



Adobe

After Effects CC

2019 release



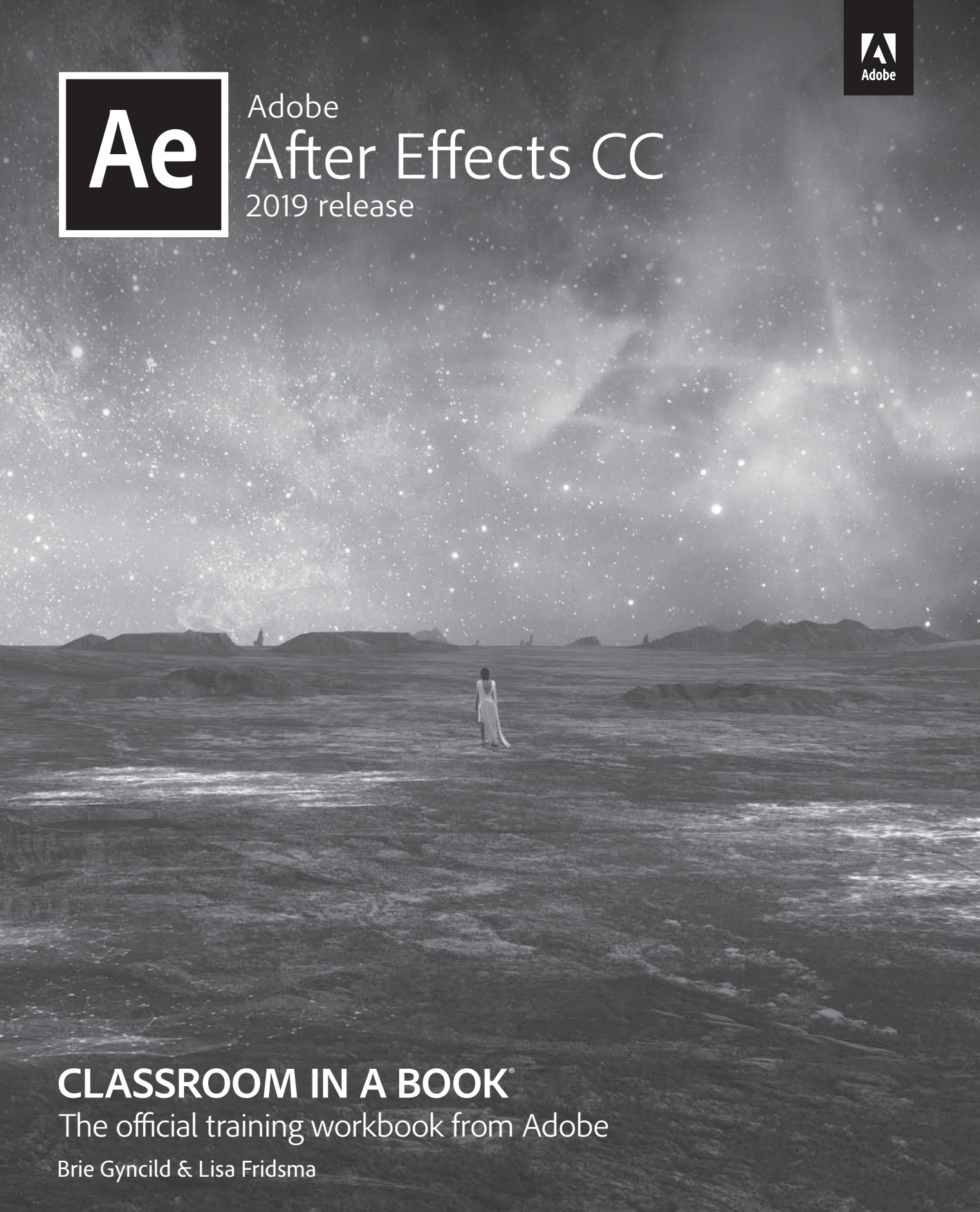
CLASSROOM IN A BOOK[®]

The official training workbook from Adobe

Brie Gyncild & Lisa Fridsma



Adobe
After Effects CC
2019 release



CLASSROOM IN A BOOK®

The official training workbook from Adobe

Brie Gyncild & Lisa Fridsma

Adobe After Effects CC Classroom in a Book (2019 Release)

© 2019 Adobe. All rights reserved.

Adobe Press is an imprint of Pearson Education, Inc. For the latest on Adobe Press books, go to www.adobepress.com. To report errors, please send a note to errata@peachpit.com. For information regarding permissions, request forms, and the appropriate contacts within the Pearson Education Global Rights & Permissions department, please visit www.pearsoned.com/permissions/.

If this guide is distributed with software that includes an end user license agreement, this guide, as well as the software described in it, is furnished under license and may be used or copied only in accordance with the terms of such license. Except as permitted by any such license, no part of this guide may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, recording, or otherwise, without the prior written permission of Adobe Systems Incorporated. Please note that the content in this guide is protected under copyright law even if it is not distributed with software that includes an end user license agreement.

The content of this guide is furnished for informational use only, is subject to change without notice, and should not be construed as a commitment by Adobe Systems Incorporated. Adobe Systems Incorporated assumes no responsibility or liability for any errors or inaccuracies that may appear in the informational content contained in this guide.

Please remember that existing artwork or images that you may want to include in your project may be protected under copyright law. The unauthorized incorporation of such material into your new work could be a violation of the rights of the copyright owner. Please be sure to obtain any permission required from the copyright owner.

Any references to company names in sample files are for demonstration purposes only and are not intended to refer to any actual organization.

Adobe, the Adobe logo, Adobe Media Encoder, Adobe Premiere, After Effects, Audition, Classroom in a Book, Creative Cloud, Illustrator, InDesign, and Photoshop are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries. Adobe product screenshots reprinted with permission from Adobe Systems Incorporated.

Apple, macOS, Macintosh, and QuickTime are trademarks of Apple, registered in the U.S. and other countries. Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the U.S. and/or other countries. All other trademarks are the property of their respective owners.

