

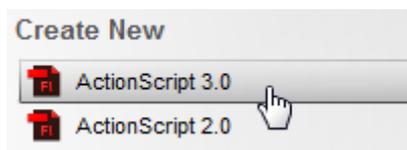
SUNRISE ANIMATION

In the following exercise, we will create an animation of a landscape scene with the sun rising. This will include many things which are important in flash animation such as:

- Re-using symbols
- Layers
- Movie clip symbols with other symbols and animation inside them
- Motion tweens

CREATING THE BACKGROUND

The first thing we will do is create a new Flash Project.



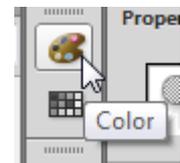
For the background we want to set a colour that would look good for our sky. We could simply change the background colour properties of the project, but instead we will place a colour rectangle on the stage. There are 2 reasons why we will do it this way.

1. We want the sky to use a gradient so that it is lighter closer to the horizon, rather than all being one colour.
2. We want the sky to be animated so that it gets lighter as the sun rises.

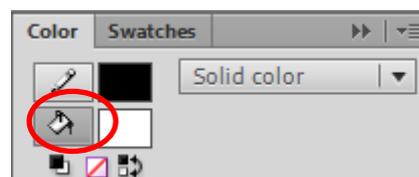
With your **rectangle tool** , draw a rectangle that covers the whole top section of the stage. It doesn't have to cover the bottom part of the stage as that will be covered by our landscape. The colour won't matter as we are about to edit it.

Select the rectangle with the **selection tool** . It doesn't matter if you select the stroke (or even if you keep it) since that will be outside the stage area.

Click the **Colour** icon (to the left of the properties panel) to display the **colour panel**.



Make sure Fill colour is selected as shown below with the circle.



Change the fill type from Solid Colour to Linear Gradient.

The bottom section of the Colour Panel is where you would edit the gradient.



Double-click on the black marker to display a selection of colours. Select a dark blue (almost black) colour for a dark blue night sky look

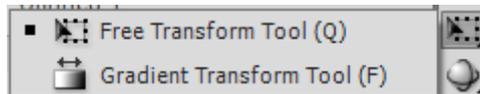
Double-click the white marker and select a shade of blue that is still dark, but not as dark.



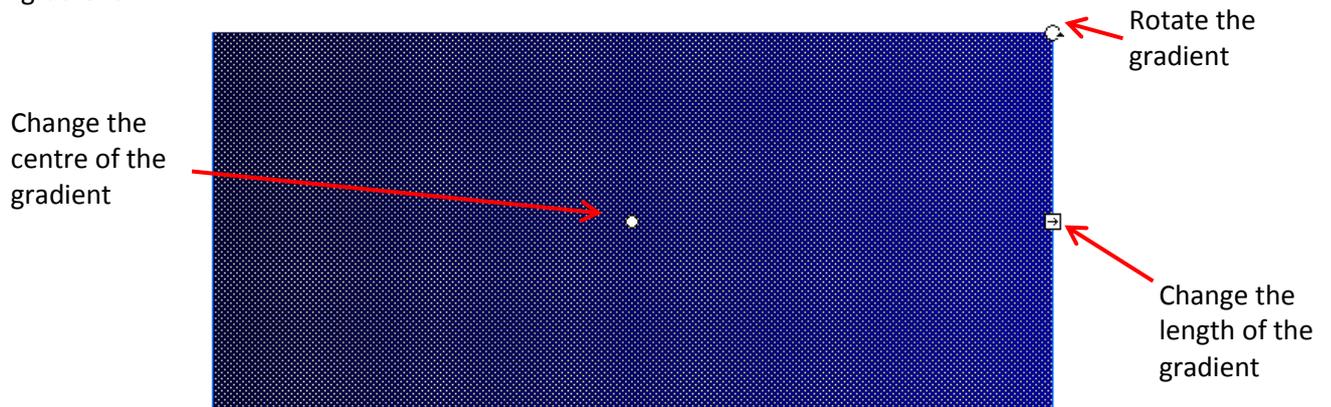
Currently the gradient goes from left to right but we want it to go from darker at the top, to lighter at the bottom. We will need to use the Gradient transform tool to change the direction of the gradient.

Make sure the rectangle is still selected.

Select the **Gradient Transform Tool**. You may need to hold your mouse on the **Free Transform Tool** to be able to select it.

