How to create an animated face

This activity walks you step by step through the process of creating a simple animation by using Adobe Flash CS3. You use drawing tools and implement motion and shape tweens. After you test your movie, you publish it for playback by others, either through a browser or directly with Flash Player.

Draw facial features

Draw the right eye

1. Start Flash and open a blank new document.

2. The new document contains one layer and one empty keyframe.

3. Select the Oval tool and draw a small circle to represent the right eye on a face (**Figure 1**).

4. Select the Selection tool and double-click the circle's center to select it. You should see both its outline (stroke) and center (fill) selected.

5. To change the outline color of the eye, click the Stroke Color box in the Property inspector and select a new color (**Figure 2**). To change the fill color, use the Fill Color box.

6. On the Timeline, double-click the layer name, Layer 1 (**Figure 3**).

    This selects the layer name so you can rename it.

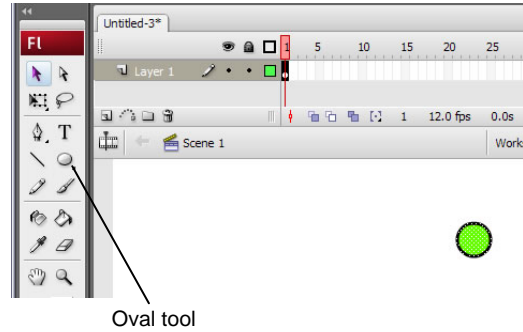7. Rename the layer **Right Eye** and press Enter (Windows) or Return (Mac OS) (**Figure 4**).

Oval tool

Figure 1 Right eye drawn with Oval tool

Stroke color   Fill color

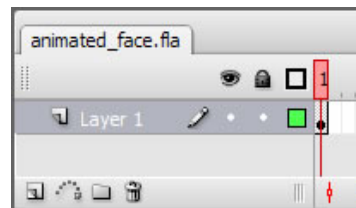**Figure 2** Image Property inspector

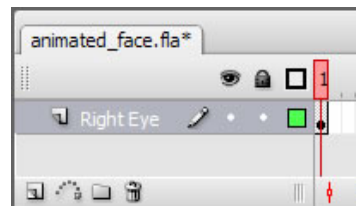**Figure 3** Layer name

Figure 4 New layer name

Save the eye graphic as a symbol in the library

Instead of creating two eyes separately, convert the right eye from a shape to a graphic symbol. This adds the eye to the library so you can use it over and over. This will also reduce the size of your finished movie.

8. On the Right Eye layer, click frame 1 to select it (**Figure 5**).

    This automatically selects the contents of frame 1.

    Note: If the right eye is not completely selected, double-click the eye on the Stage with the Selection tool to select it.

9. Select Modify > Convert To Symbol.

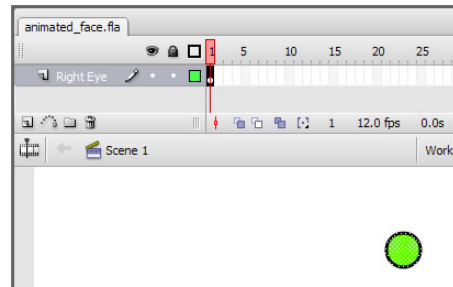   The Convert To Symbol dialog box opens (**Figure 6**).

10. In the dialog box, name the symbol **eye**, select Graphic as the behavior, and click OK.

    The eye on the Stage is now just an instance (copy) of the master eye symbol, which is stored in the library. The eye now has a single blue selection border (**Figure 7**) and can be selected with a single click.
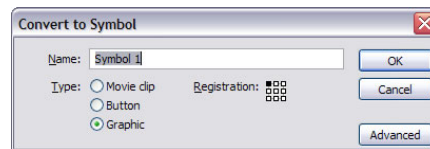
11. Select Window > Library to see that your symbol has been added to the Library panel (**Figure 8**).

    Note: You must select the eye symbol in the library to see the graphic in the preview window.
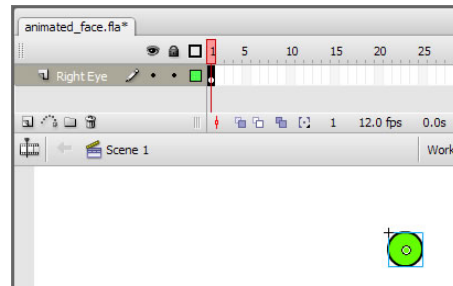
    You can now reuse the eye symbol as many times as you want without redrawing it.
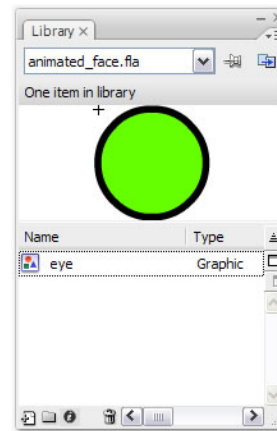

