

6. Animating Layers

Lesson overview

In this lesson, you'll learn how to do the following:

- Animate a layered Adobe Photoshop file.
- Duplicate an animation using the pick whip.
- Work with imported Photoshop layer styles.
- Apply a track matte to control the visibility of layers.
- Animate a layer using the Corner Pin effect.
- Apply the Lens Flare effect to a solid layer.
- Use time remapping and the Layer panel to dynamically retime footage.
- Edit Time Remap keyframes in the Graph Editor.



This lesson will take approximately an hour to complete. Download the Lesson06 project files from the Lesson & Update Files tab on your Account page at www.peachpit.com, if you haven't already done so. As you work on this lesson, you'll preserve the start files. If you need to restore the start files, download them from your Account page.



PROJECT: SUNRISE EFFECT IN A FILM SHORT

Animation is all about making changes over time—changes to an object or image's position, opacity, scale, and other properties. This lesson provides more practice animating the layers of a Photoshop file, including dynamically remapping time.

Getting started

Adobe After Effects provides several tools and effects that let you simulate motion video using a layered Photoshop file. In this lesson, you will import a layered Photoshop file of the sun appearing through a window, and then animate it to simulate the motion of the sun rising behind the panes of glass. This is a stylized animation in which the motion is first accelerated, and then slows down as clouds and birds move through the window frame at the end.

First, you'll preview the final movie and set up the project.

1. Make sure the following files are in the Lessons/Lesson06 folder on your hard disk, or download them from your Account page at www.peachpit.com now:
 - In the Assets folder: clock.mov, sunrise.psd
 - In the Sample_Movies folder: Lesson06_regular.mov, Lesson06_retimed.mov
2. Open and play the Lesson06_regular.mov file to see the straightforward time-lapse animation you will create in this lesson.

3. Open and play the Lesson06_retimed.mov file to see the same animation after time has been remapped, which you will also do in this lesson.
4. When you're done, quit QuickTime Player. You may delete the sample movies from your hard disk if you have limited storage space.

When you begin the lesson, restore the default application settings for After Effects. See [“Restoring default preferences”](#) on page 2.

5. Start After Effects, and then immediately hold down Ctrl+Alt+Shift (Windows) or Command+Option+Shift (Mac OS) to restore default preferences settings. When prompted, click OK to delete your preferences file. Then, close the Start window.

After Effects opens to display an empty, untitled project.

6. Choose File > Save As > Save As.
7. In the Save As dialog box, navigate to the Lessons/Lesson06/Finished_Project folder.
8. Name the project **Lesson06_Finished.aep**, and then click Save.

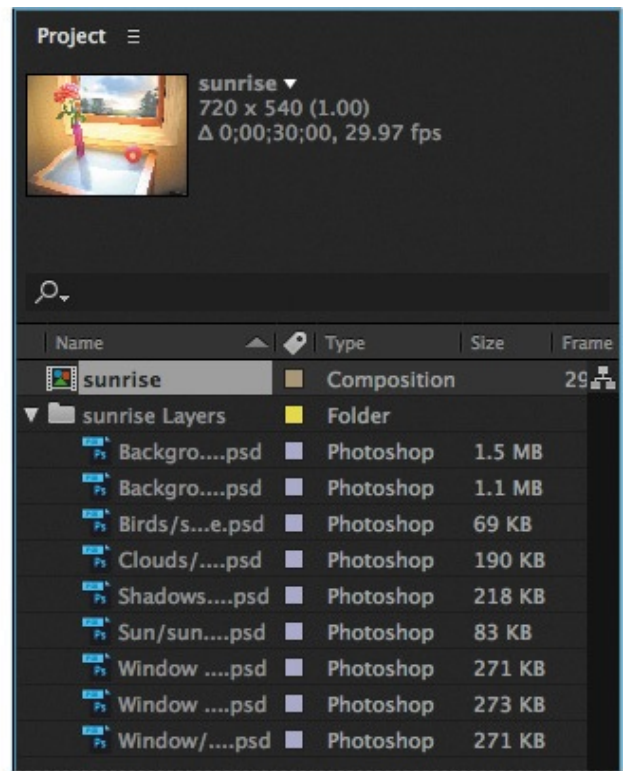
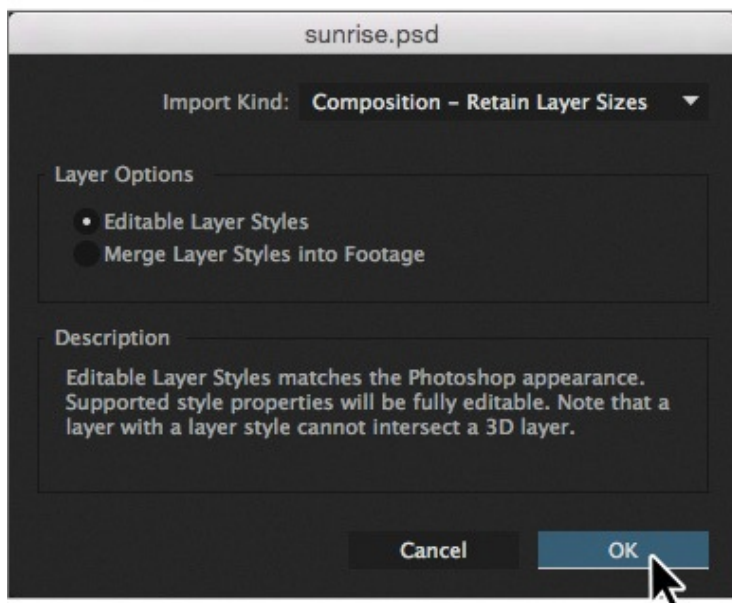
Importing the footage