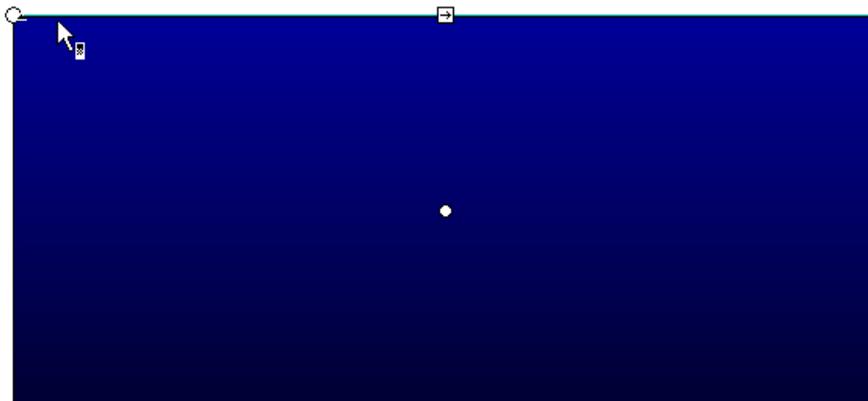


You will see 3 symbols around the selected shape as labelled below. These can be used to modify the gradient

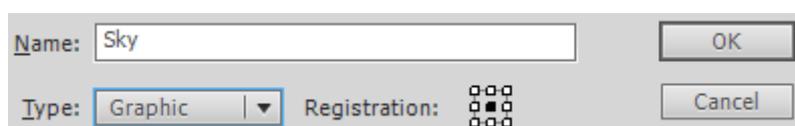


Use the **rotation** point  in the corner to rotate the gradient so that the darker colour is at the top of the rectangle.

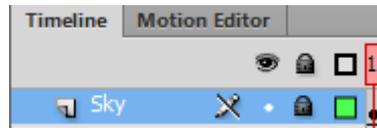
Use the **gradient length** point  to shorten the gradient so that it starts at the top of the rectangle and finishes at the bottom of the rectangle.



Later on we will need to do some animation involving this rectangle (making it go lighter as the sun rises) so we will need to make it in to a symbol. Convert the selected shape in to a **Graphic** symbol (**F8** shortcut) called **Sky**.



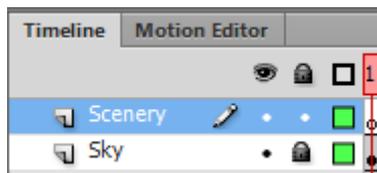
Change the name of the layer to **Sky** and lock the layer to prevent accidental changes when we are working on other layers. With the layer locked, try moving the rectangle on the stage. You will find that you won't be able to select it while the layer is locked.



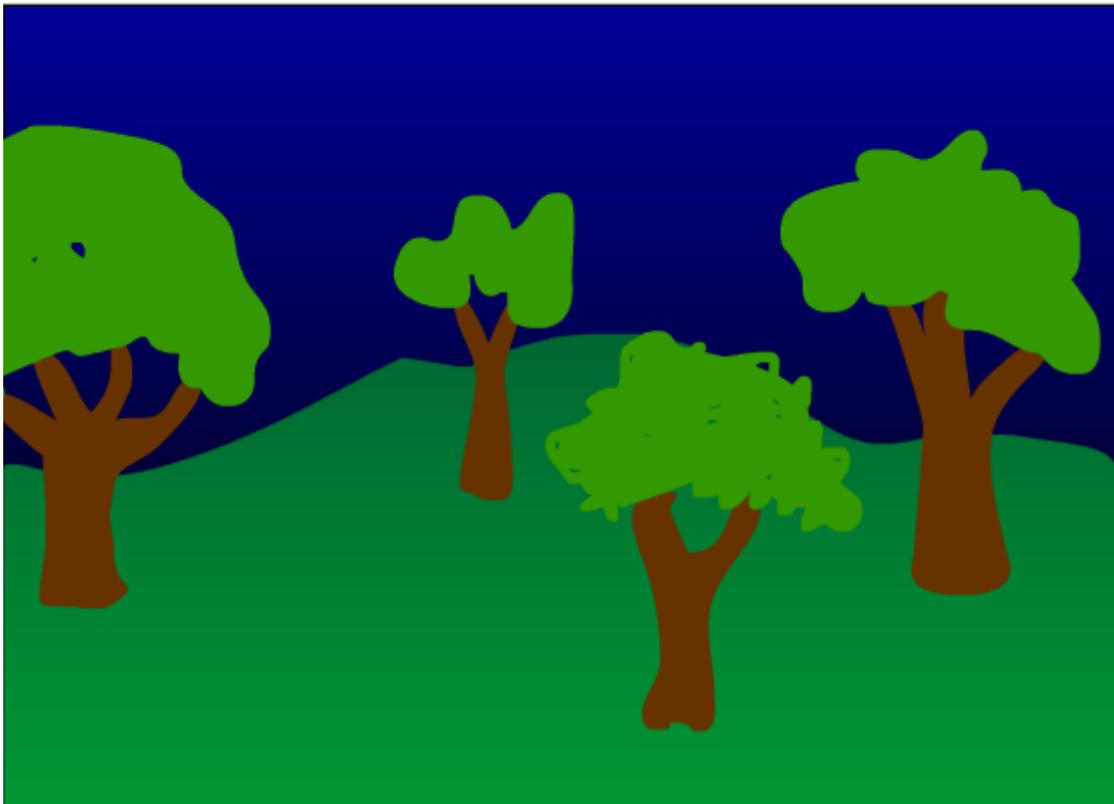
Save the project as **Sunrise** before continuing.