Unless otherwise indicated herein, any third party trademarks that may appear in this work are the property of their respective owners and any references to third party trademarks, logos, or other trade dress are for demonstrative or descriptive purposes only. Such references are not intended to imply any sponsorship, endorsement, authorization, or promotion of Pearson Education, Inc. products by the owners of such marks, or any relationship between the owner and Pearson Education, Inc. or its affiliates, authors, licensees, or distributors.

Adobe Systems Incorporated, 345 Park Avenue, San Jose, California 95110-2704, USA

Notice to U.S. Government End Users. The Software and Documentation are “Commercial Items,” as that term is defined at 48 C.F.R. §2.101, consisting of “Commercial Computer Software” and “Commercial Computer Software Documentation,” as such terms are used in 48 C.F.R. §12.212 or 48 C.F.R. §227.7202, as applicable. Consistent with 48 C.F.R. §12.212 or 48 C.F.R. §§227.7202-1 through 227.7202-4, as applicable, the Commercial Computer Software and Commercial Computer Software Documentation are being licensed to U.S. Government end users (a) only as Commercial Items and (b) with only those rights as are granted to all other end users pursuant to the terms and conditions herein. Unpublished-rights reserved under the copyright laws of the United States. Adobe Systems Incorporated, 345 Park Avenue, San Jose, CA 95110-2704, USA. For U.S. Government End Users, Adobe agrees to comply with all applicable equal opportunity laws including, if appropriate, the provisions of Executive Order 11246, as amended, Section 402 of the Vietnam Era Veterans Readjustment Assistance Act of 1974 (38 USC 4212), and Section 503 of the Rehabilitation Act of 1973, as amended, and the regulations at 41 CFR Parts 60-1 through 60-60, 60-250, and 60-741. The affirmative action clause and regulations contained in the preceding sentence shall be incorporated by reference.

Cover Illustration:

Takayuki Sato (Tokyo, Japan), behance.net/gallery/47437367/Beyond-the-Moment-of-Beauty-Into-the-Galaxy

ISBN-13: 978-0-13-529864-0

ISBN-10: 0-13-529864-4

WHERE ARE THE LESSON FILES?

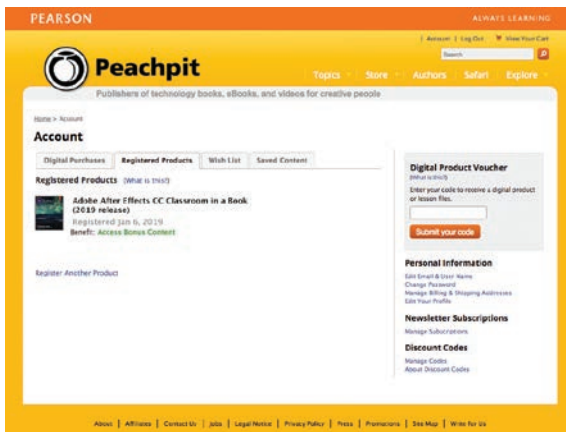
Purchase of this Classroom in a Book in any format gives you access to the lesson files you'll need to complete the exercises in the book.

You'll find the files you need on your **Account** page at www.peachpit.com on the **Registered Products** tab.

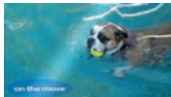
- 1 Go to www.peachpit.com/register.
- 2 Sign in or create a new account.
- 3 Enter the ISBN: **9780135298640**



- 4 Answer the questions as proof of purchase.
- 5 The lesson files can be accessed through the Registered Products tab on your Account page.
- 6 Click the Access Bonus Content link below the title of your product to proceed to the download page. Click the lesson file links to download them to your computer.



CONTENTS

WHERE ARE THE LESSON FILES?	iii
GETTING STARTED	1
About Classroom in a Book.....	1
Prerequisites.....	2
Installing After Effects, Bridge, and Media Encoder.....	2
Activating fonts.....	2
Optimizing performance.....	3
Restoring default preferences.....	3
Online content.....	4
How to use these lessons.....	5
Additional resources.....	6
Adobe Authorized Training Centers.....	7
1 GETTING TO KNOW THE WORKFLOW	8
 Getting started.....	11
Creating a project and importing footage.....	11
Creating a composition and arranging layers.....	15
Adding effects and modifying layer properties.....	18
Animating the composition.....	22
Previewing your work.....	30
Optimizing performance in After Effects.....	32
Rendering and exporting your composition.....	32
Customizing workspaces.....	33
Controlling the brightness of the user interface.....	35
Finding resources for using After Effects.....	36
Review questions and answers.....	37

2 CREATING A BASIC ANIMATION USING EFFECTS AND PRESETS 38



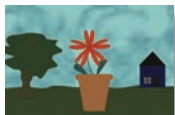
Getting started	40
Importing footage using Adobe Bridge	41
Creating a new composition	43
Working with imported Illustrator layers	46
Applying effects to a layer	48
Applying an animation preset	50
Previewing the effects	52
Adding transparency	53
Rendering the composition	54
Review questions and answers	57

3 ANIMATING TEXT 58



Getting started	60
About text layers	62
Installing a font using Adobe Fonts	63
Creating and formatting point text	65
Using a text animation preset	68
Animating with scale keyframes	71
Animating using parenting	72
Animating imported Photoshop text	74
Animating type tracking	78
Animating text opacity	79
Using a text animator group	80
Animating a layer's position	83
Timing layer animations	85
Adding motion blur	86
Review questions and answers	87

4 WORKING WITH SHAPE LAYERS 88



Getting started	90
Creating the composition	90
Adding a shape layer	91
Creating a self-animating shape	93

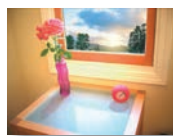
Duplicating a shape.....	95
Creating custom shapes.....	98
Positioning layers with snapping	99
Animating a shape.....	102
Creating nulls from paths	105
Previewing the composition	111
Review questions and answers	113