You need to import one source item for this lesson.

1. Double-click an empty area of the Project panel to open the Import File dialog box.
2. Navigate to the Lessons/Lesson06/Assets folder on your hard disk, and select the sunrise.psd file.
3. Choose Composition – Retain Layer Sizes from the Import As menu, so the dimensions of each layer will match the layer's content.
4. Click Import or Open.
5. In the Sunrise.psd dialog box, make sure Composition – Retain Layer Sizes is selected in the Import Kind menu, and click OK.

Before continuing, take a moment to study the layers of the file you just imported.

6. In the Project panel, expand the sunrise Layers folder to see the Photoshop layers. Resize the Name column to make it wider and easier to read, if necessary.



Each of the elements you'll animate in After Effects—the shadows, birds, clouds, and sun—is on a separate layer. In addition, there is one layer representing the initial, predawn lighting conditions in the room (Background), and a second layer that represents the final, bright daylight conditions in the room (Background Lit). Similarly, there are two layers for the two lighting conditions outside the window: Window and Window Lit. The Window Pane layer includes a Photoshop layer style that simulates a pane of glass.

After Effects preserves the layer order, transparency data, and layer styles from the source Photoshop document. It also preserves other features, such as adjustment layers and type, which you don't happen to be using in this project.

Preparing layered Photoshop files

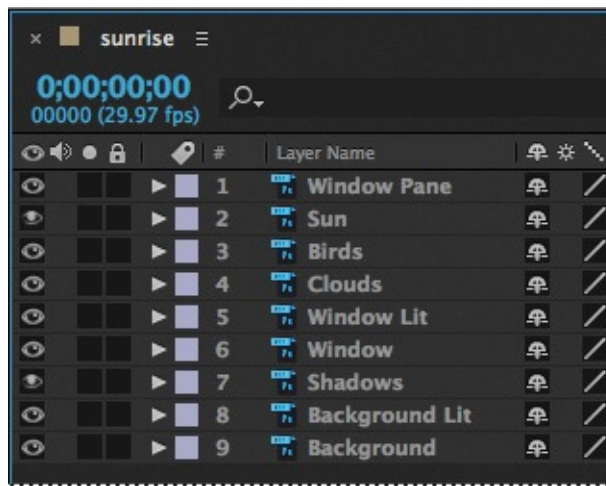
Before you import a layered Photoshop file, name its layers carefully to reduce preview and rendering time, and to avoid problems importing and updating the layers:

- Organize and name layers. If you change a layer name in a Photoshop file after you have imported it into After Effects, After Effects retains the link to the original layer. However, if you delete an imported layer, After Effects will be unable to find the original layer and will list it as missing in the Project panel.
- To avoid confusion, make sure that each layer has a unique name.

