



ADOBE ANIMATE 2020

5 – Sunrise Animation

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Sunrise Animation

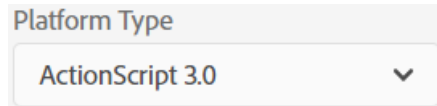
In the following exercise, we will create an animation of a landscape scene with the sun rising. This will include many things which are important in Animate projects such as:

- Re-using symbols
- Layers
- Movie clip symbols with other symbols and animation inside them
- Motion tweens
- Layer Depth
- Camera Controls




Exercise 1. Creating The Background

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

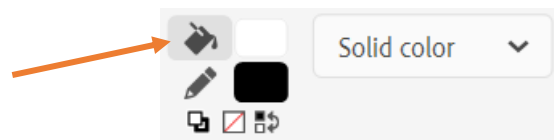
1. Create a new Animate project with the **Platform Type** set to **ActionScript 3.0**.



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.

- We want the sky to use a gradient so that it is lighter closer to the horizon, rather than all being one colour.
 - We want the sky to be animated so that it gets lighter as the sun rises.
2. With your **rectangle** tool , draw a rectangle that covers the whole top section of the stage (roughly the top 2/3). 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.
 3. 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.
 4. Click the **Colour** icon  (next to the properties panel) to display the **colour panel**.
 5. Make sure **Fill** colour is selected as shown below with the circle.



Tip you can drag the top of the colour panel away from the side of the screen if you would like to keep it open. You can also open it from the **Window** menu if you can't find it.



6. Change the fill type from **Solid Colour** to **Linear Gradient**.


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



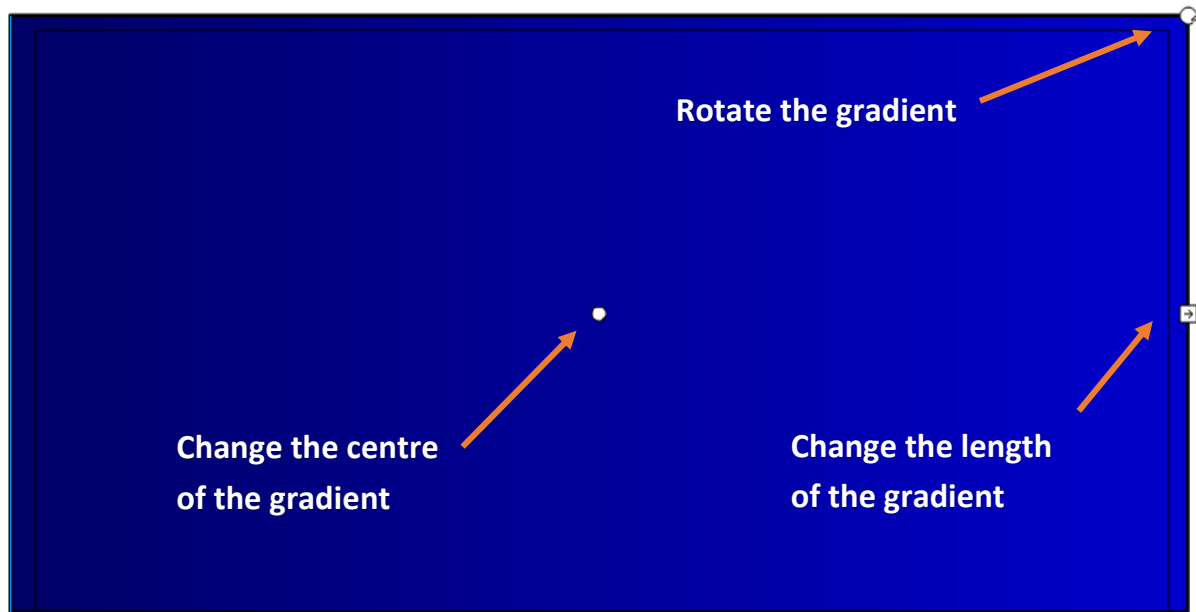
7. **Double-click** on the black marker  to display a selection of colours. Select a dark blue (almost black) colour for a dark blue night sky look
8. **Double-click** the white marker  and select a shade of blue that is still dark, but not as dark.