Figure 5 Frame 1 selected

Figure 6 Convert To Symbol dialog box


Figure 7 Graphic symbol selected

Figure 8 Library panel

Reuse the eye symbol to create the left eye

12. Click the Insert Layer button in the lower left corner of the Timeline to insert a new layer (**Figure 9**).

13. Double-click the layer name and change the name to **Left Eye**.

14. On the Left Eye layer, select frame 1.

15. Select the eye symbol in the Library panel and drag the symbol onto the Stage.

You now have a second instance of the eye on the Stage. Using instances from the library keeps the file size of your movie smaller than copying and pasting. Smaller movies load faster in a browser.
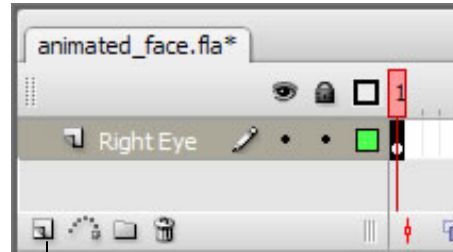

Figure 9 Insert Layer button

Draw the nose

16. Insert a new layer and name it **Nose**.

17. Select frame 1 on the Nose layer.

18. Select the Line tool and draw two lines that form an angle to represent a nose (**Figure 10**).

19. To adjust the angle after you've drawn it, use the Subselection tool (white arrow) to drag the corner or one end of the line. (You might try dragging one end of a line with the Arrow tool to see the difference between the two tools.)
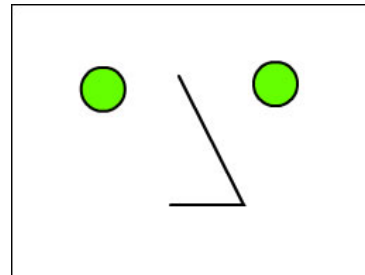
Figure 10 Draw nose

Add frames to make a three-second movie

A Flash movie typically plays 12 frames per second. To keep the nose on the Stage for 3 seconds, for example, you need to insert 36 additional frames on the Nose layer after frame 1, the current frame. (Starting at frame 1, it will take the movie 3 seconds to reach frame 37, because 1 + 36 = 37.)

20. Select frame 37 on the Nose layer and select Insert > Timeline > Frame.

Flash inserts frames through frame 37 (**Figure 11**).

Observe that the playhead (the red rectangle at the top of the Timeline) is on frame 37 and that the nose is visible but the eyes have disappeared. At the bottom of the Timeline, you can see that this movie is currently 37 frames, is set to play at 12 frames per second, and will play for 3 seconds.
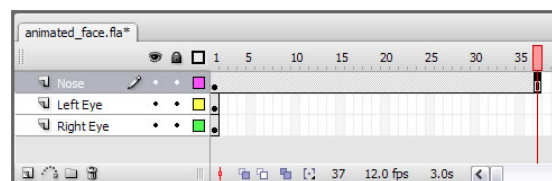
Note: The keyboard shortcut for inserting a frame is F5.

21. Drag the playhead to various frames.

The nose remains visible in frames 1 through 37, but the eyes appear only in frame 1.

22. To see your movie, drag the playhead to frame 1 and then select Control > Play.

At this point, not much is happening beyond frame 1.

Figure 11 Frame inserted in Timeline

Draw the mouth

23. Insert a new layer and name it Mouth.

24. Select frame 1 of the Mouth layer.

25. Draw a mouth in frame 1.

- Use the Line tool to draw a straight line (**Figure 12**).

- Select the Selection tool and click on the Stage away from the line to deselect it.

- Move the pointer toward the middle of the line. When a curve appears next to the pointer, drag the middle of the line downward to create a smile (**Figure 13**).

- When you release the mouse button, only the smile remains (**Figure 14**).
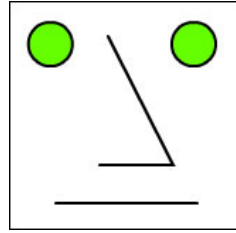
Figure 12 Mouth as straight line
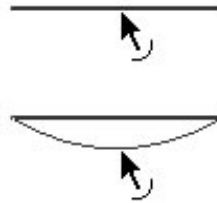
Figure 13 Drag line with Arrow tool

Figure 14 Mouth complete

Animate the facial features

Use motion tweens to animate the eyes

Because you created the eyes by using a graphic symbol, you can animate them by using a motion tween. To create the motion tween, you need a start keyframe and an end keyframe containing the same symbol. You can then use a motion tween to fill the frames between the keyframes.

1. On the Right Eye layer, select frame 37 and select Insert > Timeline > Keyframe. This will be the end keyframe.

    A keyframe signals Flash that some animation action begins or ends at that frame.

2. On the Right Eye layer, select frame 37 and drag the right eye a short distance.

3. Select any frame between frames 1 and 36 on the Right Eye layer.

4. In the Property inspector, select Motion in the Tween menu to create a motion tween (**Figure 15**).

    Note: You can also select Insert > Timeline > Create Motion Tween.

    Notice the frames containing the motion tween are now light blue and contain a solid arrow running from the start frame to the end frame (**Figure 16**).