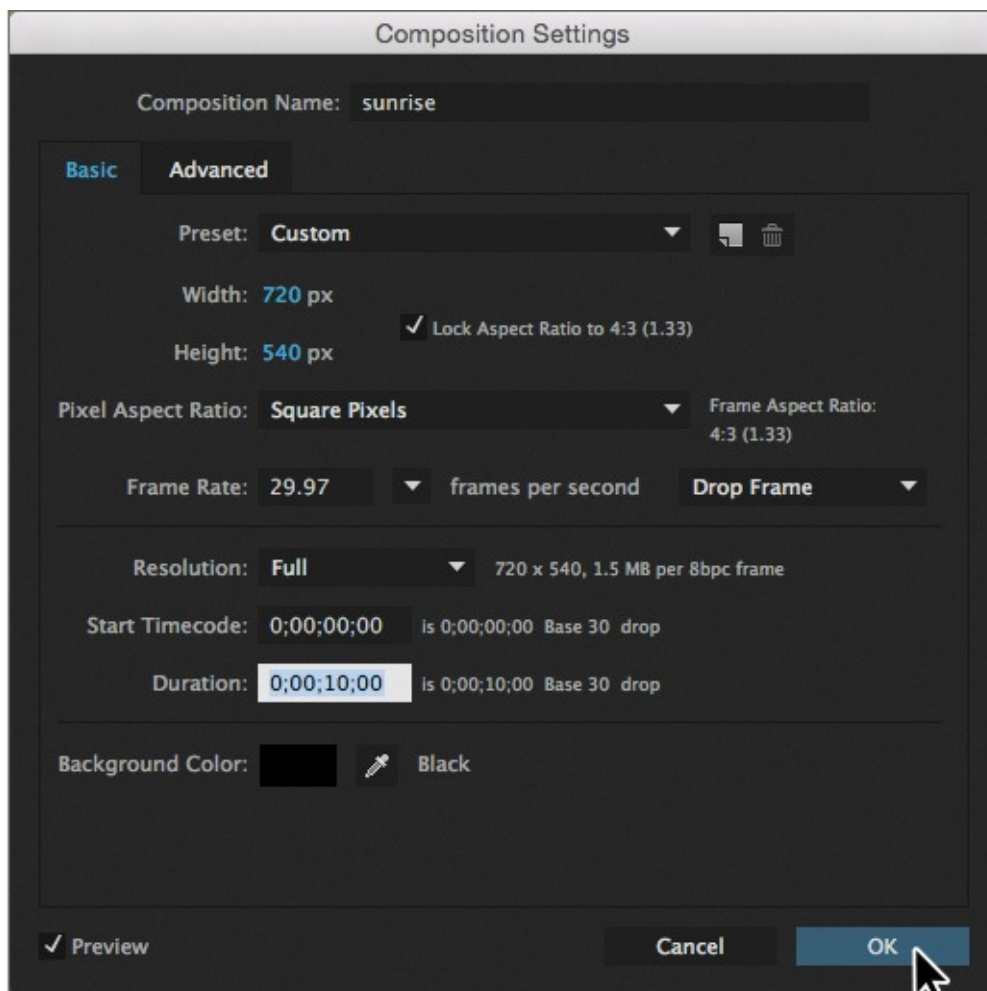
Creating the composition

For this lesson, you'll use the imported Photoshop file as the basis of the composition.

1. Double-click the sunrise composition in the Project panel to open it in the Composition panel and in the Timeline panel.



2. Choose Composition > Composition Settings.
3. In the Composition Settings dialog box, change the Duration to **10:00** to make the composition 10 seconds long, and then click OK.



About Photoshop layer styles

Adobe Photoshop provides a variety of layer styles—such as shadows, glows, and bevels—that change the appearance of a layer. After Effects can preserve these layer styles when you import Photoshop layers. You can also apply layer styles in After Effects.

Though layer styles are referred to as *effects* in Photoshop, they behave more like blending modes in After Effects. Layer styles follow transformations in the standard render order, whereas effects precede transformations. Another difference is that each layer style blends directly with the underlying layers in the composition, whereas an effect is rendered on the layer to which it's applied, the result of which then interacts with the underlying layers as a whole.

The layer style properties are available for the layer in the Timeline panel.

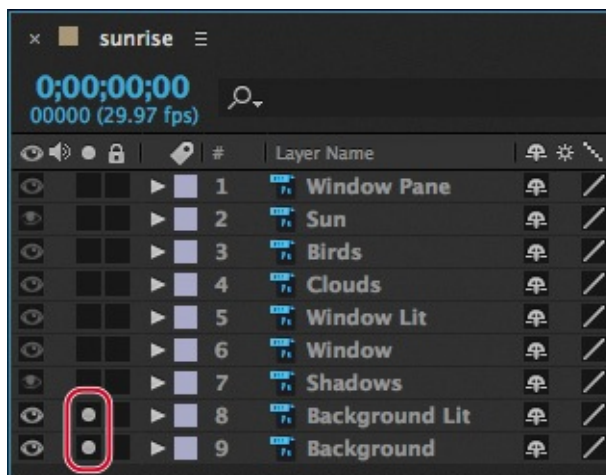
To learn more about working with layer styles in After Effects, see After Effects Help.

Simulating lighting changes

The first part of the animation involves lightening the dark room. You'll use Opacity keyframes to animate the light.

1. In the Timeline panel, click the Solo switch (●) for both the Background Lit and Background layers.

Soloing the layers isolates them to speed animating, previewing, and rendering.

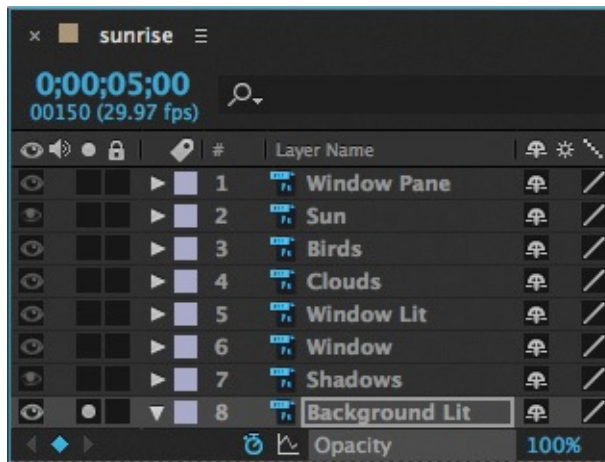


Currently, the lit background is on top of the regular (darker) background, obscuring it and making the initial frame of the animation light. However, you want the animation to start dark, and then lighten. To accomplish this, you will make the Background Lit layer initially transparent, and then animate its opacity so that it appears to lighten the background over time.