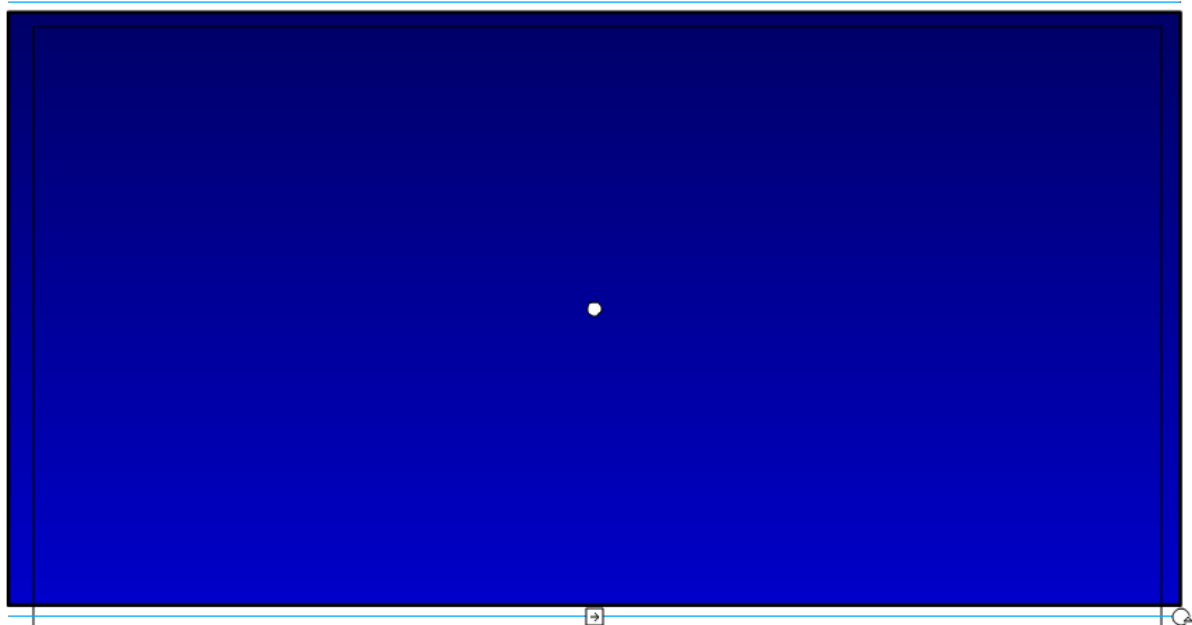
Currently the gradient goes from left to right but we want it to go from darker at the top, to lighter at the bottom. We will need to use the Gradient transform tool to change the direction of the gradient.

9. Make sure the rectangle is still selected.
10. Select the **Gradient Transform Tool** .

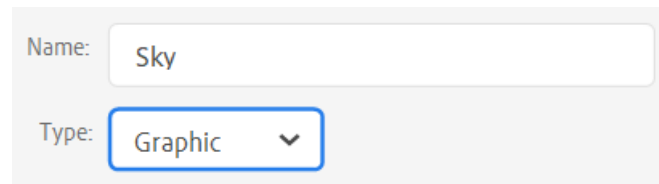
You will see 3 symbols around the selected shape as labelled below. These can be used to modify the gradient



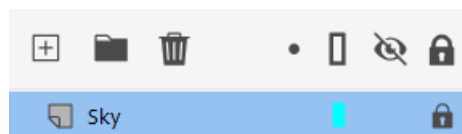
11. Use the **rotation point**  in the corner to rotate the gradient so that the darker colour is at the top of the rectangle. Hold **shift** while you rotate to limit the rotation to evenly spaced amounts
12. Use the **gradient length point**  to shorten the gradient so that it starts at the top of the rectangle and finishes at the bottom of the rectangle.



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



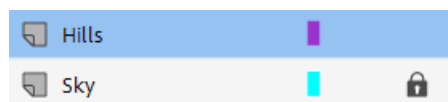
14. Change the name of the layer to **Sky** and lock the layer to prevent accidental changes when we are working on other layers. With the layer locked, try moving the rectangle on the stage. You will find that you won't be able to select it while the layer is locked.