5 ANIMATING A MULTIMEDIA PRESENTATION 114









Getting started	116
Adjusting anchor points	119
Parenting layers	121
Precomposing layers	123
Keyframing a motion path	125
Animating additional elements.....	129
Applying an effect	133
Animating precomposed layers	136
Animating the background	139
Adding an audio track	141
Review questions and answers	143




6 ANIMATING LAYERS 144



Getting started	146
Simulating lighting changes	150
Duplicating an animation using the pick whip	152
Animating movement in the scenery	154
Adjusting the layers and creating a track matte	158
Animating the shadows.....	162
Adding a lens flare effect.....	164
Adding a video animation.....	166
Rendering the animation.....	167
Retiming the composition	168
Review questions and answers	175

7	WORKING WITH MASKS	176
	About masks	178
	Getting started	178
	Creating a mask with the Pen tool	180
	Editing a mask	180
	Feathering the edges of a mask	185
	Replacing the content of the mask	186
	Adding a reflection	188
	Creating a vignette	192
	Adjusting the timing	194
	Trimming the work area	196
	Review questions and answers	197
8	DISTORTING OBJECTS WITH THE PUPPET TOOLS	198
	Getting started	200
	About the Puppet tools	205
	Adding Position pins	206
	Adding Advanced and Bend pins	208
	Stiffening an area	211
	Animating pin positions	212
	Using the Puppet tools to animate video	213
	Recording animation	214
	Review questions and answers	217
9	USING THE ROTO BRUSH TOOL	218
	About rotoscoping	220
	Getting started	220
	Creating a segmentation boundary	222
	Fine-tuning the matte	228
	Freezing your Roto Brush tool results	230
	Changing the background	231
	Adding animated text	233
	Outputting your project	236
	Review questions and answers	239

10 PERFORMING COLOR CORRECTION	240
	Getting started 242
	Adjusting color balance with levels 245
	Adjusting color with the Lumetri Color effect 248
	Replacing the background 250
	Color-correcting using Auto Levels 255
	Motion tracking the clouds 255
	Replacing the sky in the second clip 258
	Color grading 262
	Review questions and answers 269
11 CREATING MOTION GRAPHICS TEMPLATES	270
	Getting started 272
	Preparing a master composition 272
	Setting up a template 278
	Adding properties to the Essential Graphics panel 279
	Providing image options 282
	Protecting the timing of a section 284
	Exporting the template 285
	Review questions and answers 289
12 USING 3D FEATURES	290
	Getting started 292
	Creating 3D text 293
	Using 3D views 295
	Importing a background 297
	Adding 3D lights 298
	Adding a camera 302
	Extruding text in After Effects 304
	Working with Cinema 4D Lite 306
	Integrating the C4D layer in After Effects 313
	Finishing the project 314
	Review questions and answers 315

13	WORKING WITH THE 3D CAMERA TRACKER	316
	About the 3D Camera Tracker effect	318
	Getting started	318
	Tracking the footage.....	320
	Creating a ground plane, a camera, and the initial text	321
	Creating additional text elements	325
	Locking an image to a plane with a solid layer	328
	Tidying the composition	331
	Adding a final object.....	332
	Creating realistic shadows.....	333
	Adding ambient light	335
	Adding an effect.....	335
	Previewing the composition	336
	Review questions and answers	237
14	ADVANCED EDITING TECHNIQUES	338
	Getting started	340
	Stabilizing a shot	340
	Using single-point motion tracking.....	346
	Using multipoint tracking.....	352
	Creating a particle simulation	356
	Retiming playback using the Timewarp effect.....	366
	Review questions and answers	371
15	RENDERING AND OUTPUTTING	372
	Getting started	374
	About rendering and output	375
	Exporting using the Render Queue.....	375
	Creating templates for the Render Queue.....	379
	Rendering movies with Adobe Media Encoder	380
	Review questions and answers	387
	APPENDIX: GENERAL KEYBOARD SHORTCUTS	388
	APPENDIX: CUSTOMIZING KEYBOARD SHORTCUTS	389
	INDEX	391

This page intentionally left blank

GETTING STARTED

Adobe After Effects CC provides a comprehensive set of 2D and 3D tools for compositing, animation, and effects that motion graphics professionals, visual effects artists, web designers, and film and video professionals need. After Effects is widely used for digital post-production of film, video, DVDs, and the web. You can composite layers in various ways, apply and combine sophisticated visual and audio effects, and animate both objects and effects.

About Classroom in a Book

Adobe After Effects CC Classroom in a Book (2019 Release) is part of the official training series for Adobe graphics and publishing software, developed with the support of Adobe product experts. The lessons are designed to let you learn at your own pace. If you're new to Adobe After Effects, you'll learn the fundamental concepts and features you'll need to master the program. And if you've been using Adobe After Effects for a while, you'll find that Classroom in a Book teaches many advanced features, including tips and techniques for using the latest version.

Although each lesson provides step-by-step instructions for creating a specific project, there's room for exploration and experimentation. You can follow the book from start to finish, or do only the lessons that match your interests and needs. Each lesson concludes with a review section summarizing what you've covered.

Prerequisites

Before beginning to use *Adobe After Effects CC Classroom in a Book (2019 Release)*, make sure that your system is set up correctly and that you've installed the required software and hardware. You should have a working knowledge of your computer and operating system. You should know how to use the mouse and standard menus and commands, and also how to open, save, and close files. If you need to review these techniques, see the printed or online documentation included with your Microsoft® Windows® or Apple® macOS® software.

To complete the lessons in this book, you'll need to have both Adobe After Effects CC (2019 release) and Adobe Bridge CC installed. The exercises in this book are based on After Effects CC (2019 release).

Installing After Effects, Bridge, and Media Encoder

Adobe After Effects CC is not included with the book; you must purchase it separately as part of an Adobe Creative Cloud subscription. For system requirements and complete instructions on installing the software, visit <https://helpx.adobe.com/after-effects/system-requirements.html>. Note that After Effects CC requires a 64-bit operating system. To view QuickTime movies on macOS, you must also have Apple QuickTime 7.6.6 or later installed on your system.