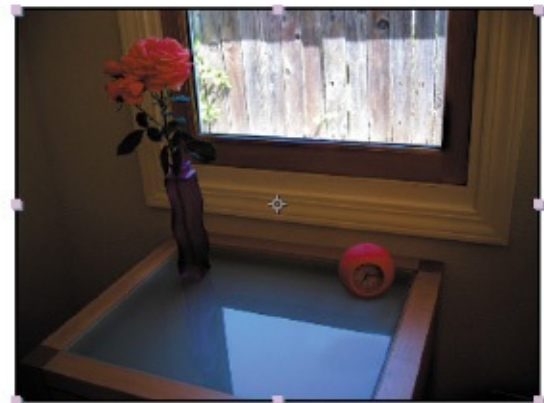
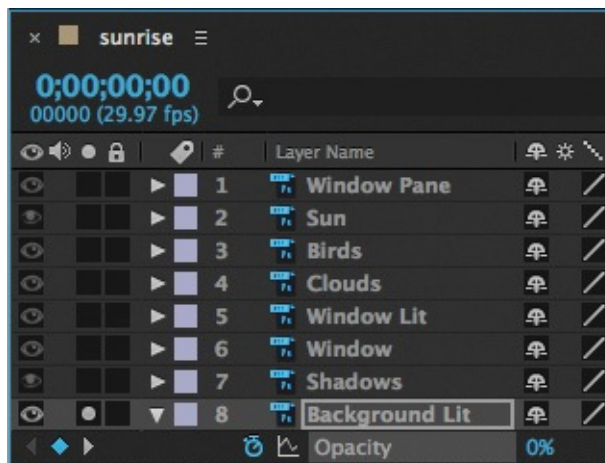
2. Go to 5:00.
3. Select the Background Lit layer in the Timeline panel, and press T to reveal its

Opacity property.

- Click the stopwatch icon (🕒) to set an Opacity keyframe. Note that the Opacity value is 100%.

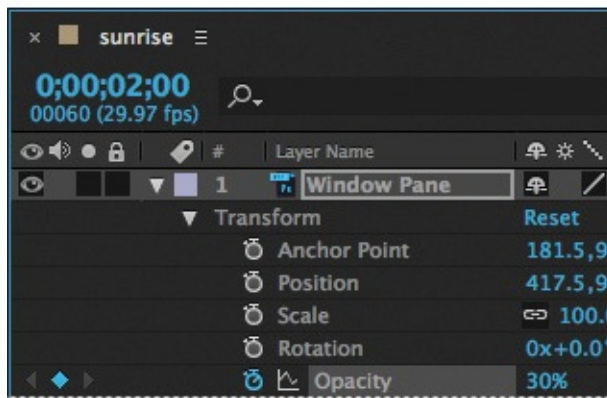


- Press the Home key, or drag the current-time indicator to 0:00. Then set the Opacity for the Background Lit layer to 0%. After Effects adds a keyframe.

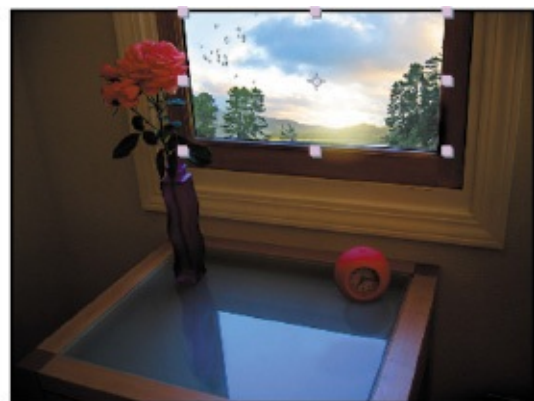
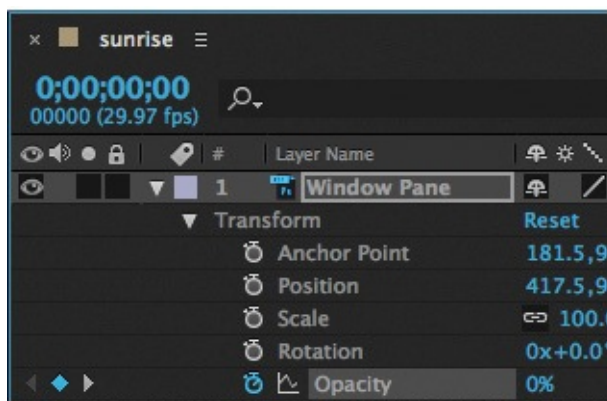


Now, when the animation begins, the Background Lit layer is transparent, which allows the dark Background layer to show through.

- Click the Solo switches (●) for the Background Lit and Background layers to restore the view of the other layers, including Window and Window Lit. Make sure to leave the Opacity property for the Background Lit layer visible.
- Expand the Window Pane layer's Transform properties. The Window Pane layer has a Photoshop layer style that creates a bevel on the window.
- Go to 2:00, and click the stopwatch next to the Opacity property for the Window Pane layer to create a keyframe at the current value, 30%.



