

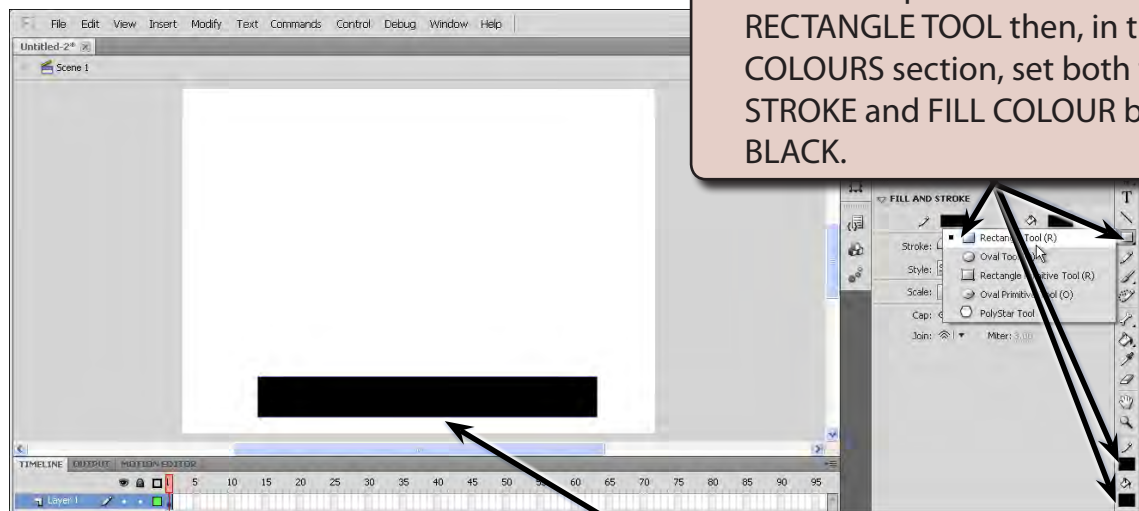
# Creating a Bouncing Ball

In this Exercise you will create a ball that bounces off a floor.

## Creating the Floor

A rectangle will be used to represent the floor.

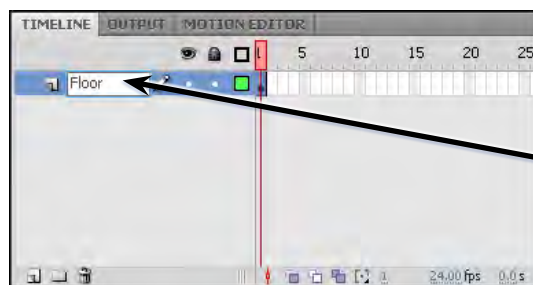
- 1 Load Adobe Flash CS5 or close the current file, then create a new FLASH FILE (ACTIONSCRIPT 3.0).



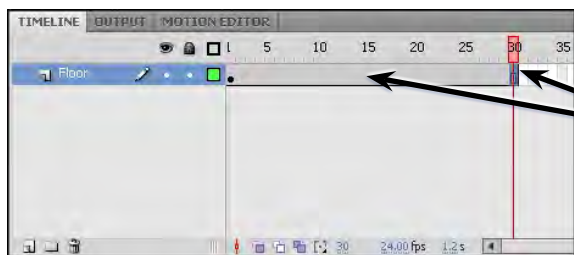
- 2 Click on the SHAPES TOOL in the TOOLS panel and select the RECTANGLE TOOL then, in the COLOURS section, set both the STROKE and FILL COLOUR boxes to BLACK.

- 3 Drag a thin rectangle across the bottom of the stage.

- 4 It is good practice to name layers in the TIMELINE panel when you are going to use more than one layer in an animation.

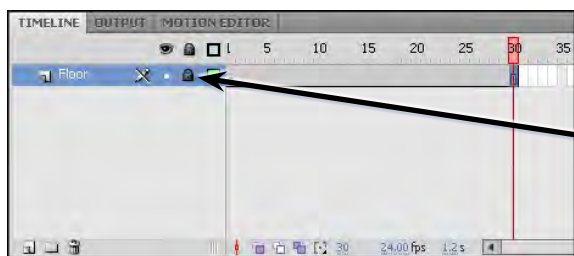


- 5 Double click on the LAYER 1 label in the TIMELINE panel and enter FLOOR.



