady and in a Web browser.
- Optimize the animation using the Optimize palette.

This lesson will take about 60 minutes to complete. The lesson must be done in Adobe ImageReady, not Adobe Photoshop.

If needed, remove the previous lesson folder from your hard drive, and copy the Lesson16 folder onto it. As you work on this lesson, you'll overwrite the start files. If you need to restore the start files, copy them from the *Adobe Photoshop 7.0 Classroom in a Book CD*.

Note: Windows users need to unlock the lesson files before using them. For more information, see “Copying the Classroom in a Book files” on page 4.

Creating animations in Adobe ImageReady

In Adobe ImageReady, you create animation from a single image using animated GIF files. An *animated GIF* is a sequence of images, or frames. Each frame varies slightly from the preceding frame, creating the illusion of movement when the frames are viewed in quick succession. You can create animation in several ways:

- By using the Duplicate Current Frame button in the Animation palette to create animation frames, and then using the Layers palette to define the image state associated with each frame.
- By using the Tween feature to quickly create new frames that warp text or vary a layer's opacity, position, or effects, to create the illusion of an element in a frame moving or fading in and out.
- By opening a multilayer Adobe Photoshop or Adobe Illustrator file for an animation, with each layer becoming a frame.

When creating an animation sequence, it's best to remain in Original image view—this saves ImageReady from having to reoptimize the image as you edit the frame contents. Animation files are output as either GIF files or QuickTime movies. You cannot create a JPEG or PNG animation.

For the Web: About working with layers in animations

Working with layers is an essential part of creating animations in ImageReady. Placing each element of an animation on its own layer enables you to change the position and appearance of the element across a series of frames.

Frame-specific changes Some changes you make to layers affect only the active animation frame. By default, changes you make to layers using Layer palette commands and options—including layer opacity, blending mode, visibility, position, and style—are frame-specific. However, you can apply layer changes to all frames in an animation by using the unity buttons in the Layers palette.

Global changes Some changes affect every frame in which the layers are included. Changes you make to layer pixel values, using painting and editing tools, color- and tone-adjustment commands, filters, type, and other image-editing commands, are global.

Each new frame starts out as a duplicate of the preceding frame—you edit the frame by adjusting its layers. You can apply layer changes to a single frame, a group of frames, or the entire animation.

—From Adobe Photoshop 7.0 online Help

Getting started

Before beginning this lesson, restore the default application settings for Adobe Photoshop and Adobe ImageReady. See “Restoring default preferences” on page 5.

In this lesson, you'll work with a set of images designed to appear on the Web page of a fresh-juice company. If you have a browser application installed on your computer, you can preview the finished animations.

Then, before you start working on the file, you'll define a new workspace especially for animation work.

- 1 Start your browser application.
- 2 From your browser, choose File > Open, and open the file Jus.html from the Lessons/Lesson16/Jus folder.
- 3 When you have finished viewing the file, quit the browser and start ImageReady.

- 4 In the ImageReady work area, close both the Color palette group and the Rollovers palette group.
- 5 Resize the Layers palette so that it is large enough to show at least five layers, and move it below the Optimize palette, leaving a gap between the two palettes of a half inch or so. (You'll need the space later, when you expand the Optimize palette.)
- 6 Choose Window > Workspace > Save Workspace, and then type **Animation_16** in the Save Workspace dialog box, and click OK.

Now you can quickly restore these palette sizes and positions by choosing Window > Workspace > Animation_16 at any time.

Animating by hiding and showing layers

In the Layers palette, any visible layer appears with an eye icon (👁) beside it.

Perhaps the simplest way to create a two-step animation is by toggling the visibility of two layers. For example, you can make an animated character alternate between different expressions or make an object move back and forth in a simple pattern.

To define an animation, you use the Layers palette in conjunction with the Animation palette. On the Animation palette, you add new frames, update existing frames, change the order of frames, and preview the animation.

Creating a simple animation

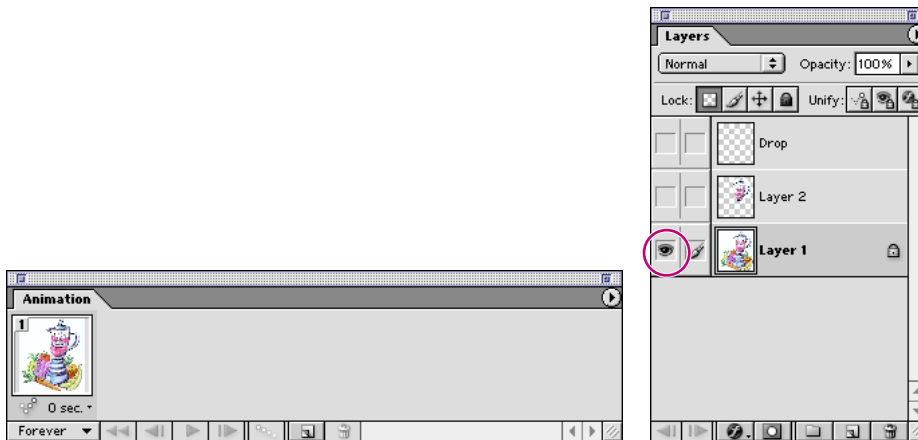
In this part of the lesson, you'll animate the shaking of a cartoon juice blender. The blender image is built in several layers. You'll create animation frames that alternate between hiding and showing two of those layers, representing different positions of the blender pitcher.



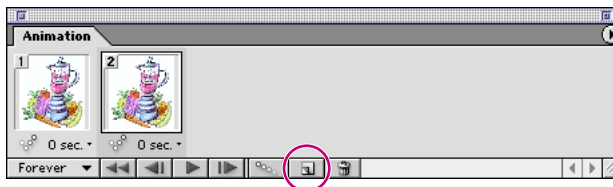
1 Choose File > Open, and open the file Blender.psd from the Lessons/Lesson16 folder on your hard drive.

In the Animation palette, a single default frame appears, showing the current state of the image. The frame is selected (outlined with a border), indicating that you can change its content by editing the image.