9. Press the Home key or drag the current-time indicator to the beginning of the time ruler, and change the Opacity property to 0%.



10. Hide the Window Pane properties.
11. Click the Play/Pause button (▶) in the Preview panel, or press the spacebar, to preview the animation.

The interior of the room transitions gently from dimly to brightly lit.

12. Press the spacebar to stop playback at any time after 5:00.
13. Choose File > Save.

About expressions

When you want to create and link complex animations, such as multiple car wheels spinning, but want to avoid creating tens or hundreds of keyframes by hand, you can use *expressions* instead. With expressions, you can create relationships between layer properties and use one property's keyframes to dynamically animate another layer. For example, if you set rotation keyframes for a layer and then apply the Drop Shadow effect, you can use an expression to link the Rotation property's values with the Drop Shadow effect's Direction values; that way, the drop shadow changes with the layer as it rotates.

Expressions are based on the JavaScript language, but you don't need to know JavaScript to use them. You can create expressions by using simple examples and modifying them to suit your needs, or by chaining objects and methods together.

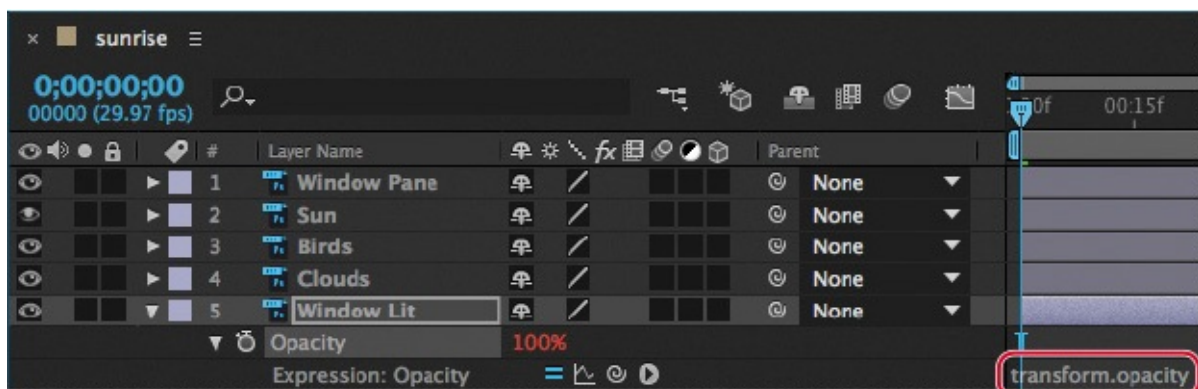
You work with expressions in the Timeline panel or the Effect Controls panel. You can use the pick whip to create expressions, or you can enter and edit expressions manually in the expression field—a text field in the time graph under the property.

For more about expressions, see After Effects Help.

Duplicating an animation using the pick whip

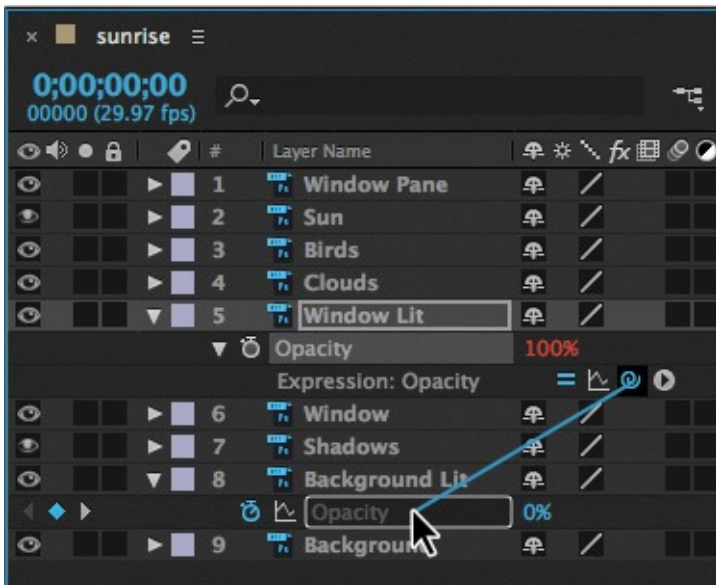
Now you need to lighten the view through the window. To do this, you'll use the pick whip to duplicate the animation you just created. You can use the pick whip to create expressions that link the values of one property or effect to another.

1. Press the Home key, or move the current-time indicator to the beginning of the time ruler.
2. Select the Window Lit layer, and press T to reveal its Opacity property.
3. Alt-click (Windows) or Option-click (Mac OS) the Opacity stopwatch for the Window Lit layer to add an expression for the default Opacity value, 100%. The words *transform.opacity* appear in the time ruler for the Window Lit layer.