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

Exercise 2. Creating The Scenery

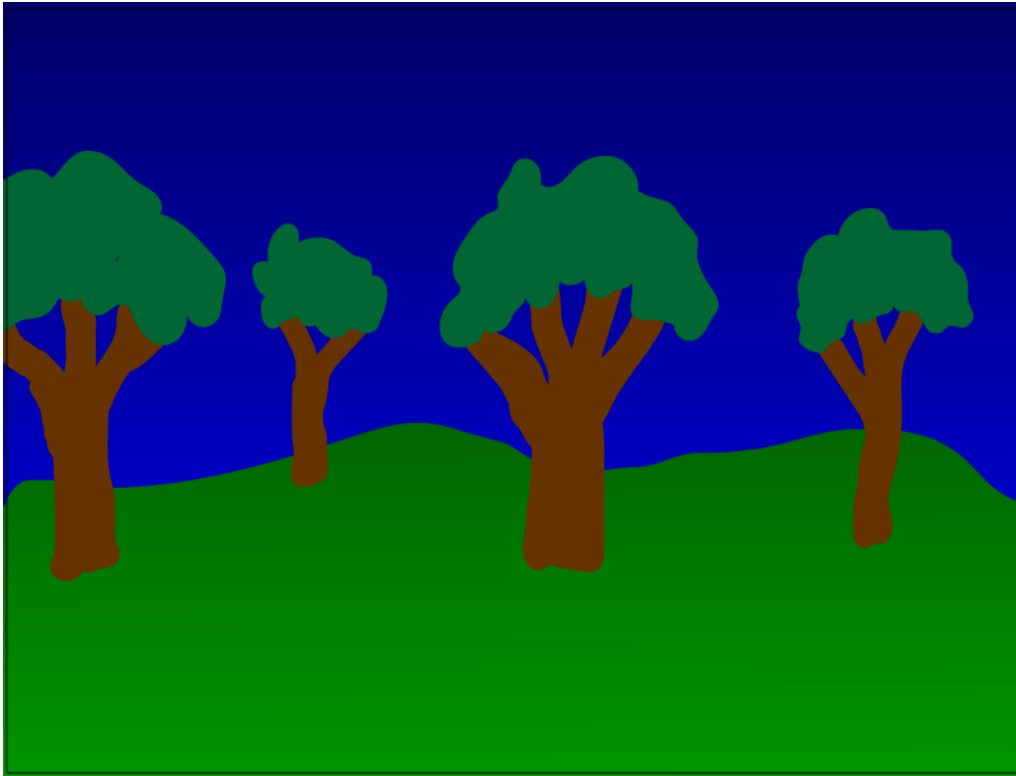
1. Create a new layer and call it **Hills**. Make sure it is above the **Sky** layer.



2. Use the drawing tools to create a hilly backdrop on the Hills layer.



3. Create a new layer called **Trees** above the **Hills** layer.
4. Use the drawing tools to create some trees on that layer. Leave gaps between the trees.



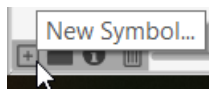
Tip for creating simple trees like the ones in the example above, use the brush tool with a brown fill colour to draw in the trunk. Then switch to a green fill colour and scribble on the top of the trunk to get the leaves.

5. Lock the **Trees** and **Hills** layers to prevent accidental changes.

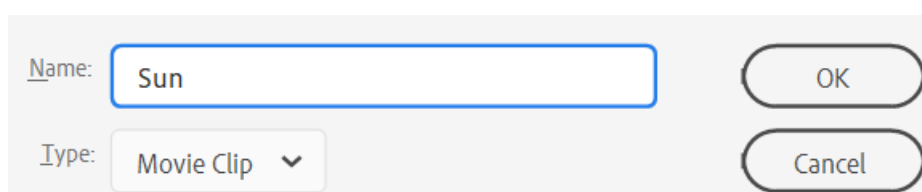
Exercise 3. Sun and Stars

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.

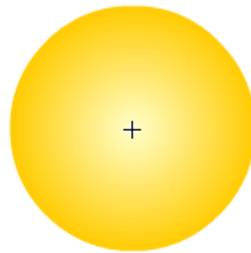
1. Click the **New Symbol** icon  at the bottom of the library panel.



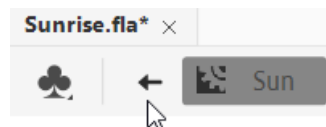
2. Call the new symbol **Sun** and make it a **Movie Clip** symbol. There won't actually be any animation taking place within this symbol but we will be using some symbol effects which are only possible with movie clips symbols, not graphic symbols.



3. 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.



4. Click the **return to 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.

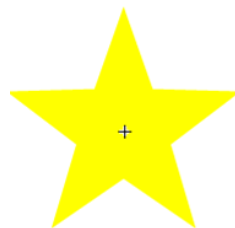
Now we'll create our star symbol. This will consist of 2 parts. First there will be a basic graphic symbol for the shape of the star. That symbol will then be used to create a movie clip symbol for the twinkling star.

5. Click the **New Symbol** icon at the bottom of the library panel.
6. This one will be a **Graphic** symbol called **Star**.

Name:

Type:

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

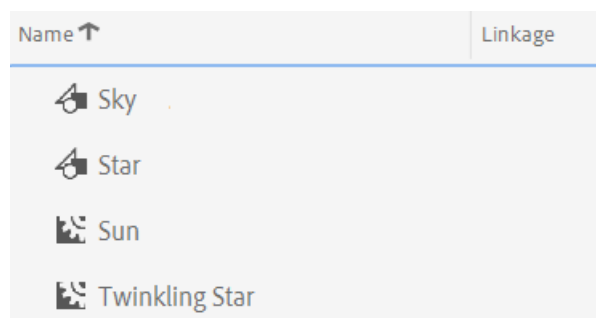


8. Click the **return to Scene** button at the top to finish editing the symbol and return to the stage.
9. Click the **New Symbol** icon at the bottom of the library panel.
10. This one will be a **Movie Clip** symbol called **Twinkling Star**.