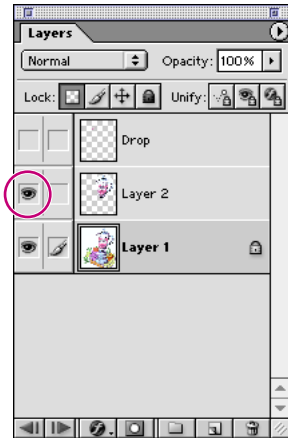
In the Layers palette, an eye icon (👁) appears next to Layer 1, indicating that this is the only visible layer in the image.



2 In the Animation palette, click the Duplicate Current Frame button (📄) to create frame 2.



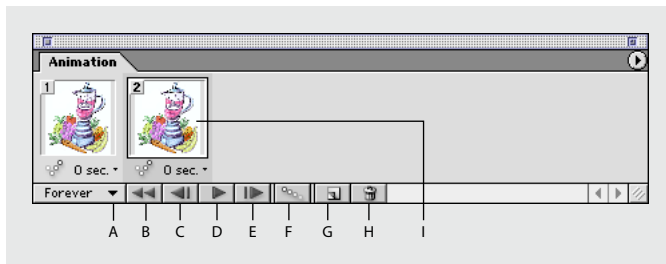
3 In the Layers palette, click the box for the Layer 2 eye icon to display this layer in the image. (Because Layer 2 sits above Layer 1 in the stacking order, it completely blocks the view of Layer 1.)



4 In the Animation palette, make sure that Forever is selected in the Looping pop-up menu in the lower left corner of the palette.

Navigating animation frames and previewing the animation

You can use a number of techniques to preview and scroll through your animation frames. Understanding the controls available on the Animation and Layers palettes is essential to mastery of the animation process.



A. Looping pop-up menu B. First Frame button C. Backward button
D. Play button E. Forward button F. Tween button G. Duplicate
Current Frame button H. Trash I. Selected frame

- 1 In the Animation palette, click the first thumbnail to select that frame. In the image window and the Layers palette, only Layer 1 is visible.
- 2 Click the second thumbnail. Now Layer 2 is also visible.
- 3 In the Animation palette, click the Backward button (◀) to move to the other frame. (Try clicking the button repeatedly in quick succession, and watch the manual playback of the animation in the image window.)
- 4 In the Layers palette, click the Backward or Forward button in the lower left corner of the palette, and notice results similar to the previous step.



A. Layers palette Backward button
B. Layers palette Forward button

- 5 Click the Play button (▶) in the Animation palette to preview the animation. The Play button becomes the Stop button (■), which you can click to stop the playback. Now you'll preview the animation in a Web browser.

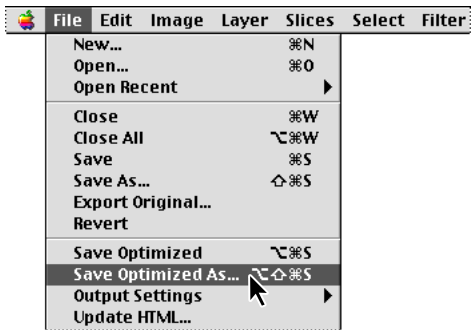
- 6 Choose File > Preview In > and choose a browser application on the Preview In submenu.

You can also do this step by pressing Ctrl+Alt+P (Windows) or Command+Option+P (Mac OS) to launch a browser preview quickly, or clicking the browser button on the toolbox.

Note: To use the Preview In command, you must have a browser application installed on your system. For more information, see “Previewing an image in a browser” in Photoshop 7.0 online Help (in ImageReady, choose Help > ImageReady Help).

- 7 When you have finished previewing the animation, quit the browser window, and return to Adobe ImageReady.

8 Choose File > Save Optimized As, name the image **Blender.gif**, and click Save.

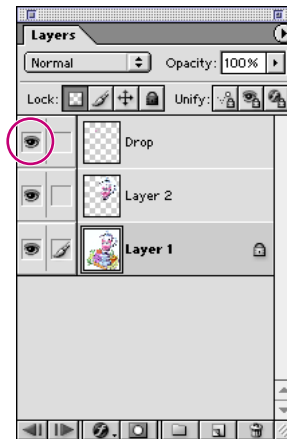


Preparing layer copies for an animation

Now you'll begin to animate a different element in the blender image, adding to the existing animation. In this procedure, you'll use the same basic technique—hiding and showing layers in different frames—to create your animation, but this time, you'll also create the different layers by copying and transforming a single layer.

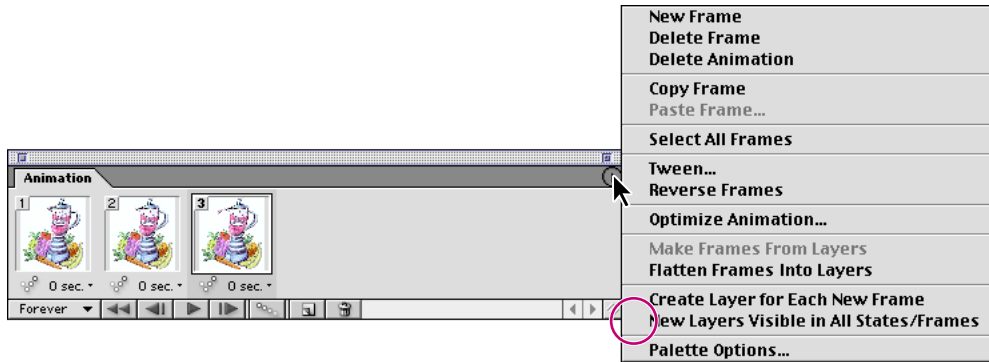
Before adding layers to an image that already contains an animation, it's a good idea to create a new frame. This step helps protect your existing frames from unwanted changes.

- 1 In the Animation palette, select frame 2 and click the Duplicate Current Frame button (⌘) to create a new frame (frame 3) that is identical to frame 2. Leave frame 3 selected.
- 2 In the Layers palette, make the Drop layer visible.