5. Position the playhead on frame 1 and select Control > Play to play your movie and see the effect of the motion tween.

    The right eye gradually moves from its original position in frame 1 to the new position in frame 37. Notice that only the right eye moves.

    Note: If you want to change the motion, move only the symbol in keyframe 37.

6. Select frame 37 on the Left Eye layer and insert a keyframe.

7. Move the left eye the same distance as the right eye, and then create a motion tween between the first and last frames on the Left Eye layer.
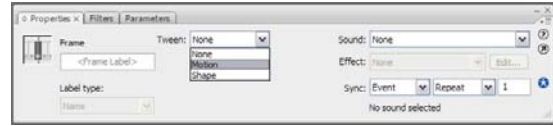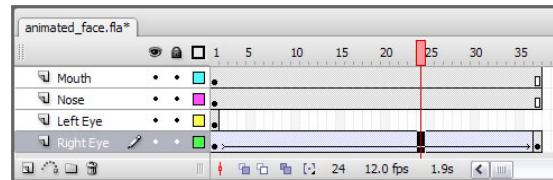

Figure 15 Tween menu

Figure 16 Motion tween in the Timeline

Use a shape tween to animate the mouth

Because you created the mouth by using one of the drawing tools (the Line tool) and have not converted the mouth to a symbol, it is still a shape. You can use a shape tween to animate the mouth.

8. Select frame 37 on the Mouth layer and insert a keyframe.

9. With the Selection tool, click on the Stage away from the mouth line to deselect it. Then drag the mouth line into a bigger smile.

10. To create a shape tween between the first and last frames on the Mouth layer, click a frame between frames 1 and 37, and select Shape in the Tween menu in the Property inspector.

Notice the frames containing the shape tween are now light green and contain a solid arrow running from the start frame to the end frame.

10. Select File > Save.

11. Select Control > Test Movie to see it play.

Selecting Control > Test Movie exports a .swf file and plays it in a preview window. When the movie reaches the last frame, it loops back to frame 1 and plays again.

12. Select File > Close to close the preview window.

Create any additional animated facial features as you choose.

Publish your movie

When you're ready to deliver your movie to an audience, you can publish the Flash document (FLA file) for playback. The Publish command creates a Flash SWF file (playable with Flash Player) and an HTML document that inserts your Flash movie in a browser window. For viewers who do not have Flash Player installed, you can select to publish the FLA file in alternative file formats—GIF, JPEG, PNG, or QuickTime—with the HTML needed to display them in a browser window.

When you publish HTML with your movie, Flash also creates a file called AC_OETags.js. This JavaScript file lets your SWF file play automatically in certain browsers (called active content-compliant browsers) that would otherwise require a site visitor to click to play your movie. To avoid this problem, upload AC_OETags.js to your site in the same location as the HTML file that hosts the movie. For more about this issue, visit www.adobe.com/go/activecontent.

1. Select File > Publish Settings to open the Publish Settings dialog box (**Figure 17**).

2. Use the Formats tab to determine which file formats to output when you publish.

3. Use the Flash tab to determine which Flash Player you are publishing to (**Figure 18**). If you think your audience might not have the latest player, you might want to select an older player from the Version menu.

4. Select Generate Size Report to see a detailed report of size for each asset in your movie.

5. Select Protect From Import to prevent anyone from importing your SWF file into Flash and converting it back to a FLA file.

6. Select Compress Movie to reduce the file size of the exported movie.
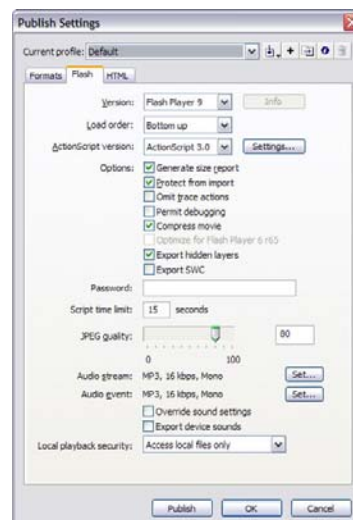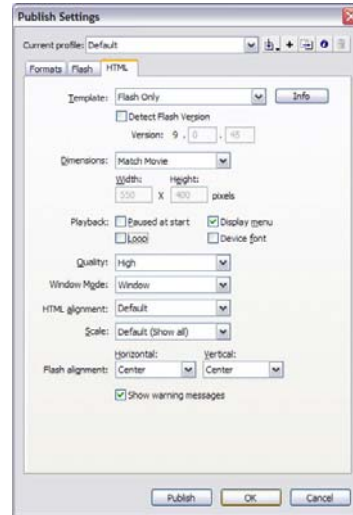

Figure 17 Publish Settings dialog box

Figure 18 Flash tab of Publish Settings dialog box

7. Use the HTML tab to control settings for the HTML file (**Figure 19**).

8. Deselect the Loop option if you want your movie to play through only one time and stop.

9. To publish your movie, click the Publish button.

Figure 19 HTML tab of Publish Settings dialog box