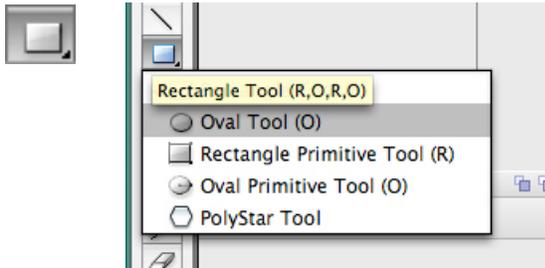
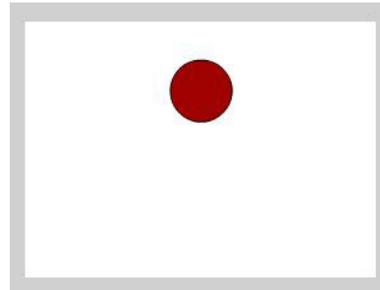


How to Animate a Bouncing Ball in Flash

1. Start off by selecting the Oval Tool. Click and hold the rectangle tool, then select the Oval Tool from the drop-down menu that appears.



2. Draw a circle on the stage, near the top, in the middle. You can keep the circle perfectly round by holding shift while you drag the mouse.



3. Rename the layer from Layer 1 to "Ball" by double-clicking the layer name and then typing in the new name.

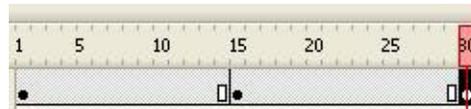
Now select your ball with the selection tool. Make sure you select the stroke around the edge of it, if you have one. Once you have it selected, right click and select "Convert to Symbol..." or press the hotkey F8. Select movie clip, and name the movie clip "ball_mc" (mc meaning movie clip).



4. Now plan where you want the keyframes. You already have one on frame 1 (where the ball is at the top of the screen), but you need a keyframe where the ball will be at the bottom, and another for when it bounces back up to the top.

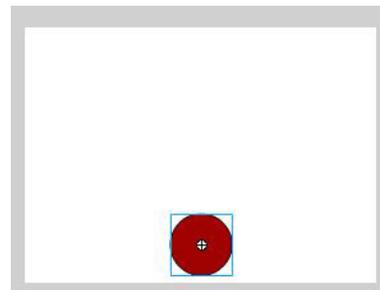
Right click on frame 15, and select "Insert Keyframe" from the dropdown menu. Then Right click on frame 30, and select "Insert Keyframe" from the dropdown menu.

This will add two new keyframes, to frames 15 and 30.

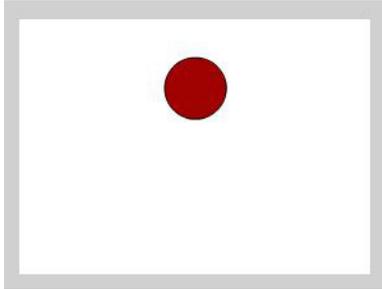


5. Now click on keyframe 15. Use the selection tool to select it. Then press the down key on your keyboard until the ball reaches the bottom of the stage.

(Tip: Holding shift while pressing an arrow key will move the object faster.) At frame 15, your stage should look like this.



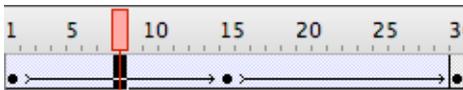
6. Now click on keyframe 30. You will notice that the ball is still at the top, which is what we want.



7. Right click on a frame between 1 and 15 (the first and second keyframes), and select "Create Classic Tween."

8. Once you do this you will see the frames turn blue, and an arrow passes through them. This indicates a motion tween. Do the same between the second and third keyframe.

If you test your movie at this stage, the ball will move up and down. However, it doesn't look very realistic, so we will add easing.



9. We need to add the easing twice, one for the first tween, and one for the second. Click on your first motion tween (where the frames are blue between keyframes 1 and 15). Your Properties menu should change and you will see an Ease box. The value will be set to 0 as default. The blue arrow to the right opens a sliding bar. If you slide it down, the frames will ease in (which means they will begin slow, and finish faster). If you slide it up, the frames will ease out, which does the opposite. We need to ease it in, so slide it downwards all the way to -100.

10. Now do the same for the motion tween in between keyframes 15 and 30, except this time, make the tween ease out. Do this by sliding it upwards all the way to 100.

11. Assuming our ball is made of something a little more flexible than diamond it's going to change form slightly upon impact with the ground. Let's add one last Keyframe where the ball flattens momentarily.

Select keyframe 15. Then use the Free Transform Tool to squash the "ball" symbol from the top edge (hold Alt as you do so to keep the bottom edge where it is).

Test your movie by pressing Control + Enter.