CREATING THE SCENERY

Create a new layer and call it **Scenery**. Make sure it is above the **Sky** layer.



With the sky layer selected, use the drawing tools and shape tools to create a landscape.



Tip for creating trees like the ones in the example above, use the brush tool with a brown fill colour to draw in the trunk. Then switch to a green fill colour and scribble on the top of the trunk to get the leaves

Lock this layer to prevent accidental changes.

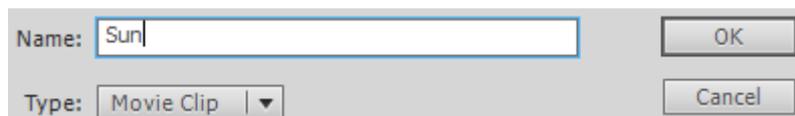
SUN AND STARS

Our animation will include twinkling stars which will all be instances of the same animated movie clip symbol. We will also have a rising sun symbol. We'll start by creating a symbol for the sun.

Click the **New Symbol** icon at the bottom of the library panel.

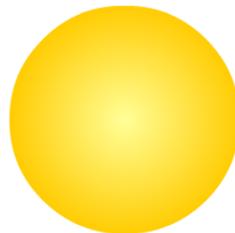


Call the new symbol **Sun** and make it a **Movie Clip** symbol. There won't actually be any animation taking place within this symbol but we will be using some symbol effects which are only possible with movie clips symbols, not graphic symbols.

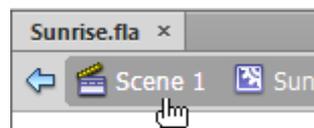


In the new blank symbol, draw a circle with a radial gradient for your sun.

The centre of the circle should be on the cross in the middle of the symbol. Remember you can hold down ALT while you are drawing a circle so that the place you first click is the centre of the circle.



Click the **Scene** button at the top to finish editing the symbol and return to the stage.



The sun won't be visible until we place it on the stage later.

Now we'll create our star symbol. This will consist of 2 parts. First there will be a basic graphic symbol for the shape of the star. That symbol will then be used to create a movie clip symbol for the twinkling star.

Click the **New Symbol** icon at the bottom of the library panel.

This one will be a **Graphic** symbol called **Star**.



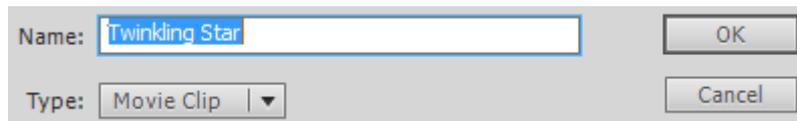
Draw a star in the middle of the symbol editing area (tip – use the polystar shape tool).



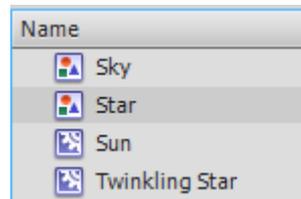
Click the **Scene** button at the top to finish editing the symbol and return to the stage.

Click the **New Symbol** icon at the bottom of the library panel.

This one will be a **Movie Clip** symbol called **Twinkling Star**.



The Library panel will list the symbols that we have created.



Drag the **Star** symbol (not Twinkling star which we are currently editing) in to the middle of the editing area.

We will create an animation that makes the star go dimmer for half a second and then return to its full brightness at the end of the second. That animation will repeat to give the star a twinkling effect.

Click on **Frame 12** (half a second) in the timeline.

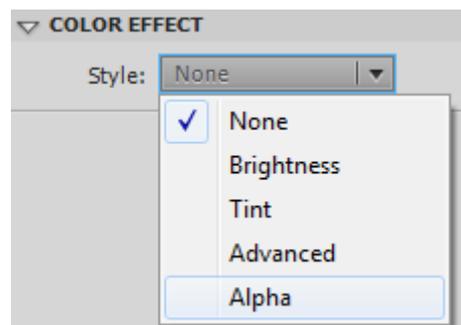
Add a **Key Frame** (F6) on that frame.



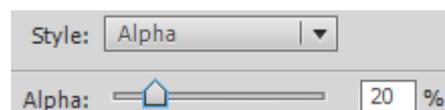
We want the star to begin slightly dim, get brighter and then go dim again. Select frame 1.

Click on the star with the Select tool to make sure it is still selected, we will change some properties in the properties panel.

Change the **Color Effect** style to **Alpha**. This allows you to set the transparency of an object.



Adjust the alpha option. The lower the number, the less visible the star will be in the middle of the animation (you can take it to 0 if you want it to disappear completely).



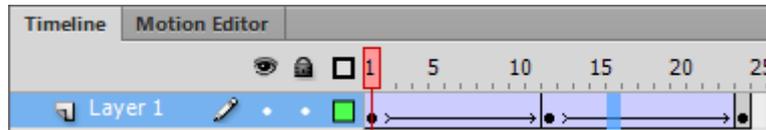
Note – if you like you can also have the star change size as part of your twinkling animation. If you want to adjust the size of the star as it fades, now would be the time to do that.