Name:

Type:

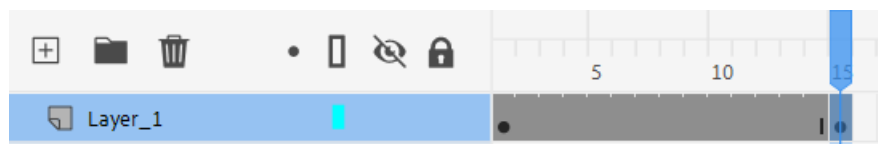
The Library panel will list the symbols that we have created.



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

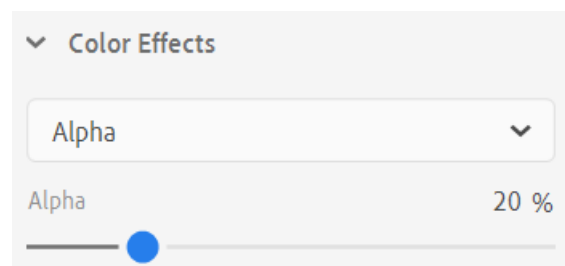
We will create an animation that makes the star go dimmer for half a second and then return to its full brightness at the end of the second. That animation will repeat to give the star a twinkling effect.

12. Click on **Frame 15** (half a second) in the timeline.
13. Add a **Key Frame** (F6) on that frame.



We want the star the begin slightly dim, get brighter and then go dim again.

14. Select frame 1.
15. Click on the star with the **Select** tool (or hold **Ctrl** to activate **Select** temporarily) to make sure it is still selected. We will change some properties in the properties panel.
16. Change the **Color Effect** style in the **Properties** to **Alpha**. This allows you to set the transparency of an object.



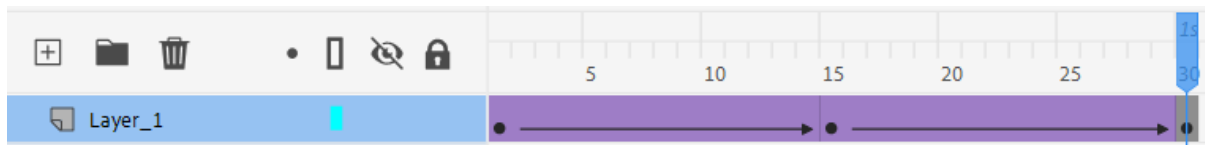
17. Adjust the alpha option. The lower the number, the less visible the star will be in the middle of the animation (you can take it to 0 if you want it to disappear completely).

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.

18. **Right-click** on **Frame 1** and select **Copy Frames**.
19. **Right-click** on **Frame 30** (one second) and select **Paste 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 Animate can fill in the frames between our key frames rather than have them stay the same.

20. **Right-click** between frame **1** and **15** and select **Create Classic Tween**. Create another classic tween between frame **15** and **30**.

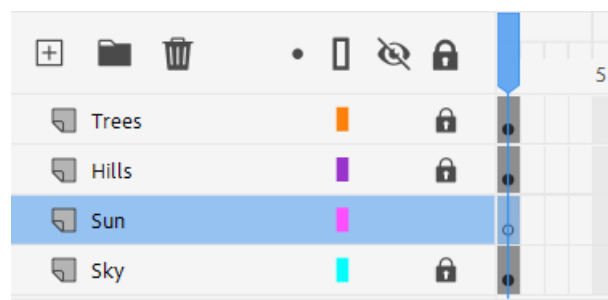


21. Press **Shift ,** (**shift comma**) to return to frame 1.
22. Press **Enter** to play the animation once.
23. Click the **return to Scene** button at the top to finish editing the symbol and return to the stage.
24. Save changes to your project.

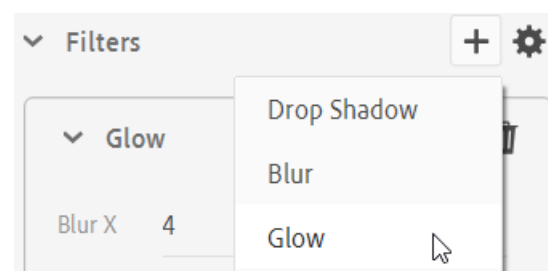
Exercise 4. Rising Sun

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.

1. Create a new layer called **Sun**.
2. Move the new layer behind the **Hills** layer since we want the sun to appear from behind the hills.