4. Click the pick whip icon (⌚) on the Window Lit Expression: Opacity line, and drag it to the Opacity property name in the Background Lit layer. When you release the

mouse, the pick whip snaps, and the expression in the Window Lit layer time ruler now reads `thisComp.layer("Background Lit").transform.opacity.` This means that the Opacity value for the Background Lit layer (0%) replaces the previous Opacity value (100%) for the Window Lit layer.



5. Drag the current-time indicator from 0:00 to 5:00. Notice that the Opacity values for the two layers match.
6. Go to the beginning of the time ruler, and then press the spacebar to preview the animation again. Notice that the sky outside the window lightens as the room inside the window does.
7. Press the spacebar to stop playback.
8. Hide the Window Lit and Background Lit layers' properties to keep the Timeline panel tidy for your next task.
9. Choose File > Save to save your project.

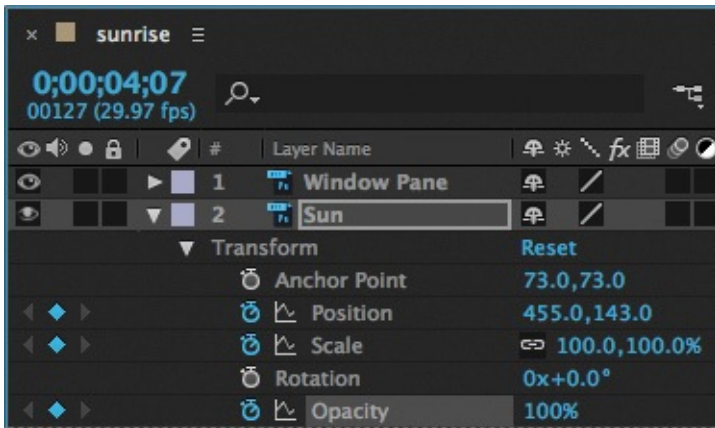
Animating movement in the scenery

The scenery outside the window is unrealistically static. For one thing, the sun should actually rise. In addition, shifting clouds and flying birds would bring this scene to life.

Animating the sun

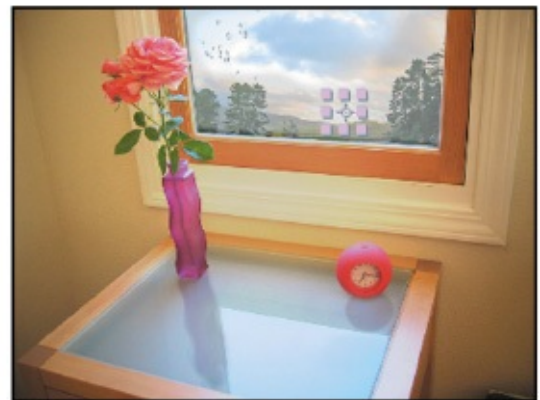
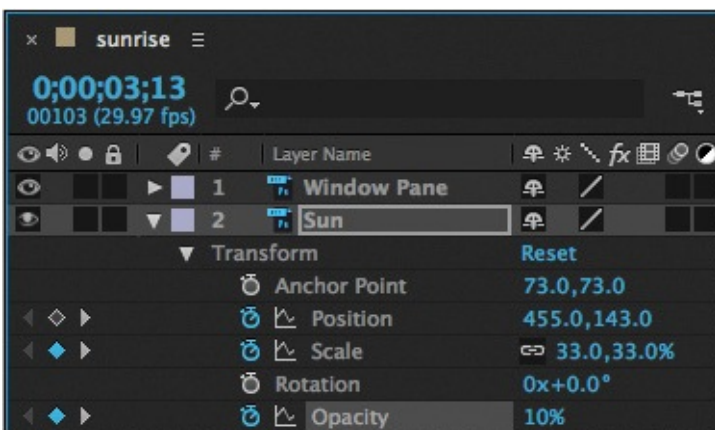
To make the sun rise in the sky, you'll set keyframes for its Position, Scale, and Opacity properties.

1. In the Timeline panel, select the Sun layer, and expand its Transform properties.
2. Go to 4:07, and click the stopwatch icons (⌚) to set keyframes for the Position, Scale, and Opacity properties at their default values.

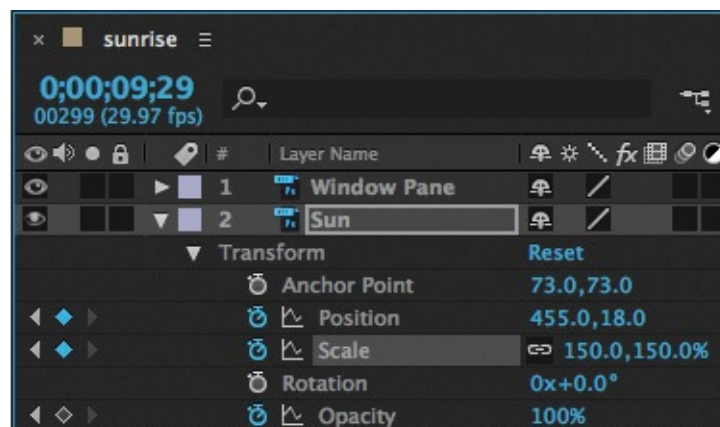


3. Go to 3:13.

4. Still working with the Sun layer, set its Scale to **33, 33%** and its Opacity to **10%**. After Effects adds a keyframe for each property.