Right-click on **Frame 1** and select **Copy Frames**.

Right-click on **Frame 24** (one second) and select **Copy Frames**. This will mean that at the end of a second, the star will look the same as it did to start with.

The last thing we need to do with the star is add some tweens so flash can fill in the frames between our key frames rather than have them stay the same.

Right-click between frame **1** and **12** and select **Create Classic Tween**. Create another classic tween between frame **12** and **24**.



Press **Shift , (shift comma)** to return to frame 1.

Press **Enter** to play the animation once.

Click the **Scene** button at the top to finish editing the symbol and return to the stage.

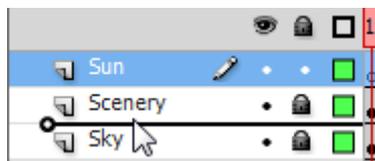
Save changes to your project.

RISING SUN

Now we will create some animation. We will add the sun symbol to the stage. It will start low so that it is behind the hills. When the animation starts the sun will begin to rise and the sky behind it will get lighter.

Create a new layer called **Sun**.

Move the new layer behind the scenery layer since we want the sun to appear from behind the hills.



With the Sun layer still selected, drag the sun symbol from the library on to the stage. For the time being position it near the top so you can see it. We'll move it downward once we've got it ready.

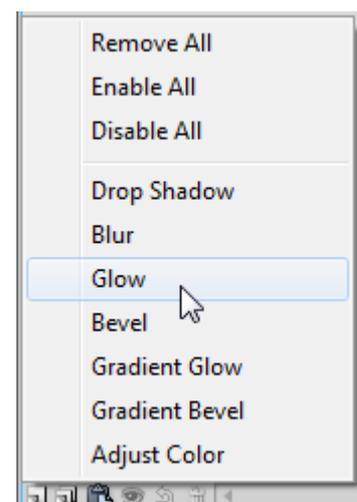
Re-size the sun if needed. It should be a size that will look good when the sun first appears on the horizon.

We will add a filter from the properties panel so make sure the sun is still selected with the Properties panel showing.

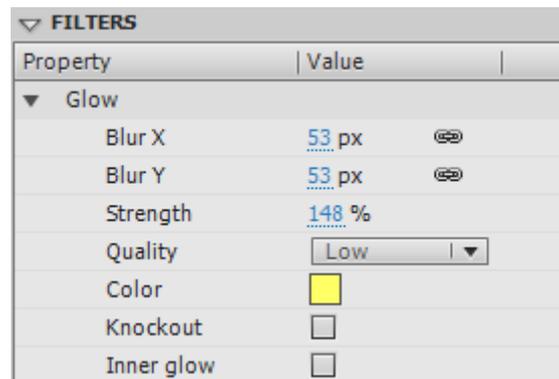
Click the Add Filter button at the bottom of the Properties panel. 

From the list of filters select **Glow** as shown to the right.

Note: Filter effects are only available for movie clip symbols. That is why we didn't use a graphic symbol for the sun.



Change the colour of the glow to a colour more suitable for the sun and set the remaining options similar to the example below. You can adjust them to whatever you think looks good for your sun.



Now move the sun so that it is below the horizon. Time to start the animation.

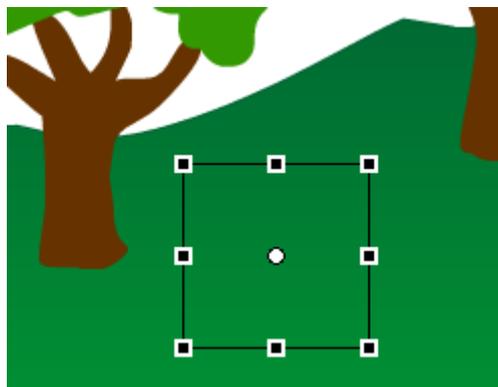
Our animation will be 5 seconds long. We'll start by making sure the scenery is visible for 5 seconds worth of frames. Click on frame 120 (5 seconds) on the Scenery layer.

Press **F5** to add a frame. Now frame 1 on that layer will continue to display until frame 120.

Click on frame 120 of the Sun layer.

Since this frame will signal a change in animation it will need to be a key frame instead of a normal frame. Press **F6** to insert a key frame.

The sun should be selected even though it is behind the hills. If it is not, clicking the name of the layer should select the contents of the layer.



Move the sun towards the top of the stage. The sun often appears larger when it is closer to the horizon. If you want you can re-create this illusion by re-sizing the sun to make it smaller when it is higher.

Right click on the **Sun** layer anywhere between frame 1 and frame 120. Select Create Classic Tween. All the frames in between will now be filled with frames that will create a smooth movement from the starting point to the finishing point.

Press **Enter** to preview the animation of the rising sun.

Click on frame 120 of the Sky layer.

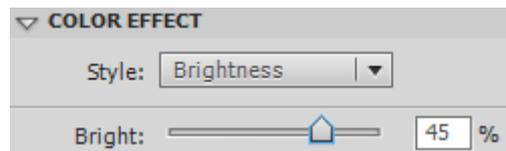
Insert a key frame.

