**HO-FL2: SIMPLE FLASH ANIMATION**

**Tweening - Simple Animation in Flash**
Traditionally Flash as provided to two types of tweened animation: motion and shape:

- In **MOTION TWEENING**, you define properties such as position, size, and rotation for an object, group, or text block at a start point, and change those properties at the end point.

- In **SHAPE TWEENING**, you draw a shape at the start point and change that shape or draw another shape at the end point.

In each case Flash interpolates the values or shapes for the frames in between the start and end points, creating the animation. Tweened animation is an effective way to create movement and changes over time while minimizing file size. In tweened animation, only the values for the changes between the key frames are stored.

Flash CS4 also adds a further dimension to animation, by allowing the user to animate objects using the MOTION EDITOR.

This exercise will explore the different ways of animating simple objects in Flash CS4 and provide links to online tutorials that support the work covered here. First though take a look at the Adobe TV episode that provides a bit more background about tweens: [http://tv.adobe.com/watch/learn-flash-professional-cs4/getting-started-11-understanding-tweens/](http://tv.adobe.com/watch/learn-flash-professional-cs4/getting-started-11-understanding-tweens/)

### A Simple Shape Tween

1. Select **File ➔ New** on the main menu and create a new document, called **mmhofl2.fla**.

2. Click on the Rectangle Tool and select the PolyStar Tool:

3. Use this to draw out a star shape in the top left hand corner of the stage. **Note**: to create a star shape, 1st select the PolyStar Tool, then click on the Options button in the Properties Panel and select an appropriate style (i.e. Star), number of sides (6) and point size (0.50) for your shape.

4. Select the shape you have just created and use the Properties Panel to change its Fill and Border colour. **Note**: Take care to ensure that both the shape Fill and Border are selected. You can do this using by dragging the Selection tool around the shape or by double clicking the Selection tool in the middle of the shape.

5. Make a note of the X: (distance from left hand side of the stage) and Y: (distance from top of stage) positions of your shape, e.g. X =10, Y =10.

6. Select layer1 and rename it **shapes**.

7. Right click on frame 25 to make it the active frame and select **Insert Blank KeyFrame** from the pop-up menu:
8. With frame 25 as the active frame, click on the rectangle tool on the Tools menu and select the oval tool. Use this to draw out a circle approximately the same size as your star. Use the Properties Panel to (i) change the circle Fill and Border colours and (ii) adjust the size and position (eg. X=10 and Y = 10 pixels) of the circle so that it sits directly above the star shape on frame1. Note: you may find it useful to activate onion-skinning to help you position the circle above the start shape.

9. You can activate onion-skinning by clicking on the Onion Skin button at the bottom of the timeline. Then click on the Modify Onion Markers button, select Always Show Markers and Onion All. This allows you to 'see' the position of the star in frame 1 and precisely position your circle in frame 25 above it:

10. Next right click on any frame in the shapes timeline between 1 and 25 and select Insert Shape Tween from the dropdown menu:

11. You should note that the timeline between frames 1 and 25 turns light green and includes a solid arrow, indicating that a shape tween has been created:

12. Select Ctrl+Enter (Control→Test Movie on the main menu) to preview your movie. What do you see? You should find that the star undergoes a smooth transition into a circle.

**Simple Motion Tweeijing**

13. Insert a second layer, called motion1. Select frame 1 of the motion1 layer and draw out a circle. Use the Properties Panel to (i) change the circle Fill and Border colours and (ii) adjust the size and position of the circle so that it is approximately the same size as and sits beside the star on frame1 of the shapes layer:

14. With the circle as the active object, right click and select Convert to Symbol from the dropdown menu. Creating a graphic object called circle2, which should now appear in your Library.
15. Select frame 25 of the motion1 layer and right click to Insert Blank Keyframe. With frame 25 selected drag a copy of circle2 from the Library and position at the bottom of the stage below the original instance of circle2 on frame 1 of the motion1 layer.

16. Next right click on any frame in the motion1 timeline between 1 and 25 and select Insert Classic Tween from the dropdown menu:

![Insert Classic Tween](image)

17. You should note that the timeline between frames 1 and 25 turns purple and includes a solid arrow, indicating that a classic motion tween has been created:

![Timeline with Classic Tween](image)

18. Select Ctrl+Enter (Control→Test Movie on the main menu) to preview your movie. What do you see? You should find that the circle simply moves to the bottom of the stage, with movie playing continuously.