Some of the lessons in this book use Adobe Bridge or Adobe Media Encoder. After Effects, Bridge, and Media Encoder use separate installers. You must install these applications from Adobe Creative Cloud (adobe.com) onto your hard disk. Follow the onscreen instructions.

Activating fonts

Several lessons use specific fonts that may not be installed on your system. You can activate the fonts using Adobe Fonts or choose a different font on your system with similar characteristics. If you choose a different font, your projects won't look exactly like the ones shown in the book.

Adobe Fonts licenses are included in Creative Cloud subscriptions.

To activate fonts within After Effects, choose File > Fonts From Adobe, or click the Creative Cloud icon next to Add Adobe Fonts in the Font menu in the Character panel. Then, find the font in Adobe Fonts in your browser, and activate the font.

Optimizing performance

Creating movies is memory-intensive work for a desktop computer. After Effects CC (2019 release) requires a minimum of 8GB of RAM. The more RAM that is available to After Effects, the faster the application will work for you. For information about optimizing memory, cache, and other settings for After Effects, see “Improve performance” in After Effects Help.

Restoring default preferences

The preferences files control the way the After Effects user interface appears on your screen. The instructions in this book assume that you see the default interface when they describe the appearance of tools, options, windows, panels, and so forth. Therefore, it’s a good idea to restore the default preferences, especially if you are new to After Effects.

Each time you quit After Effects, the panel positions and certain command settings are recorded in the preferences files. To restore the original default settings, press Ctrl+Alt+Shift (Windows) or Command+Option+Shift (macOS) while starting After Effects. (After Effects creates new preferences files if they don’t already exist the next time you start the program.)

Restoring the default preferences can be especially helpful if someone has already customized After Effects on your computer. If your copy of After Effects hasn’t been used yet, these files won’t exist, so this procedure is unnecessary.

Important: If you want to save the current settings, you can rename a preferences file instead of deleting it. When you are ready to restore those settings, change the name back, and make sure that the file is located in the correct preferences folder.

- 1 Locate the After Effects preferences folder on your computer:
 - **For Windows:** .../Users/<user name>/AppData/Roaming/Adobe/AfterEffects/16.0
 - **For macOS:** .../Users/<user name>/Library/Preferences/Adobe/After Effects/16.0
- 2 Rename any preferences files you want to preserve, and then restart After Effects.

● **Note:** In macOS, the user library folder is hidden by default. To see it, in the Finder, choose Go > Go To Folder. In the Go To Folder dialog box, type **~/Library**, and then click Go.

Online content

Your purchase of this Classroom in a Book includes online materials provided by way of your Account page on peachpit.com. These include:

Lesson files

To work through the projects in this book, you will need to download the lesson files from peachpit.com. You can download the files for individual lessons or it may be possible to download them all in a single file.

Web Edition

The Web Edition is an online interactive version of the book providing an enhanced learning experience. Your Web Edition can be accessed from any device with a connection to the Internet and it contains:

- The complete text of the book
- Hours of instructional video keyed to the text
- Interactive quizzes

Accessing the lesson files and Web Edition

If you purchased an eBook from peachpit.com or adobepress.com, your Web Edition will automatically appear under the Digital Purchases tab on your Account page. Click the **Launch** link to access the product. Continue reading to learn how to register your product to get access to the lesson files.

If you purchased an eBook from a different vendor or you bought a print book, you must **register** your purchase on peachpit.com in order to access the online content:

- 1 Go to www.peachpit.com/register.
- 2 Sign in or create a new account.
- 3 Enter the ISBN: **9780135298640**.
- 4 Answer the questions as proof of purchase.
- 5 The **Web Edition** will appear under the Digital Purchases tab on your Account page. Click the **Launch** link to access the product.

The **Lesson Files** can be accessed through the Registered Products tab on your Account page. Click the Access Bonus Content link below the title of your product to proceed to the download page. Click the lesson file links to download them to your computer.

Organizing the lesson files

The files are compressed into ZIP archives to speed download time and protect the contents from damage during transfer. You must uncompress (or “unzip”) the files to restore them to their original size and format before you use them with the book. Modern Mac and Windows systems are set up to open ZIP archives by simply double-clicking.

● **Note:** If for any reason you need to download fresh copies of the lesson files, you can download them from your account again at any time.

- 1 On your hard drive, create a new folder in a convenient location, and name it **Lessons**, following the standard procedure for your operating system:
 - In Windows, right-click, and choose New > Folder. Then enter the new name for your folder.
 - In macOS, in the Finder, choose File > New Folder. Type the new name, and drag the folder to the location you want to use.
- 2 Drag the unzipped Lessons folder (which contains folders named Lesson01, Lesson02, and so on) that you downloaded onto your hard drive to your new Lessons folder. When you begin each lesson, navigate to the folder with that lesson number to access all the assets you need to complete the lesson.

About copying the sample movies and projects

You will create and render one or more movies in some lessons in this book. The files in the Sample_Movies folders are examples that you can use to see the end results of each lesson and to compare them with your own results.

The files in the End_Project_File folders are samples of the completed project for each lesson. Use these files for reference if you want to compare your work in progress with the project files used to generate the sample movies.

These sample movies and end-project files vary in size from relatively small to several megabytes, so you can either download them all now if you have ample storage space, or download just the files for each lesson as needed, and then delete them when you finish that lesson.

How to use these lessons

Each lesson in this book provides step-by-step instructions for creating one or more specific elements of a real-world project. The lessons build on each other in terms of concepts and skills, so the best way to learn from this book is to proceed through the lessons in sequential order. In this book, some techniques and processes are explained and described in detail only the first few times you perform them.

Many aspects of the After Effects application can be controlled by multiple techniques, such as a menu command, a button, dragging, and a keyboard shortcut. Only one or two of the methods are described in any given procedure, so that you can learn different ways of working even when the task is one you've done before.