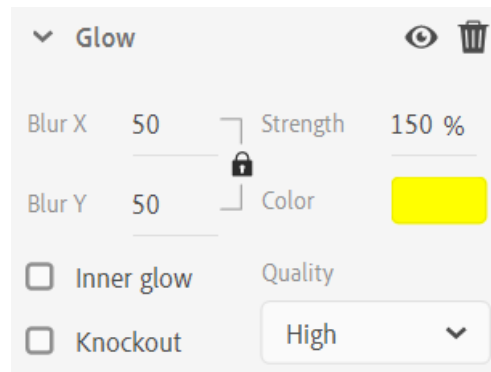


3. With the Sun layer still selected, drag the sun symbol from the library on to the stage. For the time being position it near the top so you can see it. We'll move it downward once we've got it ready.
4. Re-size the sun if needed. It should be a size that will look good when the sun first appears on the horizon.
5. We will add a filter from the properties panel so make sure the sun is still selected with the **Properties** panel showing.
6. Click the **Add Filter** button in the **Properties** panel.
7. 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.

8. 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.



9. Now move the sun so that it is below the horizon. Time to start the animation.
10. 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 150 (5 seconds) on the **Hills** layer.
11. Press **F5** to add a frame. Now frame 1 on that layer will continue to display until frame 150.
12. Do the same for the **Trees** layer.
13. Click on frame 160 of the **Sun** layer.
14. 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.
15. The sun should be selected even though it is behind the hills. If it is not, clicking the name of the layer will select the contents of the layer.
16. 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.
17. **Right click** on the **Sun** layer anywhere between frame 1 and frame 150. 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.
18. Press **Enter** to preview the animation of the rising sun.
19. Click on frame 150 of the Sky layer.
20. Insert a key frame.
21. If you previously locked the **Sky** layer, you will now need to unlock it so that you can select the sky object.



22. Select the **Sky** rectangle object if it is not already selected.
23. In the **properties** panel change the **colour** effect to **Brightness**. Use the **Bright** option to make the sky lighter.



24. Right click on the **Sky** layer anywhere between frame 1 and frame 150. Select Create Classic Tween.

25. **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.

26. Create a new layer called **Stars_1**. It should be in front of your **Sky** layer but behind the **Hills** layer so that some stars can be partially hidden behind the scenery.

27. 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.

28. Create a new layer called **Stars_2**.

29. Add a Key Frame on frame 5. Add some twinkling stars on this layer.

30. Create a new layer called **Stars_3**.

31. Add a Key Frame on frame 10. Add some twinkling stars on this layer.

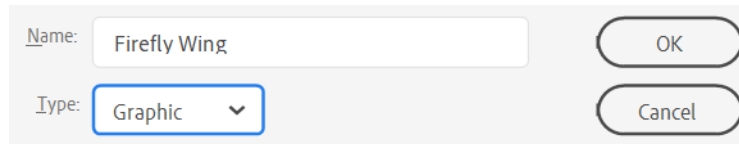
If you press **Enter** to preview the animation you won't see the stars twinkling since their animation is inside the movie clip symbol. To see animation on the stage as well as in movie clip symbols you need to use the **Test Movie** option (**Ctrl Enter**).

32. Close the preview window when done.

Exercise 5. 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.

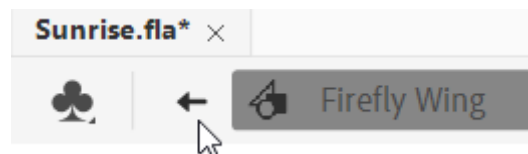
1. Create a new **graphic** symbol called **Firefly Wing**.



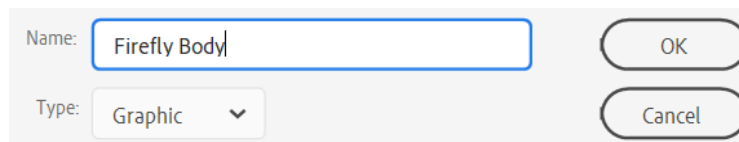
2. Use the drawing tools to create a wing for your firefly. Position it so that one end of it is over the small cross (centre position) in the symbol editing area. This should be the end that will be connected to the rest of the firefly.



3. Exit the symbol edit view.



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



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



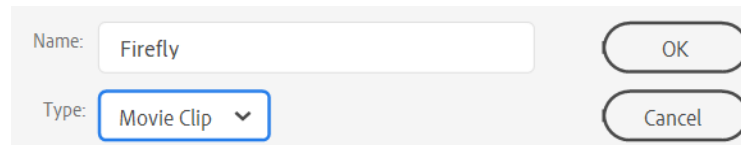
Tip The tail section of the firefly in this example was created with the gradient settings shown below.





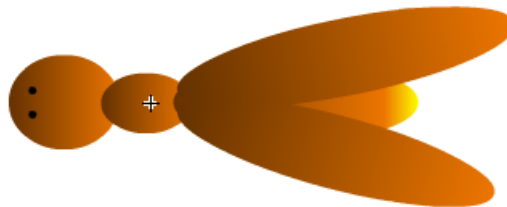
6. Exit the symbol edit view.