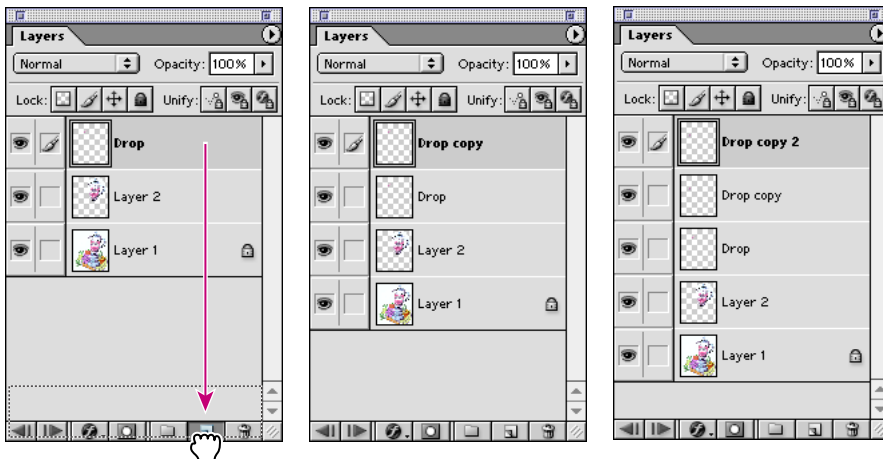
In the image window and in the frame 3 thumbnail, notice the juice drop that appears at the top left edge of the blender.

3 In the Animation palette menu, click the New Layers Visible in All States/Frames command to deselect it (remove the checkmark), if necessary.



4 In the Layers palette, select the Drop layer and drag it to the New Layer button (📄) to duplicate the layer. Repeat this step so that you now have three drop layers: Drop, Drop copy, and Drop copy 2. (The order of these three layers in the Layers palette is unimportant.)

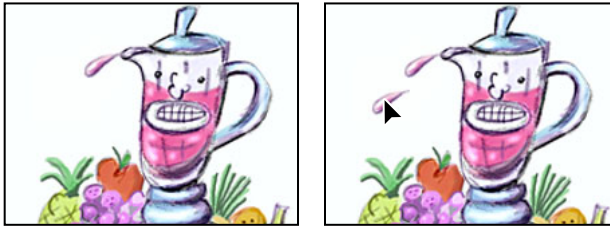
Note: The duplicate layers would be visible in all three frames in the Animation palette if New Layers Visible in All States/Frames was not deselected in the Animation palette menu.



Moving and transforming layers for an animation

Now that you've prepared the layer duplicates in the Blender.psd file, you'll transform the two copies so that the drop appears to fall in a smooth trajectory as it escapes the blender.

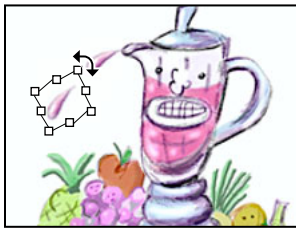
- 1 In the Layers palette, select the Drop copy layer, and then select the move tool (⬇️) in the toolbox.
- 2 Drag the Drop copy layer to the left and down a short distance, as if it were falling in a smooth trajectory from the first position.



- 3 Choose Edit > Free Transform.

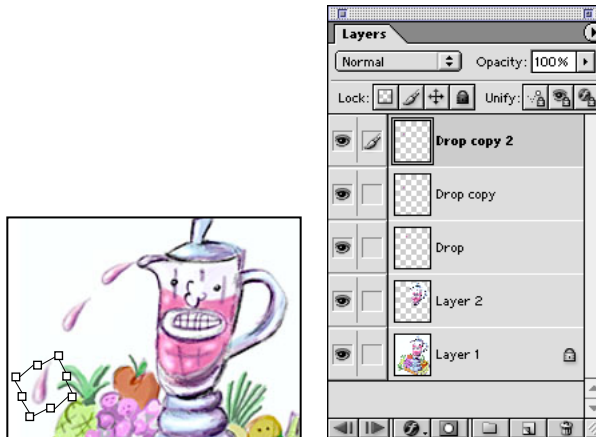
In the image window, the transformation bounding box appears around the Drop copy layer.

- 4 Position the pointer outside the bounding box so that the pointer becomes a curved double arrow (↺), and then drag counterclockwise to rotate the drop about 30° (this does not have to be exact).



- 5 Press Enter (Windows) or Return (Mac OS) to apply the transformation.

6 In the Layers palette, select the Drop copy 2 layer and repeat the rest of steps 2–5, but rotating the drop a little more and moving it more to the lower left, as shown in the following illustration.



7 Choose File > Save to save the image with the layers you’ve just created.

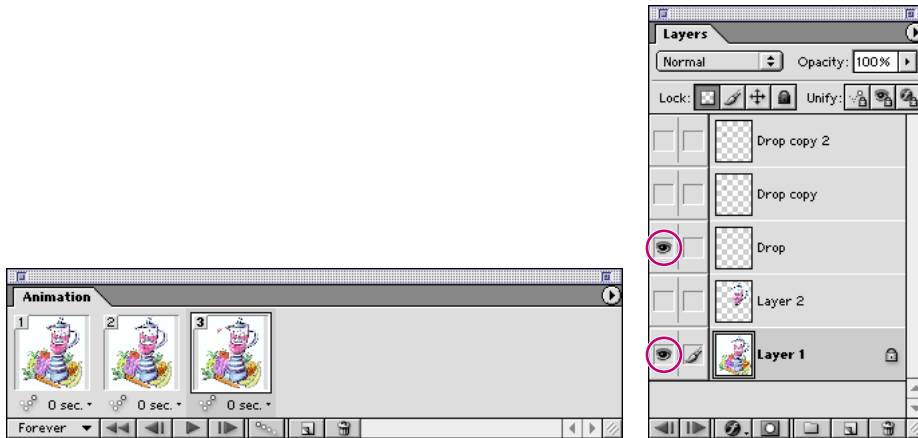
In ImageReady, the Save command saves the layered .psd file, including all of the animation and optimization information.

Creating the simultaneous animations

Now you’ll define the falling-drop animation by successively hiding and showing the layers of the Blender.psd file. You’ll also build in the shaking-blender animation as the drop falls. All of this is done by coordinating settings in the Layers and Animation palettes.