The organization of the lessons is also design-oriented rather than feature-oriented. That means, for example, that you'll work with layers and effects on real-world design projects over several lessons, rather than in just one lesson.

Additional resources

Adobe After Effects CC Classroom in a Book (2019 Release) is not meant to replace documentation that comes with the program or to be a comprehensive reference for every feature. Only the commands and options used in the lessons are explained in this book.

Tutorials within After Effects can help you get started: In After Effects, choose Help > Learn After Effects. The Learn panel opens with a series of tutorials.

For comprehensive information about program features and tutorials, refer to these resources:

- **Adobe After Effects Learn & Support:** helpx.adobe.com/support/after-effects.html is where you can find and browse tutorials, help, and support on www.adobe.com.
- **After Effects tutorials:** helpx.adobe.com/after-effects/tutorials.html lists online tutorials for beginner and experienced users. You can go there directly from After Effects by choosing Help > Tutorials.
- **After Effects Forums:** forums.adobe.com/community/aftereffects_general_discussion lets you tap into peer-to-peer discussions, and questions as well as answers about After Effects.

- **Adobe Create Magazine:** create.adobe.com offers thoughtful articles on design and design issues, a gallery showcasing the work of top-notch designers, tutorials, and more.
- **Resources for educators:** www.adobe.com/education and edex.adobe.com offer a treasure trove of information for instructors who teach classes on Adobe software. Find solutions for education at all levels, including free curricula that use an integrated approach to teaching Adobe software and can be used to prepare for the Adobe Certified Associate exams.

Also check out these useful links:

- **Adobe Add-ons:** exchange.adobe.com/addons is a central resource for finding tools, services, extensions, code samples, and more to supplement and extend your Adobe products.
- **Adobe After Effects CC product home page:** www.adobe.com/products/aftereffects

Adobe Authorized Training Centers

Adobe Authorized Training Centers offer instructor-led courses and training on Adobe products. A directory of AATCs is available at <https://training.adobe.com/training/partner-finder.html>

1 GETTING TO KNOW THE WORKFLOW

Lesson overview

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

- Create a project and import footage.
- Create compositions and arrange layers.
- Navigate the Adobe After Effects interface.
- Use the Project, Composition, and Timeline panels.
- Transform layer properties.
- Apply basic effects.
- Create keyframes.
- Preview your work.
- Customize the workspace.
- Adjust preferences related to the user interface.
- Find additional resources for using After Effects.



This lesson will take about an hour to complete. Download the project files for this lesson, following the instructions in the Getting Started section under “Accessing the lesson files and Web Edition,” 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.

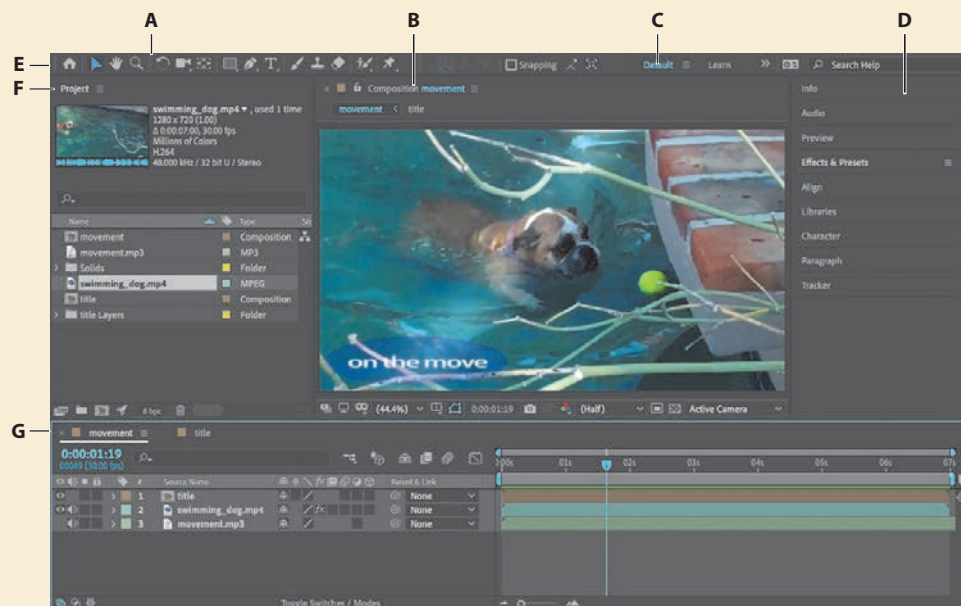


PROJECT: TITLE SEQUENCE

Whether you use After Effects to animate a simple DVD title sequence or to create complex special effects, you generally follow the same basic workflow. The After Effects interface facilitates your work and adapts to each stage of production.

About the After Effects work area

After Effects offers a flexible, customizable work area. The main window of the program is called the *application window*. Panels are organized in this window in an arrangement called a *workspace*. The default workspace contains stacked panels as well as panels that stand alone, as shown below.



A. Application window **B.** Composition panel **C.** Workspace bar **D.** Stacked panels **E.** Tools panel **F.** Project panel **G.** Timeline panel

You customize a workspace by dragging the panels into the configuration that best suits your working style. You can drag panels to new locations, change the order of stacked panels, move panels into or out of a group, place panels alongside each other, stack panels, and undock a panel so that it floats in a new window above the application window. As you rearrange panels, the other panels resize automatically to fit the window.

When you drag a panel by its tab to relocate it, the area where you can drop it—called a *drop zone*—becomes highlighted. The drop zone determines where and how the panel is inserted into the workspace. Dragging a panel to a drop zone either docks it, groups it, or stacks it.

If you drop a panel along the edge of another panel, group, or window, it will dock next to the existing group, resizing all groups to accommodate the new panel.

If you drop a panel in the middle of another panel or group, or along the tab area of a panel, it will be added to the existing group and be placed at the top of the stack. Grouping a panel does not resize other groups.

