

# Tweening - The Basics of Motion

The first thing that catches an animators' attention is the capability in Flash® to tween objects. Essentially, a tween is Flash automatically drawing the changes in shape or location of objects on the Stage. Done properly, tweening will be a huge timesaver. If done incorrectly, you will find yourself contending with choppy animation and rather large file sizes. There are two types of tweens you construct in this exercise:

- Shape tween
- Motion tween

## SHAPE TWEENING

Shape tweening allows you to morph shapes between keyframes. The simpler you keep the shape, such as from a square to circle, the cleaner the animation appears.

**1. Open a new Flash document, select the Line tool, and draw a line that crosses the Stage.**

The line should be no more than two pixels thick and should have a black stroke.

This line will be the start point of a shape tween. All tweens have a start point and an end point, and they are always between two key frames.

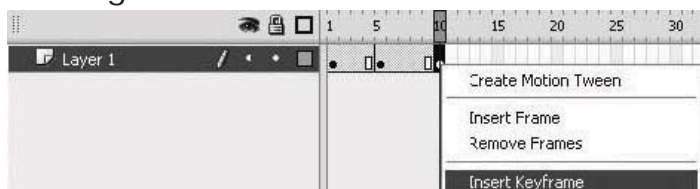


**2. Add a keyframe at Frame 5 and another at Frame 10.**

In this animation, the line acts much like the surface of a trampoline. When an object is dropped onto it, the surface bends downward and then bends back upward to its start position. The end of the bend downward will be located at Frame 5.

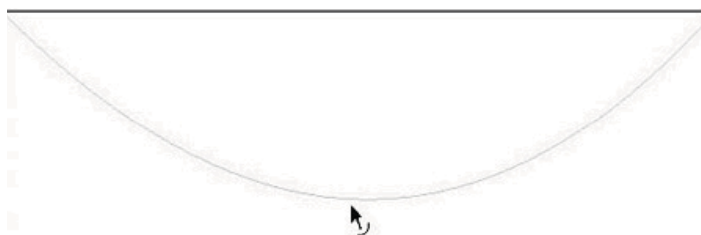
**3. Move the playhead to Frame 5 and place the cursor over the line. When you see the stroke cursor, click and drag the line downward.**

The line bends as you drag the mouse. Drag the line down to a point just above the bottom of the Stage.



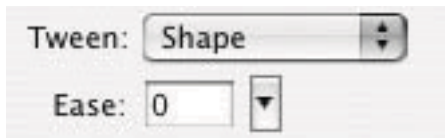
Release the mouse. The line curves between the line's two anchor points.

**4. Hold down the Shift key and click the keyframes at Frames 1 and 10.**



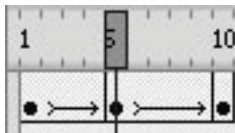
When the entire line is selected, select Shape from the Tween drop-down list in the Property inspector.

If you look at the Timeline, you see arrows between Frames 1 and 5 and between Frames 5 and 10. The frames also have a green color that indicates a Shape tween. If you drag the playhead across the Timeline, you see the line bend downward and then spring back into position.



**Tip:** Shape tweens can be applied only to objects drawn on the Stage. You can't apply a shape tween to a symbol or a grouped object.

**5. Save your file and leave it open for use in the next exercise:**



## MOTION TWEENING

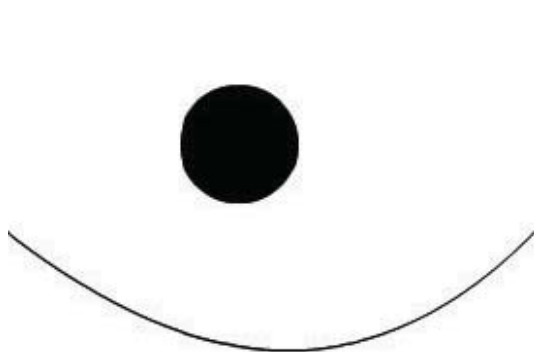
Motion tweening creates the in-between positions of an object in motion. Like a Shape tween, a Motion tween occurs between two keyframes. The difference is that Flash automatically creates the intermediate positions of the object set in motion between the two keyframes.

**1. Add a new layer to your animation. With the new layer selected, draw a ball on the stage.**

Drag this ball to a position to the middle of the line and position the ball so the bottom of the ball is just touching the line.

**2. Add keyframes at Frames 5 and 10 of the new layer.**

The effect you will create is the ball pushing



the line down and then being pushed back up as the line springs back to its original shape. The ball needs to follow the line as the line curves downward.

**3. Drag the playhead to Frame 5, select the ball, and move it downward until it just touches the bottom of the curve.**

With the ball in its final position, you can now add a Motion tween. Right-click (PC) or Control-click (Mac) anywhere on the Timeline in Layer 2 between Frames 1 and 5. When the context menu appears, select Create Motion Tween.

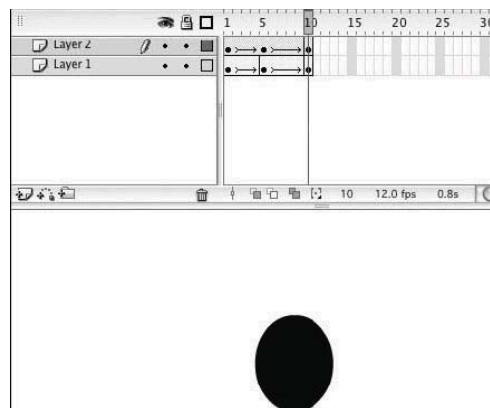
**Tip:** You don't have to use the context menu

to create a Motion tween. Select all the frames, including keyframes, in the tween and select Motion from the Tween drop-down list in the Property inspector.

Notice that an arrow appears between the two keyframes. Do the same thing between Frames 5 and 10. Drag the playhead between the frames, and the ball appears to bounce on the line.

**Note:** Motion tweens can be applied to movie clip and graphic symbols as well as Drawing objects. Shape tweens can be applied only to Drawing objects.

This animation is a bit fast. A quick way to slow it down is to select the keyframes in Frame 10 and drag them to Frame 36. Next, drag the keyframes in Frame 5 to Frame 18. What you have essentially done is to increase the duration of the animation from about 1 second to 3 seconds. **Tip:** It



is quite easy to figure out which is a Motion tween and which is a Shape tween on the Timeline. Motion tweens are blue and Shape tweens are green.

**4. Select Control > Loop Playback and press Enter/Return.**

The animation plays. This is a great little technique for testing an animated sequence without creating a test SWF file. It can also be used to test an animation in a movie clip.