6 Click on FRAME 30 of the FLOOR layer and press the F5 key to insert frames up to FRAME 30.

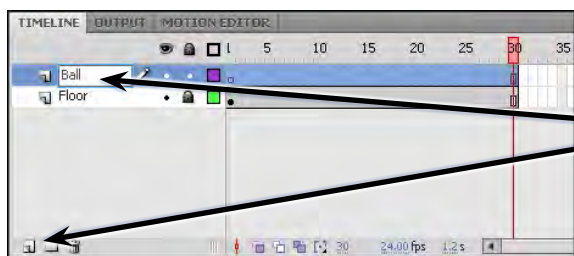
**NOTE:** You can also display the INSERT menu, highlight TIMELINE and select FRAME to insert frames. A KEYFRAME is not needed at FRAME 30 because the floor will not change - it is a fixed object.



7 Click on the dot under the LOCK symbol in the FLOOR layer to lock the layer. This prevents any changes being accidentally made to the rectangle.

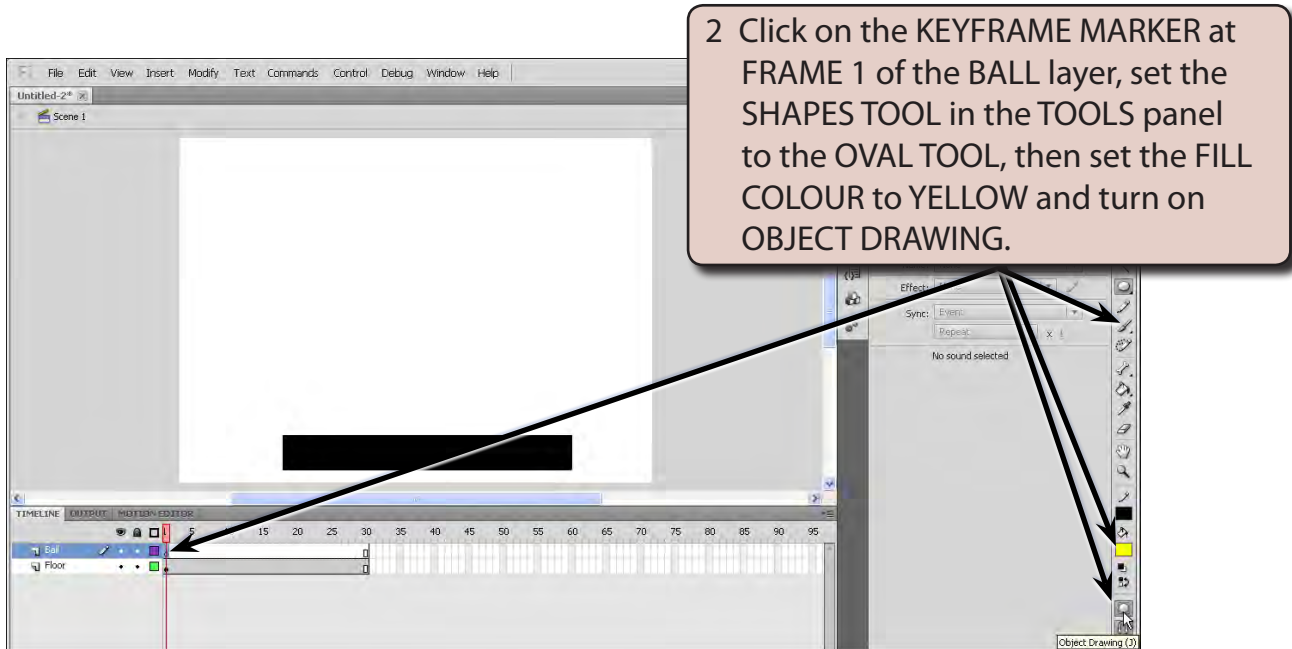
## Drawing the Ball

A circle will be used to represent the ball and it will be converted to a SYMBOL. Using symbols reduces the size of animations and symbols can be used over and over in an animation without increasing the animation's size.