You can also open a panel in a floating window. To do so, select the panel, and then choose *Undock Panel* or *Undock Frame* from the panel menu. Or, drag the panel or group outside the application window.

Getting started

A basic After Effects workflow follows six steps: importing and organizing footage, creating compositions and arranging layers, adding effects, animating elements, previewing your work, and rendering and outputting the final composition so that it can be viewed by others. In this lesson, you will create a simple animated video using this workflow, and along the way, you'll learn your way around the After Effects interface.

First, you'll preview the final movie to see what you'll create in this lesson.

- 1 Make sure the following files are in the Lessons/Lesson01 folder on your hard disk, or download them from your Account page at www.peachpit.com now:
 - In the Assets folder: movement.mp3, swimming_dog.mp4, title.psd
 - In the Sample_Movies folder: Lesson01.avi, Lesson01.mov
- 2 Open and play the Lesson01.avi sample movie in Windows Movies & TV or the Lesson01.mov sample movie in QuickTime Player to see what you will create in this lesson. When you are done, close Windows Movies & TV or QuickTime Player. You may delete the sample movies from your hard disk if you have limited storage space.

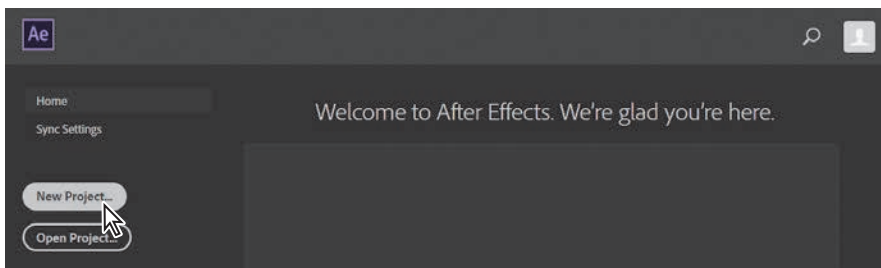
Creating a project and importing footage

When you begin each lesson of this book, it's a good idea to restore the default preferences for After Effects. (For more information, see "Restoring default preferences" on page 3.) You can do this with a simple keyboard shortcut.

- 1 Start After Effects, and then immediately hold down Ctrl+Alt+Shift (Windows) or Command+Option+Shift (macOS) to restore default preferences settings. When prompted, click OK to delete your preferences.

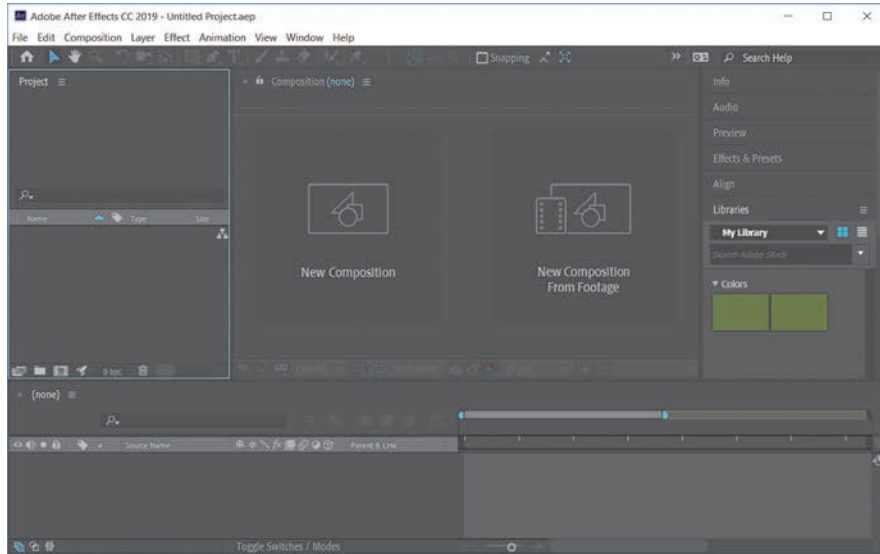
The Home window opens. It provides easy access to your recent After Effects projects, as well as to tutorials and more information about After Effects.

- 2 Click New Project in the Home window.



► **Tip:** Restoring default preferences can be tricky in Windows, especially if you're working on a fast system. Press the keys after you double-click the application icon but before After Effects begins to list the files it's activating. Alternatively, you can choose Edit > [your Creative Cloud account username] > Clear Settings, and then restart the application.

After Effects displays an empty, untitled project.

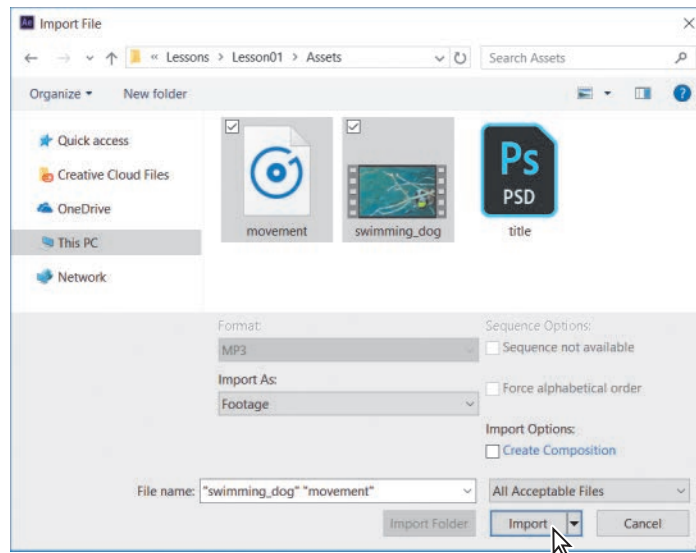


► **Tip:** To quickly maximize a panel, double-click the panel tab. To return it to its original size, double-click the tab again.

An After Effects project is a single file that stores references to all the footage you use in that project. It also contains *compositions*, which are the individual containers used to combine footage, apply effects, and, ultimately, drive the output.