If you previously locked the **Sky** layer, you will now need to unlock it so that you can select the sky object.



Select the **Sky** rectangle object if it is not already selected.

In the properties panel change the colour effect to Brightness. Use the Bright option to make the sky lighter.

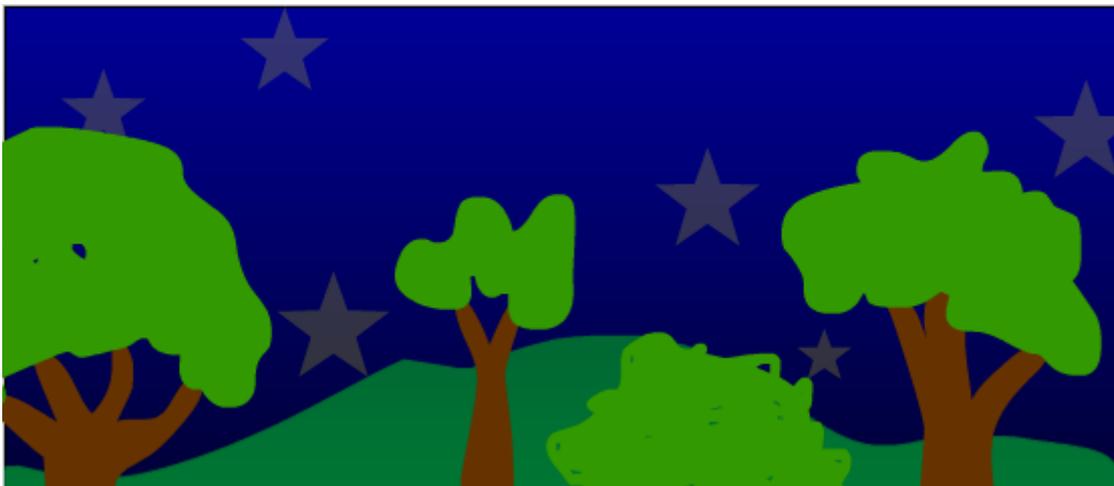


Right click on the **Sky** layer anywhere between frame 1 and frame 120. Select Create Classic Tween. Preview your animation again. The sky will now gradually get lighter as the sun rises.

We are going to add some stars to the scene now. We won't add them all on the same layer though since we don't want them all twinkling at the same time.

Create a new layer called **Stars 1**. It should be in front of your sky layer but behind the scenery layer so that some stars can be partially hidden behind the scenery.

Drag your Twinkling Star symbol from the library to the stage. Add a few more instances of the same symbol in different places (they can be varying sizes).



Now we will create another star layer which will have the stars appear a few frames after the start. This will mean that those stars will not be twinkling at the same time as the ones on the first stars layer.

Create a new layer called **Stars 2**.

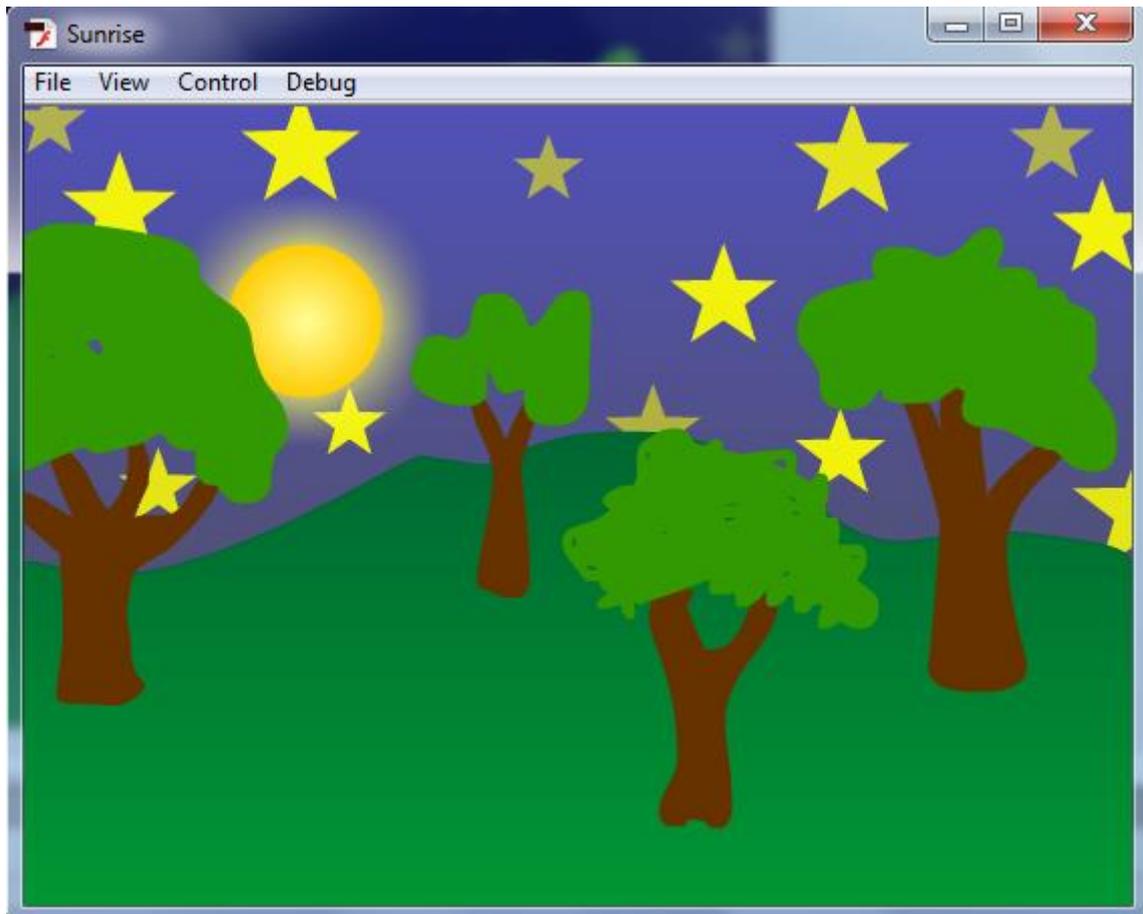
Add a Key Frame on frame 4. Add some twinkling stars on this layer.