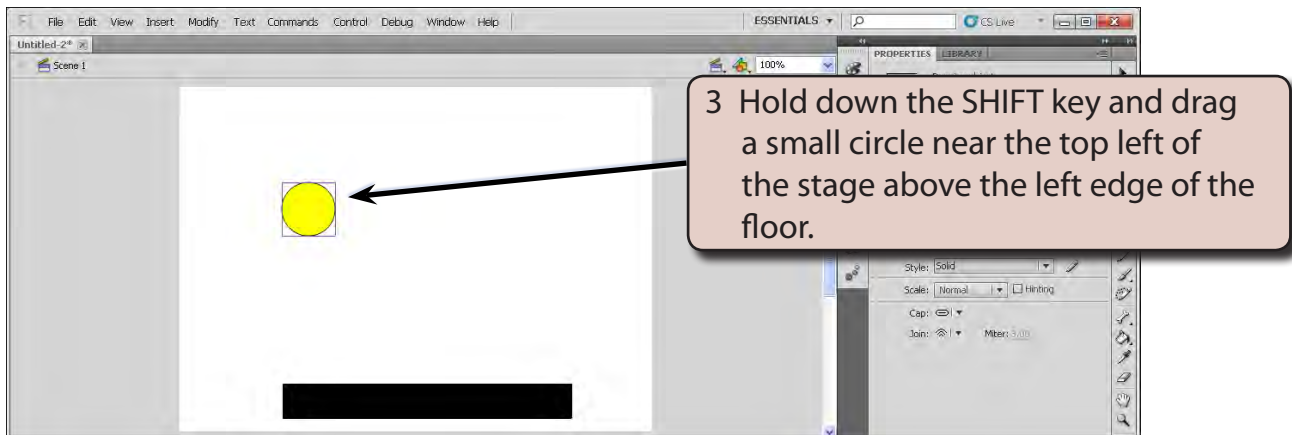


1 Click on the NEW LAYER button at the bottom left of the TIMELINE panel to insert a new layer then double click on the LAYER 2 label and rename the new layer: BALL

**NOTE:** 30 frames will be inserted in the BALL layer to match the frames inserted in the FLOOR layer.

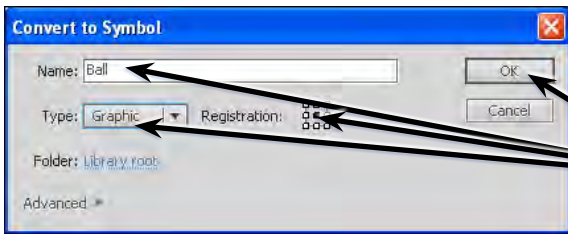


**NOTE:** The OBJECT DRAWING TOOL is shaded when it is turned on. It allows the shape to be drawn as a separate object, which makes it easier to select and move the shape.



**NOTE:** The SHIFT key ensures that the oval is a perfect circle.

- 4 Display the MODIFY menu and select CONVERT TO SYMBOL.

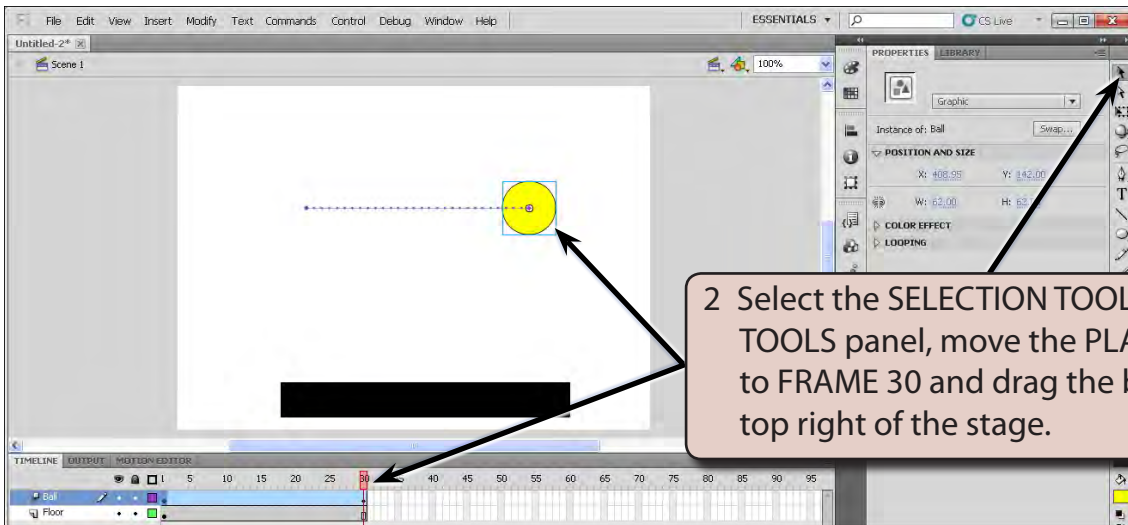


5 Name the symbol: BALL set its TYPE to GRAPHIC, its REGISTRATION to the CENTRE and select OK.

**NOTE:** Symbols are a more efficient way of handling objects in an animation. REGISTRATION is the position of the graphic symbol that connects to other objects, such as a rotation point.

## Animating the Ball

- 1 Display the INSERT menu and select MOTION TWEEN to start the animation.



2 Select the SELECTION TOOL from the TOOLS panel, move the PLAYHEAD to FRAME 30 and drag the ball to the top right of the stage.