7. 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.

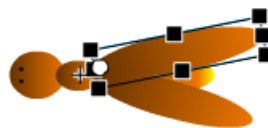


8. Add the **Firefly Body** symbol to the middle of the symbol editing area.
9. Rename **Layer 1** and call it **Body**.
10. Add a new layer called **Right_Wing**.
11. Add the **Wing** symbol from the library.
12. Use the Free Transform tool  to position, rotate and re-size the symbol as needed.
13. Add a new layer called **Left_Wing**.
14. Add the **Wing** symbol from the library.
15. Use the Free Transform  tool to position, rotate and re-size the symbol as needed.
16. 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 only take a short amount of time (12 frames).

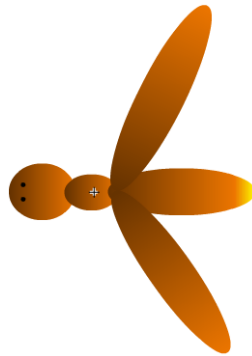
17. Firstly, we want to make sure the body is visible for the whole 12 frames. That part won't be changing during the animation. Click on frame 12 on the **Body** layer and add a normal frame (**F5**).
18. The wings will change to an outstretched position halfway through the animation (frame 6). Click on frame 1 on the **Right_Wing** layer
19. Select the **Free Transform**  tool.
20. 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.



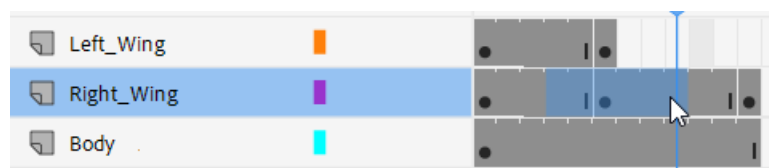
21. Select Frame 6 on the **Right_Wing** layer and add a key frame (**F6**).
22. Rotate the wing so that it is in outstretched position.



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



24. Right click on frame 1 on the **Right Wing** layer and select **Copy Frames**.
25. Right click on frame 12 and select **Past Frames**.
26. 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).



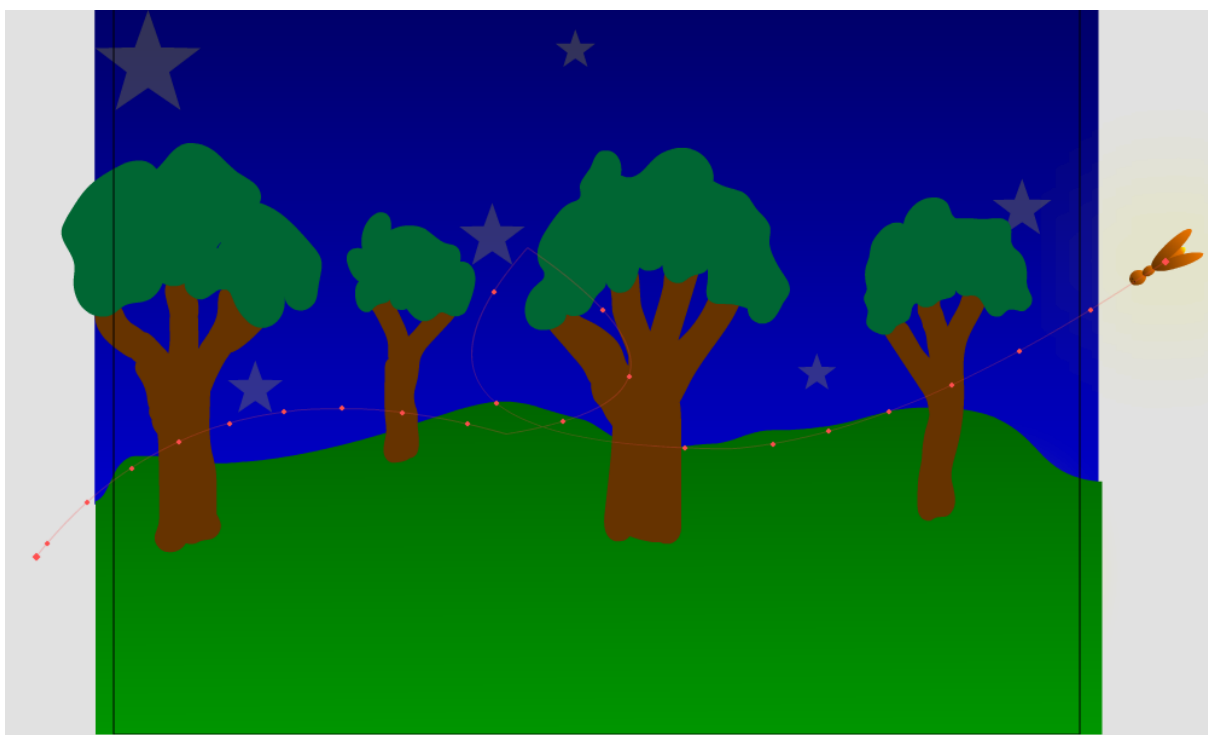
27. Right click on the selected frames select **Create Classic Tween**.
28. Repeat on the **Left Wing** layer.
29. Press **Enter** to preview the wing movement.
30. Exit the symbol edit view.