When you begin a project, often the first thing you'll do is add footage to it.

- 3 Choose File > Import > File.
- 4 Navigate to the Assets folder in your Lessons/Lesson01 folder. Shift-click to select the movement.mp3 and swimming_dog.mp4 files. Then click Import or Open.

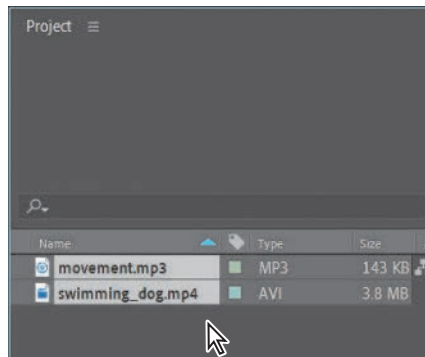


A *footage item* is the basic unit in an After Effects project. You can import many types of footage items, including moving-image files, still-image files, still-image sequences, audio files, layered files from Adobe Photoshop and Adobe Illustrator, other After Effects projects, and projects created in Adobe Premiere® Pro. You can import footage items at any time.

As you import assets, After Effects reports its progress in the Info panel.

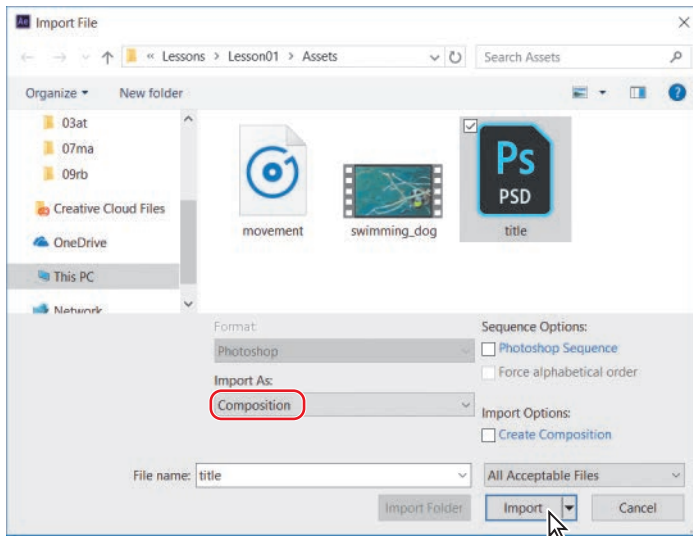
Because one of the footage items for this project is a multilayer Photoshop file, you'll import it separately as a composition.

- 5 Double-click in the lower area of the Project panel to open the Import File dialog box.



► **Tip:** You can also choose File > Import > Multiple Files to select files located in different folders or drag and drop files from Explorer or the Finder. You can use Adobe Bridge to search for, manage, preview, and import footage.

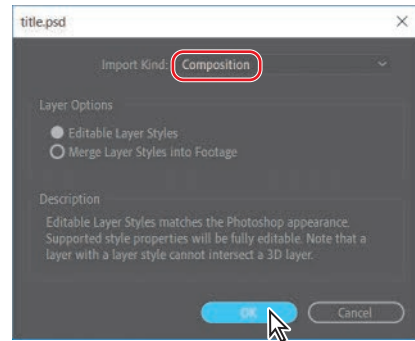
- 6 Navigate to the Lesson01/Assets folder again, and select the title.psd file. Choose Composition from the Import As menu. (In macOS, you may need to click Options to see the Import As menu.) Then click Import or Open.



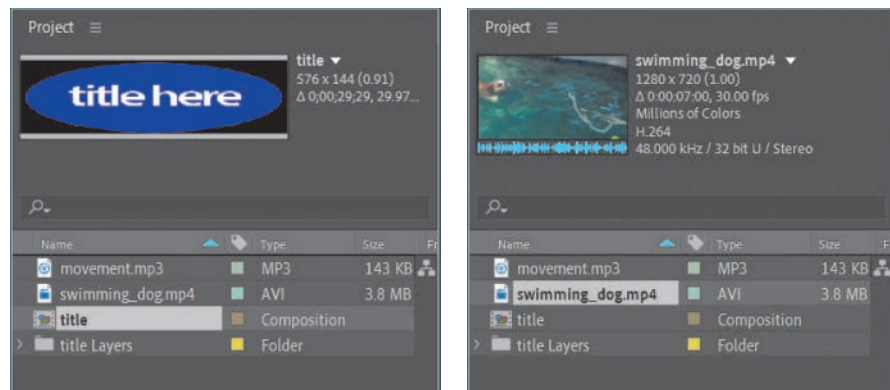
After Effects opens an additional dialog box that displays options for the file you are importing.

- 7 In the title.psd dialog box, choose Composition from the Import Kind menu to import the layered Photoshop file as a composition. Select Editable Layer Styles in the Layer Options area, and then click OK.

The footage items appear in the Project panel.



- 8 In the Project panel, click to select different footage items. Notice that a thumbnail preview appears at the top of the Project panel. You can also see the file type and size, as well as other information about each item, in the Project panel columns.



When you import files, After Effects doesn't copy the video and audio data itself into your project. Instead, each footage item in the Project panel contains a reference link to the source files. When After Effects needs to retrieve image or audio data, it reads it from the source file. This keeps the project file small and allows you to update source files in another application without modifying the project.

► **Tip:** You can locate missing fonts or effects the same way. Choose File > Dependencies, and then choose Find Missing Fonts or Find Missing Effects. Or just type **Missing Fonts** or **Missing Effects** into the Search box in the Project panel.

If you move a file or if After Effects can't access its location, it will report that the file is missing. To identify missing files, choose File > Dependencies > Find Missing Footage. You can also type **Missing Footage** into the Search box in the Project panel to look for the missing assets.

To save time and minimize the size and complexity of a project, you'll usually import a footage item once even if you're using it multiple times in a composition. However, you may sometimes need to import a source file more than once, such as if you want to use it at two different frame rates.