Create a new layer called **Stars 3**.

Add a Key Frame on frame 8. Add some twinkling stars on this layer.

If you press Enter to preview the animation you won't see the stars twinkling since their animation is inside the movie clip symbol. To see animation on the stage as well as in movie clip symbols you need to use the **Test Movie** option.

From the **Control** menu select **Test Movie** and then **Test** (or you can do it the easy way by pressing **Ctrl Enter**). Flash will open the animation in a separate window that will loop the animation continuously. A menu along the top of the window provides access to playback control options. Using the test movie option will also create a .swf file in the same location your project (a .fla file) is saved in. The .swf file could then be viewed by anyone who has the Flash player on their computer or mobile device. It can also be viewed in most web browsers such as **Internet Explorer** or **Mozilla Firefox**. From now on, any time you use the test movie option, the .swf file will be updated with any recent changes to your project.

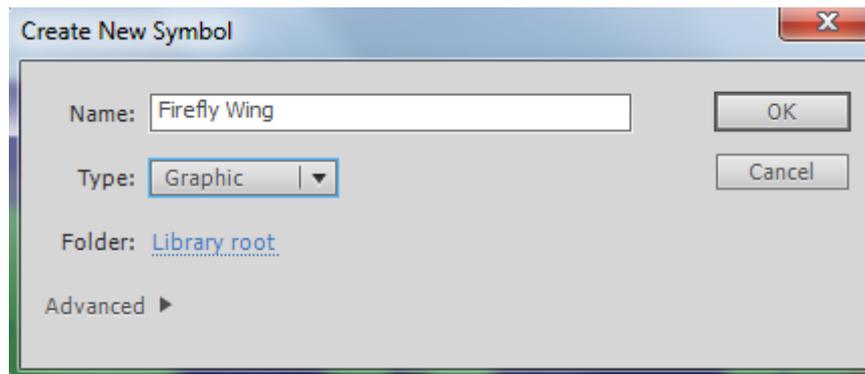


Close the preview window when done.

ADDING A FIREFLY

To finish off our animation, we will add a firefly which will fly across the stage. First we will create the parts of the firefly.

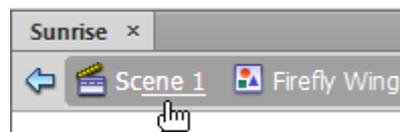
Create a new **graphic** symbol called **Firefly Wing**.



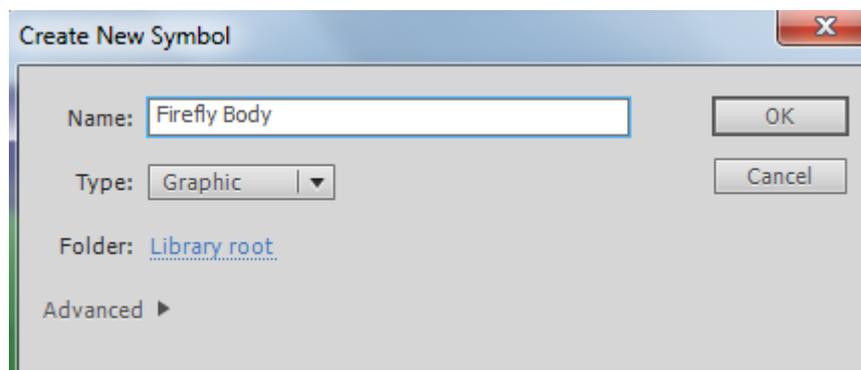
Use the drawing tools to create a wing for your firefly. Position it so that one end of it is over the small cross (centre position) in the symbol editing area. This should be the end that will be connected to the rest of the firefly.



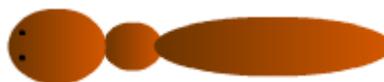
Exit the symbol edit view.