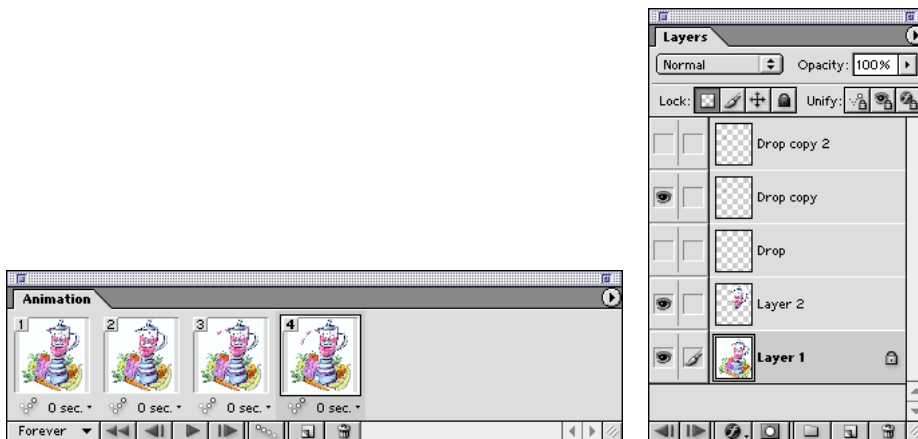
1 In the Animation palette, make sure that frame 3 is selected, or select it now.

- 2 In the Layers palette, select Layer 1, and click the eye icon (👁) boxes as needed to make only the Layer 1 and Drop layers visible; hide the other three layers.



Note: When you hide or show a layer in a frame, the visibility of the layer changes for that frame only.

- 3 In the Animation palette, click the Duplicate Current Frame button (📄) to create frame 4.
- 4 With frame 4 selected in the Animation palette, click eye icon boxes in the Layers palette as needed so that only Drop copy, Layer 2, and Layer 1 are visible. Hide the Drop layer and Drop copy 2 layer.



5 Click the Duplicate Current Frame two more times, and then use the Layers palette eye icons to change the layer visibility as follows:

- For frame 5, make only Drop copy 2 and Layer 1 visible.
- For frame 6, make only Layer 2 and Layer 1 visible.

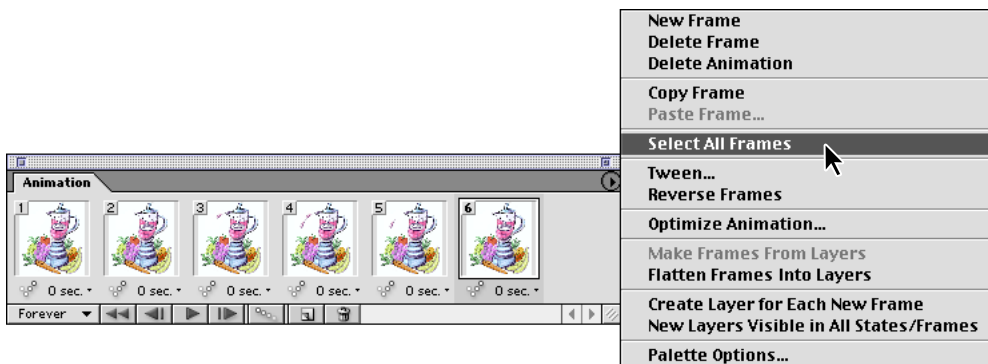
You can now use one of the navigation techniques you learned earlier to step through your animation. As the animation moves from frame to frame, the blender moves back and forth with each step. In each full cycle, the drop flies from the blender and falls in a three-step sequence.

If your results are different than described here, review the visibility settings on the Layers palette for each successive frame and make any necessary corrections.

Setting and previewing the timing sequence

Now you'll set a delay for playing each frame in the animation, and then play it.

- 1 From the Animation palette menu, choose Select All Frames.



- 2 Click the time (0 seconds, which is the default) beneath one of the frames to open the Frame Delay pop-up menu, and choose 0.1 seconds.



The new value appears below each frame thumbnail, indicating that the time delay applies to all the frames in the palette. (You can also vary the time delay for individual frames.)

- 3 Click the Play button (▶) in the Animation palette to view your animation, and then click the Stop button (■) when you're ready to stop the animation.
- 4 Choose File > Preview In, and choose a browser application from the submenu to play the animation with accurate timing. When you finish previewing, return to ImageReady.
- 5 Choose File > Save Optimized As. Make sure that the image is named **Blender.gif**, click Save, and then click Replace to replace the existing file.

The Save Optimized As command saves a file in the GIF, JPEG, or PNG format, for use in you Web pages. GIF is the only format that supports animations.

- 6 Choose File > Close to close your original image without saving changes.

You've finished your work on the blender animation.

Animating with layer opacity and position

You'll use a slightly different method for animation in the next facet of the project. This time, you'll animate a fly-in of a text logo, using a multilayered Photoshop image.

In this part of the lesson, you'll adjust the position and opacity of layers in an image to create the starting and ending frames of an animation sequence.

Opening the image file and starting the animation process

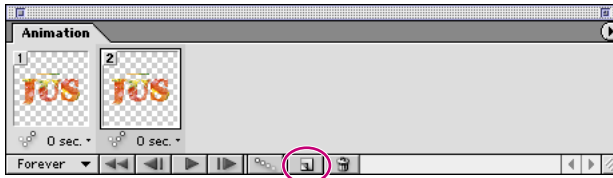
To get started, you'll open the new art file and review its current settings.

- 1 In ImageReady, choose File > Open, and open the file Logo1.psd from the Lessons/Lesson16 folder on your hard drive.

The logo consists of four different components that reside on separate layers. You'll compose animation frames that show the letters of the logo appearing and moving into their final position from different areas. The current image state reflects how you want the logo to appear at the end of the animation.

- 2 Make sure that the Animation and Layers palettes are visible, or choose Window > Workspace > Animation_16 to open them (or choose Window > Layers and Window > Animation).