Exercise 6. Moving The Firefly

1. 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.
2. Take the Firefly symbol from the library, and place an 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.
3. 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.
4. 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.
5. Click on to the last frame in that layer (or press **Shift** and the **full stop** key).
6. 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.




7. Move your mouse over a point on the line. Drag the line to adjust the path the insect will fly along.
8. 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.

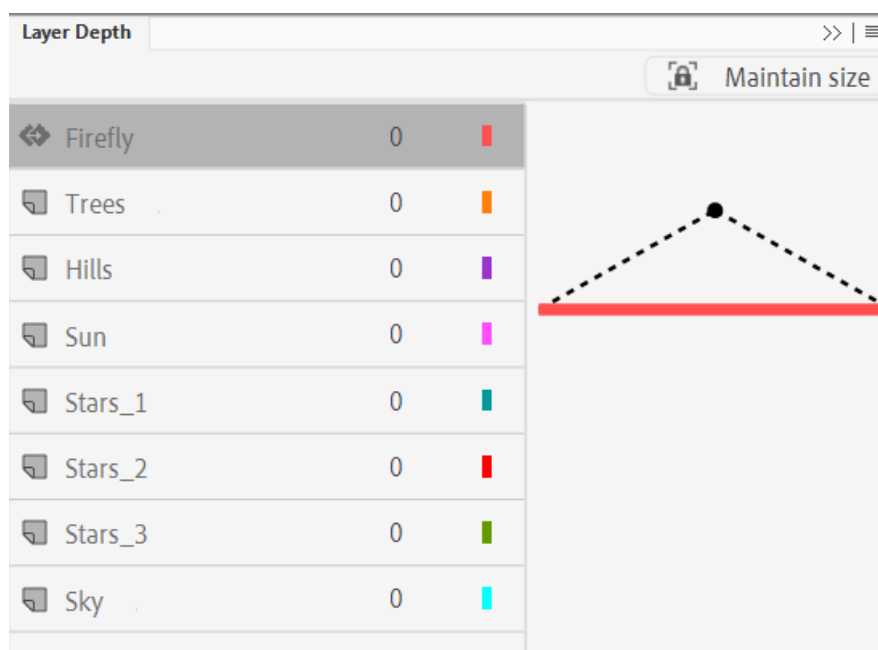


Exercise 7. Layer Depth

The order of our layers determine which objects appear in front when they overlap. In animations you don't always want things to stay in the same order. What if some things move closer or further away? Recent versions of Adobe Animate present a solution to this dilemma using Layer Depth. This allows you to determine how deep (how far away) each layer is in a way that can change across the timeline.

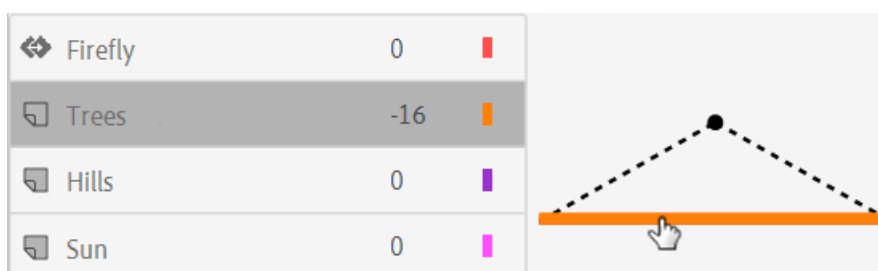
We will adjust our animation so that the firefly will be in front of everything else for most of the animation, but at one point it will move further away and fly behind one of our trees.

1. Make sure you are on Frame 1 and click the **Layer Depth** icon  (usually to the right of the **Properties Panel**) to open the **Layer Depth** panel.

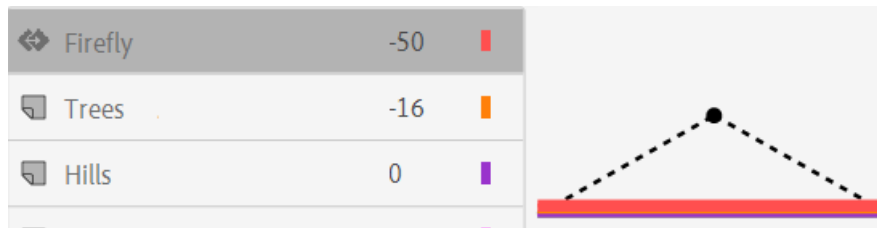


The Layer Depth panel shows a list of the layers in your project. Click a layer and to the right is an area that shows the *depth* of that layer.