5. Press the End key, or move the current-time indicator to the end of the composition.



6. For the Position property of the Sun layer, set the y value to **18**, and then set the Scale values to **150, 150%**. After Effects adds two keyframes.

You've just set keyframes that instruct the sun to move up and across the sky, and to become slightly larger and brighter as it rises.

7. Hide the Sun layer's properties.

Animating the birds

Next, you'll animate the motion of the birds flying by. To create the animation faster, you'll take advantage of the Auto-Keyframe option. When Auto-Keyframe is enabled, After Effects automatically creates a keyframe whenever you change a value.

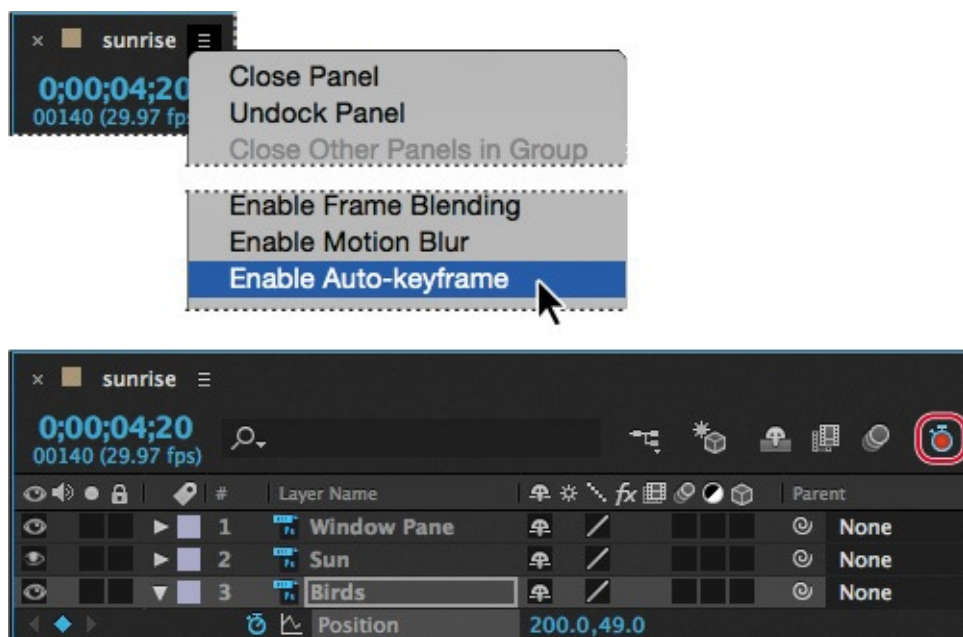
1. Select the Birds layer in the Timeline panel, and press P to reveal its Position property.
2. From the Timeline panel menu, choose Enable Auto-Keyframe.

Note

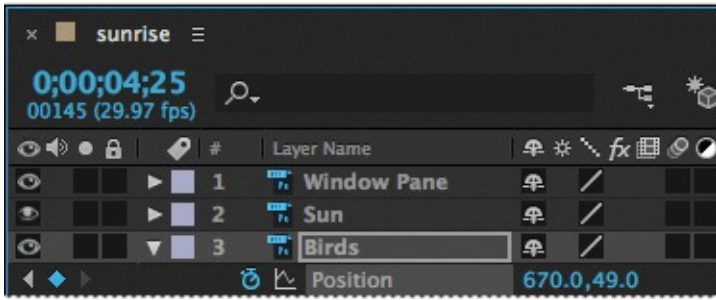
While the Auto-Keyframe option can make your life easier, it can also create more keyframes than you intended. Choose Enable Auto-Keyframe only when you need it for a specific task, and remember to disable it when you're done with that task!

A red stopwatch icon appears at the top of the Timeline panel to remind you that Auto-Keyframe is selected.

3. Go to 4:20, and set the Position values for the Birds layer to **200, 49**. After Effects automatically adds a keyframe.