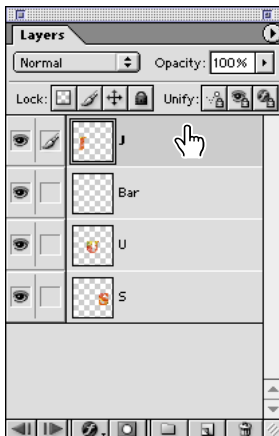
- 3 In the Animation palette, click the Duplicate Current Frame button (📄) to create a new animation frame.



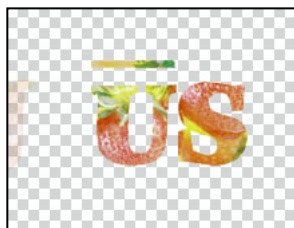
Now that you have two frames, you've paved the way for a new animation. Your next tasks will be to create differences between the layer statuses of the two frames.

Setting layer positions

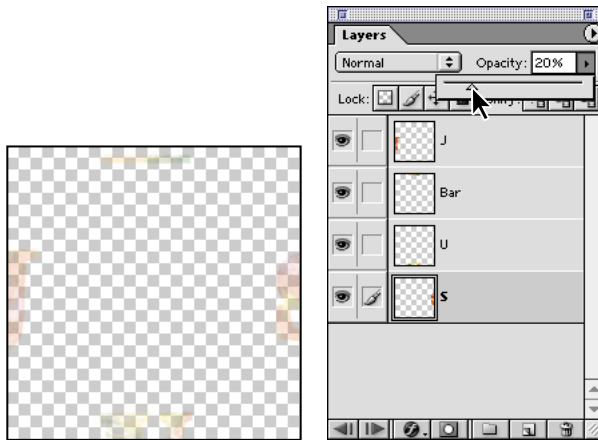
- 1 In the Animation palette, make sure that frame 2 is selected. Then, in the Layers palette, select the J layer.



- 2 Select the move tool (↻), hold down Shift (to constrain the movement), and drag the “J” to the left side of the image window so that only a portion of the “J” is visible.

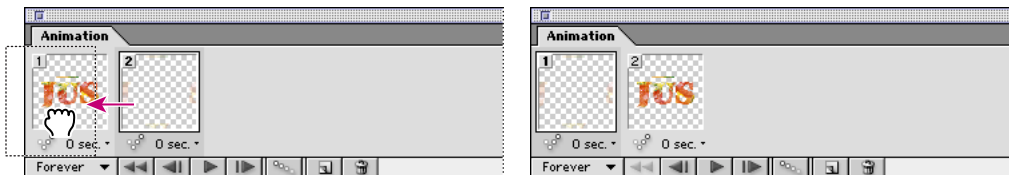


- 3 In the Layers palette, select the S layer and then hold down Shift and drag to a similar position on the right side of image window.
- 4 Using the same technique as above, move the Bar layer to the upper edge of the image window and the U layer to the bottom edge of the image window. (First select the layer, and then drag it with the move tool to its new position.)
- 5 In the Layers palette, select the J layer and drag the Opacity slider to 20%. Repeat this process to reset the opacity of each of the other three layers.



In the Animation palette, notice that frame 2 has updated to reflect the current image state. To make frame 2 the starting state of your animation, you'll switch the order of the two frames.

- 6 In the Animation palette, drag frame 2 to the left, releasing the mouse when the black bar appears to the left of frame 1.



Tweening the position and opacity of layers

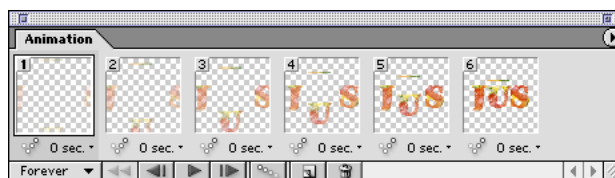
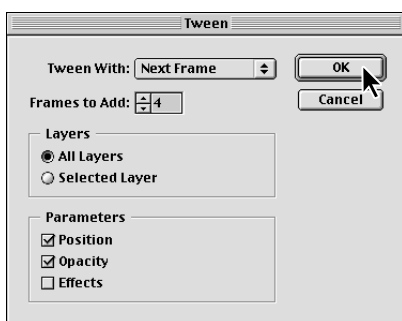
To finish the animation sequence, you'll add frames that represent transitional image states between the two existing frames. When you change the position, opacity, or effects of any layer between two animation frames, you can instruct ImageReady to *tween*, or automatically create intermediate frames.

1 In the Animation palette, make sure that frame 1 is selected; then choose Tween from the palette menu.

2 In the Tween dialog box, set the following options (if they are not already selected):

- On the Tween With pop-up menu, select Next Frame.
- For Frames to Add, enter 4.
- Under Layers, select All Layers.
- Under Parameters, select the Position and Opacity check boxes. (You can also select Effects to vary the settings of layer effects evenly between the beginning and ending frames. You won't choose this option now because you have not applied any layer effects.)
- Click OK to close the dialog box.

ImageReady creates four new transitional frames, based on the opacity and position settings of the layers in the original two frames.



3 On the Looping pop-up menu in the lower left of the Animation palette, choose Once.

In the Animation palette, click the Play button (▶) to preview your animation in ImageReady.

For the Web: Tweening frames

You use the Tween command to automatically add or modify a series of frames between two existing frames—varying the layer attributes (position, opacity, or effect parameters) evenly between the new frames to create the appearance of movement. For example, if you want to fade out a layer, set the opacity of the layer in the starting frame to 100%; then set the opacity of the same layer in the ending frame to 0%. When you tween between the two frames, the opacity of the layer is reduced evenly across the new frames.

The term “tweening” is derived from “in betweening,” the traditional animation term used to describe this process. Tweening significantly reduces the time required to create animation effects such as fading in or fading out, or moving an element across a frame. You can edit tweened frames individually after you create them.

If you select a single frame, you choose whether to tween the frame with the previous frame or the next frame. If you select two contiguous frames, new frames are added between the frames. If you select more than two frames, existing frames between the first and last selected frames are altered by the tweening operation. If you select the first and last frames in an animation, these frames are treated as contiguous, and tweened frames are added after the last frame. (This tweening method is useful when the animation is set to loop multiple times.)