19. TASK: To check that you understand what is happening, modify the two animations so that: (i) the star shape on the shapes layer changes into a circle and then back into a star and (ii) the ball drops to the bottom of the stage and then bounces back up.

20. To do this you need to INSERT BLANK KEYFRAMES in frame 50 of both the shapes and motion1 layers, add objects in the Blank Key Frames and create appropriate tweens so that the required transformations take place.

21. Save your file and then select Ctrl+Enter to test your movie to check that you have created the correct transformations. If you are unsure about anything please ask your tutor for assistance.

22. The final stage, with onion skinning applied, should look something like that shown below:

![Final Stage](image)

23. Adjust the dimensions of the stage as necessary and save your movie. The select Publish Preview to see what the final movie will look like.
Using the Motion Editor
25. Click on the Rectangle Tool and select the Oval tool and use this to draw out a circle in the top left hand corner of the stage.
26. Select the shape you have just created and use the Properties Panel to change its Fill and Border colour.
27. Next with the circle selected, right click and select Convert to Symbol from the dropdown menu. Save the object as a graphic called circle3.
28. With the circle selected, right click and select CREATE MOTION TWEEN:

![Create Motion Tween]

29. This inserts frames on the timeline based on a movie of 1 second duration:

![Timeline with 30 frames]

30. With the frame indicator on frame 24, as in the above diagram, click on the circle and drag it to the bottom right hand corner of the stage. This creates a motion path, the green dotted line, along which the object will move. Flash also inserts a property keyframe in frame 24 (as indicated by its diamond shape):

![Frame Indicator in frame 24]

31. By clicking on the path and dragging out the object we can change the path along which the object will move. Experiment with this. Each time you change the path, select Ctrl+Enter to see the effect of your changes on the movie:
32. We can further enhance our animation by changing the properties of our object at points along the motion path. To do this select frame 10 in the timeline and then select Modify→Transform→Scale on the main menu and resize the object in frame 10:

33. Save your work and select Ctrl+Enter to test the movie. You should find that this changes the shape of all instances of the circle from frame 10 onwards.

34. If you wanted the shape to return to its original size in frame 24 you would need to resize the circle in frame 24. Do this and then resave and retest your movie, to check you have created the correct transformation.

35. Creating motion tweens in this way also enables you to adjust the other properties of object, should as colour and transparency and a new feature of Flash CS4 is the Motion Editor (the Tab next to Timeline).

36. With the circle in frame 1 selected, click on the Motion Editor tab to reveal a series of controls that enable you to manipulate both the object’s properties and also the motion path.
along which the object moves.

37. You can find more information about the Motion Editor via the two links in the final section (Additional Reading and Resources).

38. **TASK:** Adobe TV contains two tutorials that explore the use of Motion Tweens and the Motion Editor, take time now to work through these as they will reinforce and extend the concepts we have just covered:

39. After completing the bouncing ball exercise, optimise the file, save as mmhofl2_ball and then publish in the handson section of your MM website.

**Shape Tweening - Create a Smiley Face**

40. Finally, using what you have learnt above and in the additional online tutorials, create a small movie of a smiley face. Think about the actions required to create the smiley face? (i.e. the initial state of the face needs to be glum and unhappy; the final face should be smiling).

41. Draw out a rough sketch. Then think about what shapes you need to create? How many layers are required? etc... What are the key elements that need to change?

42. When you are confident about what is required create your smiley face in a new Flash movie, called mm-hofl2_face.fla. (If you are unsure about how to proceed please read: [http://www.tutorialized.com/view/tutorial/Shape-tween-in-Flash-CS3-for-beginners/40478](http://www.tutorialized.com/view/tutorial/Shape-tween-in-Flash-CS3-for-beginners/40478), although this tutorial is for Adobe CS3 it can be adapted for use in Adobe CS4).

43. Once completed publish your work and add this to the handson links on your MM website.

**Additional Exercises**


**ADDITIONAL READING AND RESOURCES**


- Using the Motion Editor: [http://www.adobe.com/designcenter/flash/articles/8rivid4057_fl.html](http://www.adobe.com/designcenter/flash/articles/8rivid4057_fl.html)