4. Go to 4:25, and set the Position values of the Birds layer to **670, 49**. After Effects adds a keyframe.

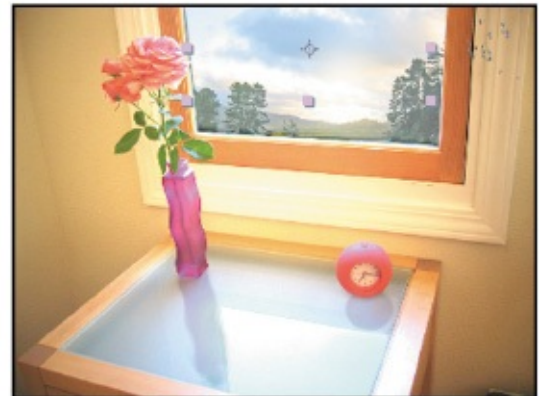
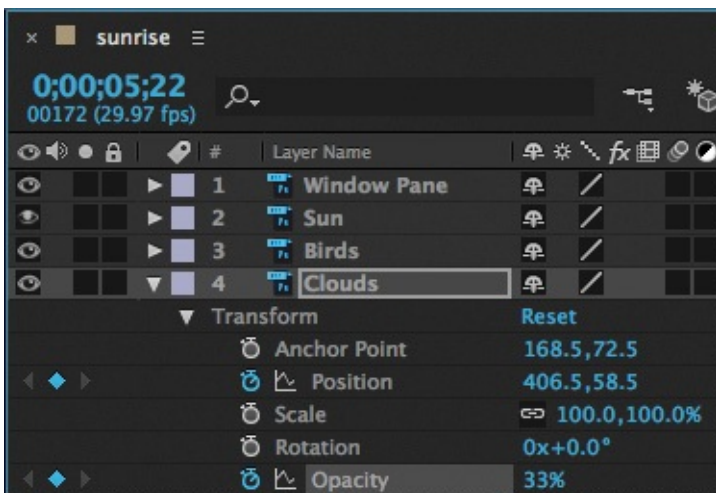


5. Select the Birds layer, and press P to hide its Position property.

Animating the clouds

Next, you'll animate the clouds drifting across the sky.

1. Select the Clouds layer in the Timeline panel, and expand its Transform properties.
2. Go to 5:22, and click the stopwatch icon (⌚) for the Position property to set a Position keyframe at the current value (406.5, 58.5).
3. Still at 5:22, set the Opacity for the Clouds layer to **33%**.

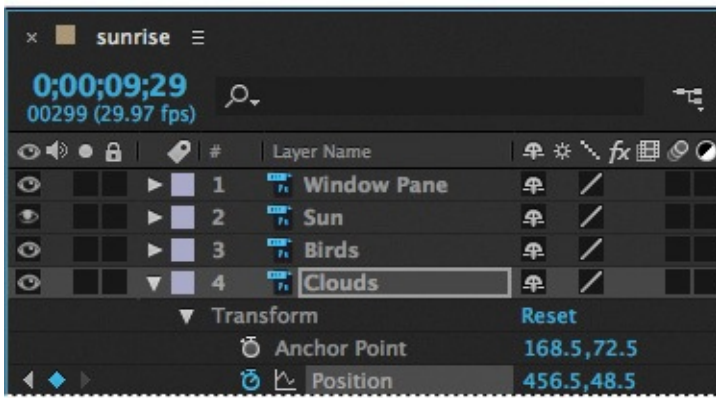


After Effects automatically adds a keyframe, because Auto-Keyframe is still enabled.

4. Choose Enable Auto-Keyframe from the Timeline panel menu to deselect it.
5. Go to 5:02, and set the Clouds layer Opacity value to **0%**.

After Effects adds a keyframe, even though you disabled Auto-Keyframe. After Effects adds a keyframe whenever you change the value for a property that already has a keyframe in the timeline.

6. Go to 9:07, and set the Clouds layer Opacity value to **50%**. After Effects adds a keyframe.
7. Press the End key, or move the current-time indicator to the last frame of the composition.
8. Set the Position of the Clouds layer to **456.5, 48.5**. After Effects adds a keyframe.

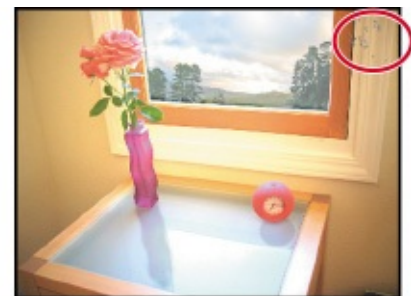


Previewing the animation

Now, see how it all comes together.

1. Press the Home key, or go to 0:00.
2. Press F2 or click an empty area in the Timeline panel to deselect everything, and then press the spacebar to preview the animation.

The sun rises in the sky, the birds fly by (very quickly), and the clouds drift. So far, so good! However, there's a fundamental problem: These elements all overlap the window frame—the birds even appear to be flying inside the room. You'll solve this next.



3. Press the spacebar to stop playback.
4. Hide the properties for the Clouds layer, and then choose File > Save.

Adjusting the layers and creating a track matte

To solve the problem of the sun, birds, and clouds overlapping the window frame, you must first adjust the hierarchy of the layers within the composition. Then you'll use an alpha track matte to allow the outside scenery to show through the window, but not appear to be inside the room.

Precomposing layers

You'll start by precomposing the Sun, Birds, and Clouds layers into one composition.

1. Shift-click to select the Sun, Birds, and Clouds layers in the Timeline panel.
2. Choose Layer > Pre-compose.
3. In the Pre-compose dialog box, name the new composition **Window Contents**. Make sure the Move All Attributes Into The New Composition option is selected, and select Open New Composition. Then click OK.