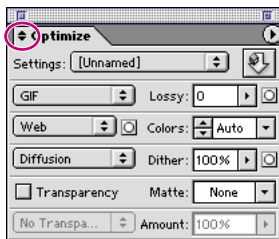
Note: You cannot select discontinuous frames for tweening.

—From Adobe Photoshop 7.0 online Help

Preserving transparency and preparing to optimize

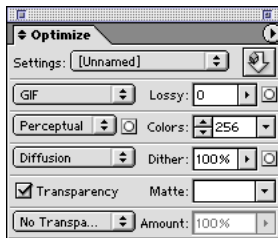
Next, you’ll optimize the image in GIF format with background transparency and preview your animation in a Web browser. Remember that only the GIF format supports animated images.

- 1 Click the double-arrow button on the Optimize palette tab to expand the palette, or choose Show Options on the Optimize palette menu.



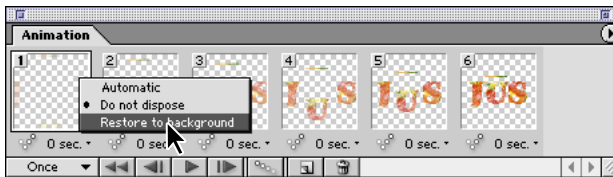
2 Set the following options on the Optimize palette:

- For the file format, choose GIF.
- For the color reduction algorithm, choose Perceptual.
- For Colors, select a number (we used 256).
- Select the Transparency check box (to preserve the transparency of the original image).
- For Matte, select white from the pop-up menu.



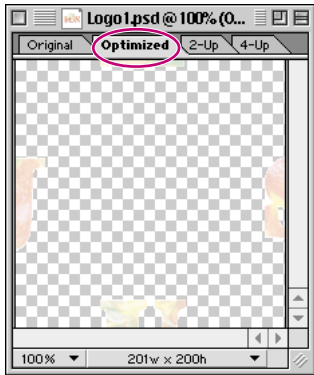
3 On the Animation palette menu, choose Select All Frames.

4 Right-click (Windows) or Control-click (Mac OS) one of the frames in the Animation palette to open the Disposal Method context menu, and choose Restore to Background.



5 On the Animation palette menu, choose Optimize Animation. In the Optimize Animation dialog box, make sure that both the Bounding Box and Redundant Pixel Removal check boxes are selected, and then click OK.

6 In the image window, click the Optimized tab.



ImageReady rebuilds the image according to the options you entered.

7 In the image window, click the 2-Up tab and compare the information for the original and optimized versions of the animated image.

8 Choose File > Save Optimized As, name the image **Logo1.gif**, and click Save.

If you want to preview your animation in the browser, you can do that now by clicking the Preview In Default Browser button on the toolbox. Then close the browser,

9 In ImageReady, choose File > Close to close the original file. Do not save your changes. You have finished your work on the fly-in logo.

For the Web: Setting the frame disposal method

The frame disposal method specifies whether to discard the current frame before displaying the next frame. You select a disposal method when working with animations that include background transparency in order to specify whether the current frame will appear through the transparent areas of the next frame.

The Disposal Method icon indicates whether the frame is set to Do Not Dispose or Restore to Background. (No icon appears when the disposal method is set to Automatic.)

- *Choose the Automatic option to determine a disposal method for the current frame automatically, discarding the current frame if the next frame contains layer transparency. For most animations, the Automatic option yields the desired results and is, therefore, the default option.*

Note: *Choose the Automatic disposal option when using the Redundant Pixel Removal optimization option, to enable ImageReady to preserve frames that include transparency.*

- *Choose the Do Not Dispose option to preserve the current frame as the next frame is added to the display. The current frame (and preceding frames) may show through transparent areas of the next frame. To accurately preview an animation using the Do Not Dispose option, preview the animation in a browser.*
- *Choose the Restore to Background option to discard the current frame from the display before the next frame is displayed. Only a single frame is displayed at any time (and the current frame will not appear through the transparent areas of the next frame).*

—From Adobe Photoshop 7.0 online Help

The disposal options—Restore to Background (⌫) and Automatic—clear the selected frame before the next frame is played, eliminating the danger of displaying remnant pixels from the previous frame. The Do Not Dispose (⌫) option retains the frames. The Automatic option is suitable for most animations. This option selects a disposal method based on the presence or absence of transparency in the next frame and discards the selected frame if the next frame contains layer transparency.

In addition to the optimization tasks applied to standard GIF files, several other tasks are performed for animated GIF files. If you optimize the animated GIF using an adaptive, perceptual, or selective palette, ImageReady generates a palette for the file based on all of the frames in the animation. A special dithering technique is applied to ensure that dither patterns are consistent across all frames, to prevent flickering during playback. Also, frames are optimized so that only areas that change from frame to frame are included, greatly reducing the file size of the animated GIF. As a result, ImageReady requires more time to optimize an animated GIF than to optimize a standard GIF.

The Bounding Box option directs ImageReady to crop each frame to preserve only the area that has changed from the preceding frame. Animation files created using this option are smaller but are incompatible with GIF editors, which do not support the option.

The Optimize by Redundant Pixel Removal option makes all pixels in a frame that are unchanged from the preceding frame transparent. When you choose the Redundant Pixel Removal option, the Disposal Method must be set to Automatic, as in step 5.

 For more information, see “Optimizing Images for the Web” in Photoshop 7.0 online Help.

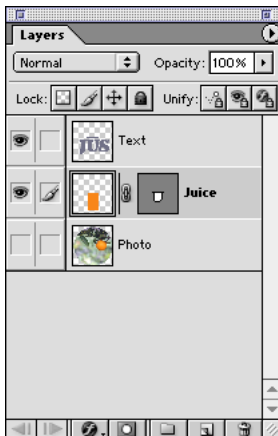
Using advanced layer features to create animations

In this part of the lesson, you’ll learn some animation tricks that can be created through the use of advanced layer features, such as layer masks, clipping paths, and clipping groups.

Using layer masks to create animations

First, you’ll use a clipping path to create the illusion of juice filling slowly to the top of the “U” in the logo text.