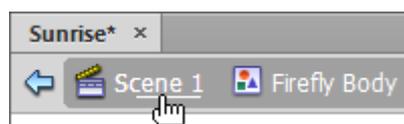
Create a new **graphic** symbol called **Firefly Body**.



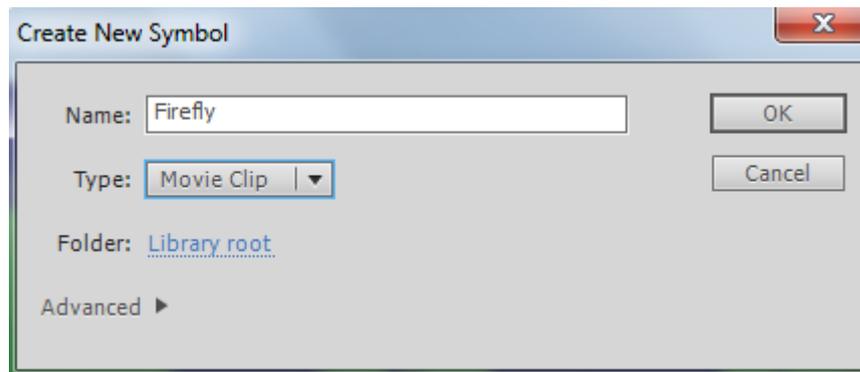
Use the drawing tools to create a body for your firefly.



Exit the symbol edit view.



Create a new **Movie Clip** symbol called **Firefly**. This one needs to be a movie clip as it will contain the animation with the moving wings.



Add the **Firefly Body** symbol to the middle of the symbol editing area.

Rename **Layer 1** and call it **Body**.

Add a new layer called **Right Wing**.

Add the **Wing** symbol from the library.

Use the Free Transform tool  to position, rotate and re-size the symbol as needed.

Add a new layer called **Left Wing**.

Add the **Wing** symbol from the library.

Use the Free Transform tool  to position, rotate and re-size the symbol as needed.

When both wings are added, they should appear so that they are suitably connected to the body of the insect.



Now we will create an animation to make the wings move. The animation will take half a second (12 frames).

Firstly, we want to make sure the body is visible for the whole 12 frames. That part won't be changing during the animation. Click on frame 12 on the **Body** layer and add a normal frame (**F5**).

The wings will change to an outstretched position halfway through the animation (frame 6). Click on frame 6 on the **Right Wing** layer and add a key frame (**F6**).

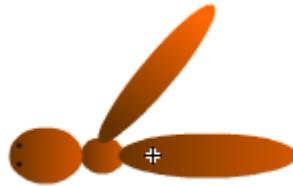
Select the Free Transform tool .

The white dot in the middle of the transform area indicates the centre of rotation. Move that dot to the point where the wing connects to the bug so that the wing rotates around that point.

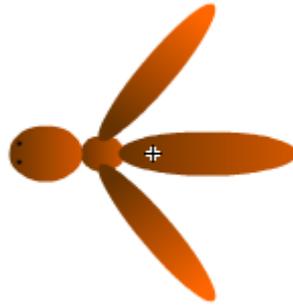


Do the same on Frame 1 to ensure both frames have the centre point in the same position and then select Frame 6 again.

Rotate the wing so that it is in outstretched position.



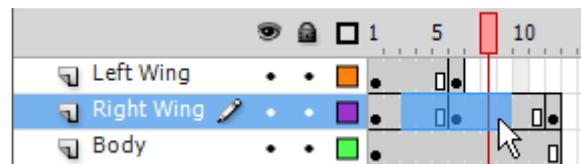
Do the same with the **Left Wing** so that both wings have a key frame at frame 6 with wings outstretched.



Right click on frame 1 on the **Right Wing** layer and select **Copy Frames**.

Right click on frame 12 and select **Past Frames**.

Drag your mouse along the timeline on the Right Wing layer so that frames either side of frame 6 are selected (I.e. a selection that includes both areas where we want tweens to be added).

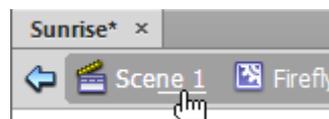


Right click on the selected frames select **Create Classic Tween**.

Repeat on the **Left Wing** layer.

Press **Enter** to preview the wing movement.

Exit the symbol edit view.



MOVING THE FIREFLY

Add a new layer called **Firefly**. Position it at the top of the list of layers so that the firefly will be in front of everything else.

Take the Firefly symbol from the library, and place and instance (a copy) of that symbol to the right of the stage. Resize and rotate if necessary. We want it to be positioned facing to the left so that it is ready to fly across the stage from right to left.