2. Click on the **Trees** layer in the **Layer Depth** panel.
3. Drag the coloured Layer Depth line upward slightly so that it has a negative number. The higher you drag it, the closer the contents of that layer will be to the observer. We don't want to adjust it much though. Just enough for it to be closer than all of the layers below it.



- Adjust the layer depth for the Firefly layer so that it is closer (with a negative number) than the trees layer.

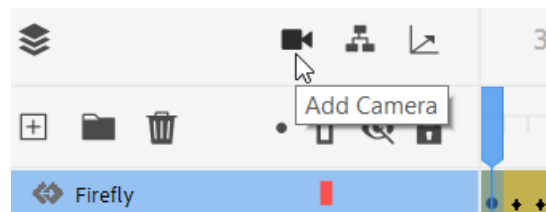


- Click on a frame in the middle of the timeline where the firefly overlaps a tree. On this frame, ensure that the firefly's layer depth is further away than the tree layer. This will cause the firefly to appear behind the tree.
- Check at other points along the timeline. Anywhere you want the firefly to be in front of a tree or behind a tree it passes, adjust the layer depth accordingly.
- Test your animation (**Ctrl Enter**) and save the changes to your project.

Exercise 8. Animating a Camera

So far in all of our projects, the animations have all been seen from the same viewpoint. In movies, cartoons etc it is common for the viewpoint to change. E.g. in a movie a camera might move or zoom in to change the viewpoint. In Animate, this can be done by animating a *camera*.

- Select Frame 1 on the timeline and click on Add Camera.



A small camera controls bar appears on the stage.



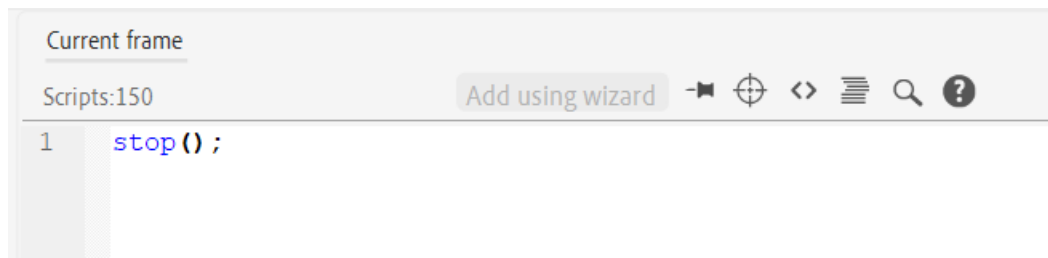
- Drag the zoom bar to the right so that your camera's viewpoint is closer.
- Move your mouse over the stage and your mouse will change to a camera pan shape. Drag the stage so that the camera is zoomed in on the part of the stage where the firefly will appear.
- Select the last frame and change the camera viewpoint so that you are zoomed out to view the whole stage.
- Create a **Classic tween** so that the camera layer is animated between the first and last frame.
- Preview your animation (**Ctrl Enter**) and save the changes to your project.



Exercise 9. Action Script

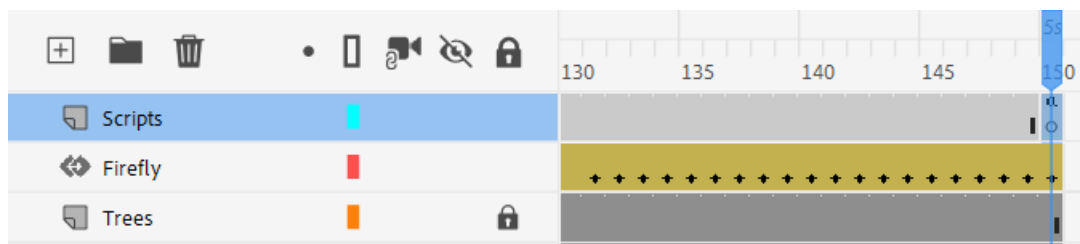
Action script is a programming language which allows for greater control and interaction in your projects. We'll add a small piece of action script which stops the animation when it reaches the last frame rather than constantly repeating.

1. Create a new layer called **Scripts**. It is a good idea to keep any scripts on a separate layer.
2. Add a key frame on the last frame of the Scripts layer
3. Right-click on the last frame in the scripts layer and select Actions.
4. In the script window type **stop();** as shown below (including the semi-colon).



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

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



6. Save changes to your project.