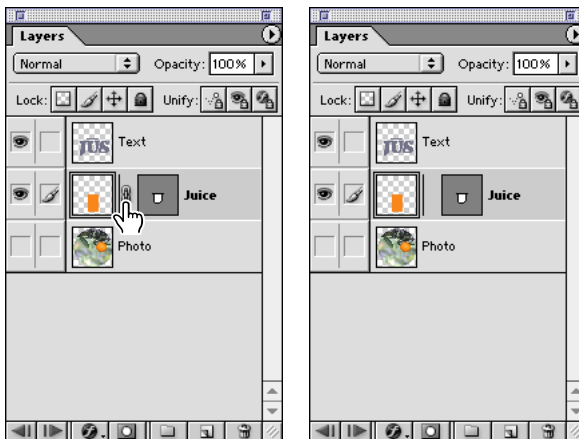
- 1 Choose File > Open, and open the file Logo2.psd from the Lessons/Lesson16 folder.
- 2 In the Layers palette, hide the Photo layer, and leave the Text layer and the Juice layer visible.



The Juice layer contains a layer mask, as indicated by the grayscale thumbnail that appears to the right of the layer thumbnail in the palette. The layer mask is U-shaped, restricting the orange juice to appearing only in the middle of the “U” in the logo text.

The orange juice currently fills to the brim of the “U.” You’ll move the Juice layer to define another frame that shows the “U” empty of juice.

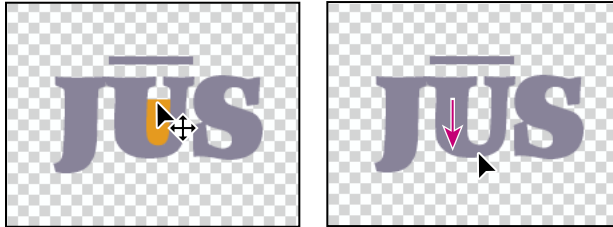
- 3 In the Animation palette, click the Duplicate Current Frame button (⌘) to create a second frame.
- 4 In the Layers palette, click the link icon (⌋) between the layer and layer mask thumbnails to turn it off.



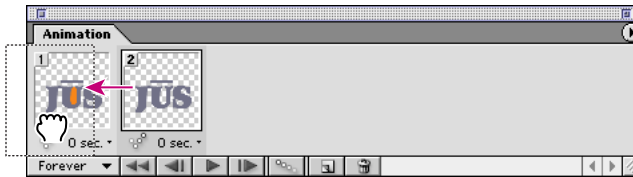
Turning off the link icon makes it possible to move the layer independently of its layer mask.

- 5 Select the move tool (⌘).
- 6 In the Layers palette, click the layer thumbnail (on the left) for the juice layer to select it.

7 In the image, position the move tool over the orange color, and drag down to reposition the layer below the curve of the “U” so that the orange color is completely hidden.



8 In the Animation palette, drag to reverse the order of frames 1 and 2.

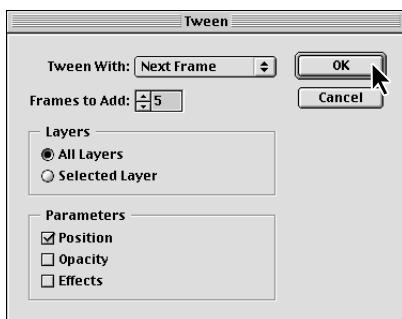


Because you have defined the two frames by repositioning a single layer, you can generate intermediate frames automatically using the Tween command.

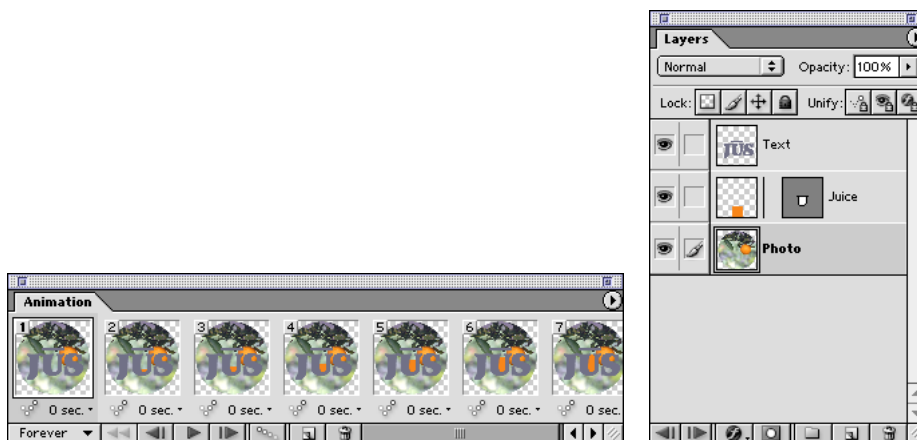
9 Choose Tween from the Animation palette menu, and select the following options in the Tween dialog box:

- For Tween With, select Next Frame.
- For Frames to Add, enter 5.
- Under Layers, select All Layers.
- Under Parameters, select the Position check box, and then deselect the other two check boxes (Opacity and Effects).

- Click OK to close the dialog box.



10 In the Animation palette, select frame 1; in the Layers palette, select the Photo layer and show it.



11 Click the Play button (▶) to play the animation. Click the Stop button (■) to stop the animation.

You can also choose File > Preview In, and choose a browser to play the animation, or select Preview In Default Browser in the toolbox. When you finish, return to ImageReady.

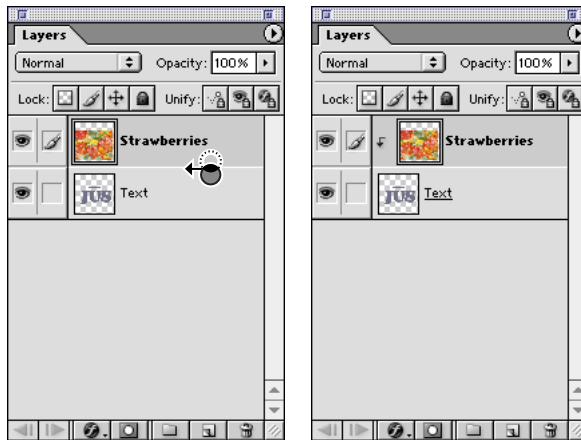
12 Choose File > Save Optimized As, name the file **Logo2.gif**, and click Save.