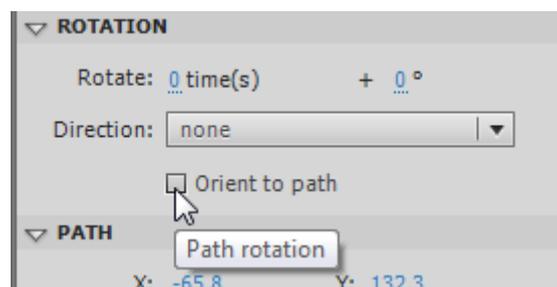
Being a firefly we want it to glow. Since it's a movie clip symbol we can do that. Add a glow filter effect to the firefly just as you did with the sun.

This time instead of using a classic tween we'll use one of Flash's new motion tweens. Right-click on frame 1 of the Firefly layer and select **Create Motion Tween**. The timeline on that layer will now be filled with a blue bar indicating that it has been filled with a tween.

Click on to the last frame in that layer (or press **Shift** and the **full stop** key). With the last frame selected, move the firefly to the left side of the stage. You will see a dotted line connecting the starting point with the finishing point. This dotted line shows the path that the object will move along. You can re-size the insect on the last frame if you like, to make it look as though it is moving closer or further away as it crosses the animation.



Move your mouse over a point on the line. Drag the line to adjust the path the insect will fly along. Click anywhere along the timeline on the Firefly layer to show the tween properties in the Properties Panel. Turn on the Orient to Path option. This will cause the object to change its direction according to the direction of the path it is following. This makes a more natural looking movement.



Note – you can add key frames along the firefly timeline to break the tween in to segments. This allows you to break the path in to different sections which allows for more complex paths (for example if you wanted the firefly to do a loop on its way across the stage).

Press **Ctrl Enter** to preview the completed animation.

ACTION SCRIPT

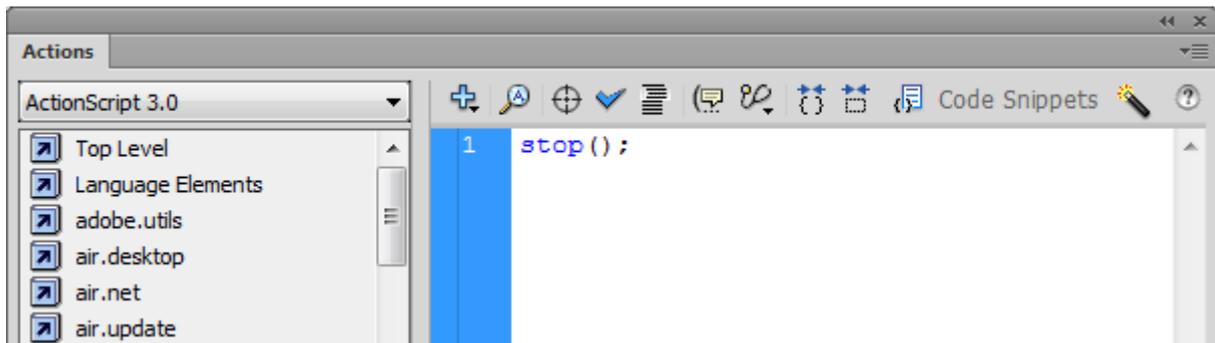
Action script is a programming language built in to Flash which allows for greater control and interaction in your projects. We'll add a small piece of action script which stops the animation when it reaches the last frame rather than constantly repeating.

Create a new layer called **Scripts**. It is usually a good idea to keep any scripts on a separate layer.

Add a key frame on the last frame of the Scripts layer

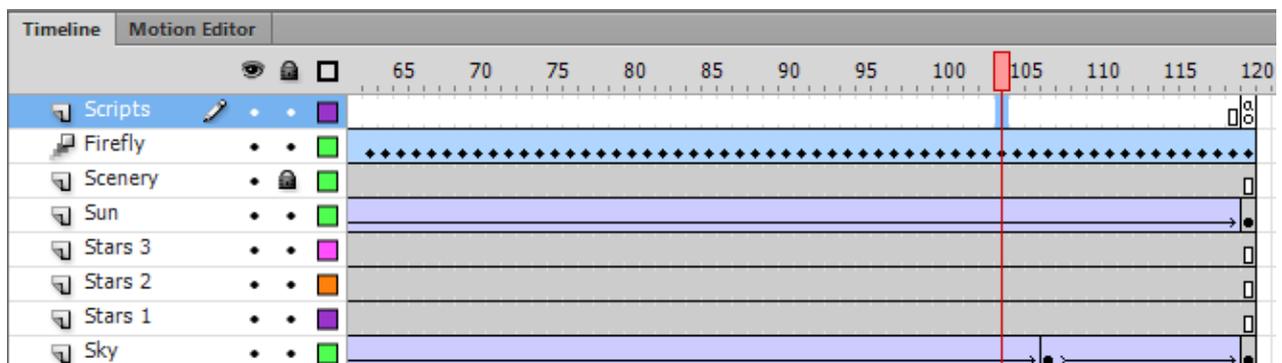
Right-click on the last frame in the scripts layer and select **Actions**.

In the script window type **stop();** as shown below.



The key frame will show a small  symbol to indicate that there is action script on that frame.

Close the scripts window and preview the animation (**Ctrl Enter**).



Save changes to your project.