You are finished with your work on Logo2, so you can choose File > Close to close the original file without saving changes.

Using vector masks to create animations

Now you'll create the effect of strawberries shaking inside the logo text.

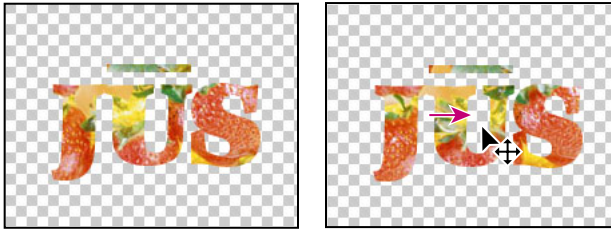
- 1 Choose File > Open, and open the file Logo3.psd from the Lessons/Lesson16 folder.
- 2 In the Layers palette, make sure that both the Strawberries and Text layers are visible. To make the strawberries appear only through the shape of the logo text, you'll create a vector mask.
- 3 In the Layers palette, select the Strawberries layer. Hold down Alt (Windows) or Option (Mac OS), position the pointer over the solid line dividing two layers in the Layers palette until the pointer changes to two overlapping circles (⦿), and click the dividing line between the layers. Or, you can do the same thing by choosing Layer > Group with Previous.



Notice that the strawberries now appear masked by the logo text. The thumbnail for the Strawberries layer is indented with a downward-pointing arrow (⇩), indicating that the layer is grouped with the layer that precedes it.

- 4 In the Animation palette, click the Duplicate Current Frame button. For the second animation frame, you'll reposition the Strawberries layer.
- 5 In the Layers palette, make sure that the Strawberries layer is selected. Then in the toolbox, select the move tool (⇧+V).

6 In the image window, drag the Strawberries layer slightly to the right, or use the arrow keys to move the layer.



7 Click the Play button (▶) to play the animation. The strawberries move from side to side inside the logo. Click the Stop button (■) to stop the animation.

8 Choose File > Save Optimized As, name the file **Logo3.gif**, and click Save. ImageReady saves the animation as a GIF file using the current settings in the Optimize palette.

You can also preview the animation in the browser, using the methods you've already learned in this lesson. When you finish, return to ImageReady.

9 Choose File > Close to close the original file without saving changes.

You are now finished with your work on Lesson 16.

On your own: Creating the remaining animations

You've already learned all the essentials you need to know for creating the other parts of the JUS home-page animations.

Use the six-layered Fruit.psd file in your Lessons/Lesson16 folder to create a montage sequence in which six different images of fruit appear and replace each other.

- The simplest way to create the frames you need is to use the Animation palette menu and choose Make Frames From Layers. This creates your six basic frames with the eye icons for each layer set just the way you want them to be.
- You can smooth out the transitions between frames by changing the Frame Time Delay value in the pop-up menu below the frames.
- You can smooth the transitions out further by adding duplicate frames between the existing frames, reducing the opacity, and adding Tween frames.

- You can create another transformation animation by duplicating one of the images repeatedly and then using the Edit > Transform > Numeric command to change the scale of each duplicate layer by a specific amount, such as multiples of 20%.

Use the Logo4.psd file to practice creating a transition between image states. In this file, you'll make the photograph of the orange branch (the Photo layer) dissolve into the painting of the same branch (the Illustration layer).

- Click the appropriate boxes in the Layers palette to define a starting state in which the Photo and the (blocked) Illustration layers are visible.
- Create a duplicate frame and hide the Photo layer by removing its eye icon in the Layers palette.
- Use the Tween command on the Animation palette menu to create a 4-frame transition for All Layers between the selected frame and the Previous Frame.
- Use the Looping pop-up in the Animation palette to change the looping from Forever to Once.
- Use the File > Save Optimized As command to save the image in GIF format.

Review questions

- 1 Describe a simple way to create animation.
- 2 In what instances can you tween animation frames? When can't you tween frames?
- 3 How do you optimize an animation?
- 4 What does optimizing an animation accomplish?
- 5 What is frame disposal? Which frame-disposal method should you generally use?
- 6 How do you edit an existing animation frame?
- 7 What file formats can you use for animations?

Review answers

- 1 A simple way to create animation is to start with a layered Photoshop file. Use the Duplicate Current Frame button in the Animation palette to create a new frame, and then use the Layers palette to alter the position, opacity, or effects of one of the selected frames. Then, create intermediate frames between the selection and the new frame either manually, by using the Duplicate Current Frame button or automatically, by using the Tween command.
- 2 You can instruct Adobe ImageReady to tween intermediate frames between any two frames, to change layer opacity or position between two frames, or to add new layers to a sequence of frames. You cannot tween discontinuous frames.
- 3 Click the Show Options button in the Optimize palette, and then choose File > Save Optimized to optimize animations. Choose Optimize Animation from the Animation palette menu to perform optimization tasks specific to animation files, including removing redundant pixels and cropping frames according to the bounding box.
- 4 In addition to the optimization tasks applied to standard GIF files, ImageReady generates an adaptive, perceptual, or selective palette for the file based on all frames in the animation if you selected one of those palettes. ImageReady applies a special dithering technique to ensure that dither patterns are consistent across all frames, to prevent flickering during playback. The application also optimizes frames so that only areas that change from frame to frame are included, greatly reducing the file size of the animated GIF.

- 5 A frame-disposal method specifies whether to discard the selected frame before displaying the next frame when an animation includes background transparency. This option determines whether the selected frame will appear through the transparent areas of the next frame. Generally, the Automatic option is suitable for most animations. This option selects a disposal method based on the presence or absence of transparency in the next frame, and discards the selected frame if the next frame contains layer transparency.
- 6 To edit an existing animation frame, you first select the frame, either by clicking the frame thumbnail in the Animation palette or by navigating to the desired frame using the First Frame, Backward, or Forward buttons in the Animation palette or Layers palette. Then edit the layers in the image to update the contents of the selected frame.
- 7 Files for animations must be saved in GIF format or as a QuickTime movie. You cannot create animations as JPEG or PNG files.