After you've imported footage, it's a good time to save the project.

- 9 Choose File > Save. In the Save As dialog box, navigate to the Lessons/Lesson01/Finished_Project folder. Name the project **Lesson01_Finished.aep**, and then click Save.

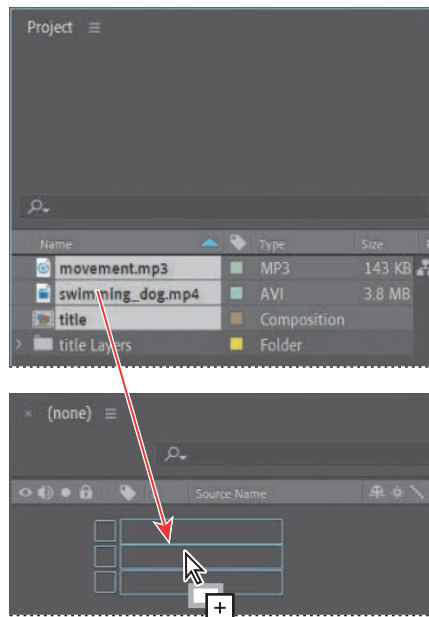
Creating a composition and arranging layers

The next step of the workflow is to create a composition. You create all animation, layering, and effects in a composition. An After Effects composition has both spatial dimensions and a temporal dimension (time).

Compositions include one or more layers, arranged in the Composition panel and in the Timeline panel. Any item that you add to a composition—such as a still image, moving-image file, audio file, light layer, camera layer, or even another composition—becomes a new layer. Simple projects may include only one composition, while elaborate projects may include several compositions to organize large amounts of footage or intricate effects sequences.

To create a composition, you'll drag the footage items into the Timeline panel, and After Effects will create layers for them.

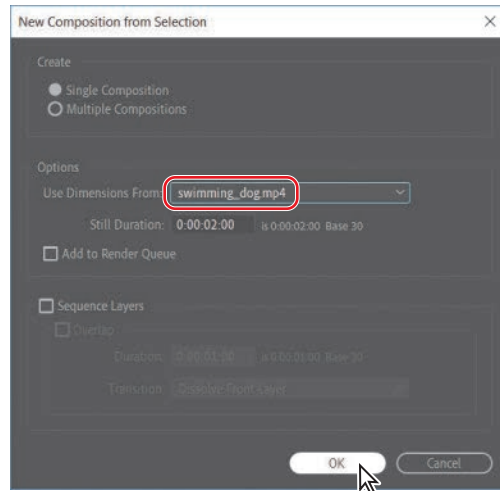
- 1 In the Project panel, Shift-click to select the movement.mp3, swimming_dog.mp4, and title assets. Don't select the title Layers folder.
- 2 Drag the selected footage items into the Timeline panel. The New Composition From Selection dialog box appears.



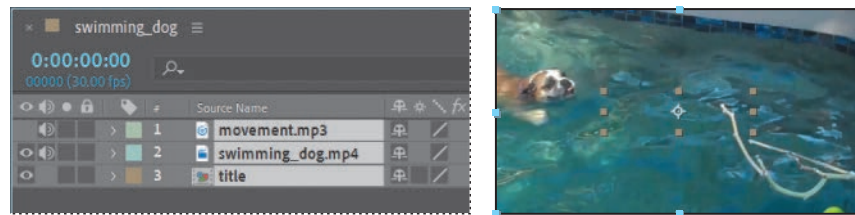
► **Tip:** To create a composition from footage as you import it, select Create Composition in the Import File dialog box.

After Effects bases the dimensions of the new composition on the selected footage. In this example, all of the footage is sized identically, so you'll accept the default settings for the composition.

- 3 Select `swimming_dog.mp4` in the Use Dimensions From menu, and then click OK to create the new composition.



The footage items appear as layers in the Timeline panel, and After Effects displays the composition, named `swimming_dog`, in the Composition panel.

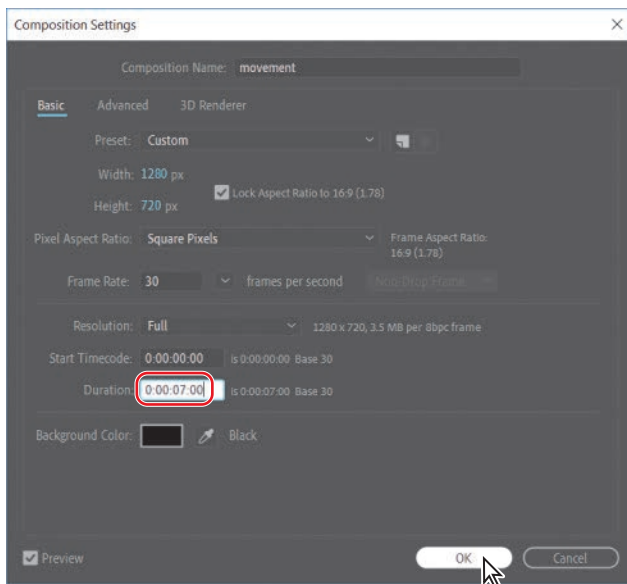


When you add a footage item to a composition, that footage becomes the source for a new layer. A composition can have any number of layers, and you can also include a composition as a layer in another composition, which is called *nesting*.

Some of the assets are longer than others, but you want them all to continue only as long as the swimming dog is on the screen. You'll change the length of the entire composition to 7:00 to match the dog clip.

- 4 Choose `Composition > Composition Settings`.

- 5 In the Composition Settings dialog box, rename the composition **movement**, type **7:00** for the Duration, and then click OK.



The Timeline panel displays the same duration for each of the layers.

In this composition, there are three footage items, and therefore three layers in the Timeline panel. Depending on the order in which the elements were selected when you imported them, your layer stack may differ from the one shown on the previous page. The layers need to be in a specific order as you add effects and animations, however, so you'll rearrange them now.

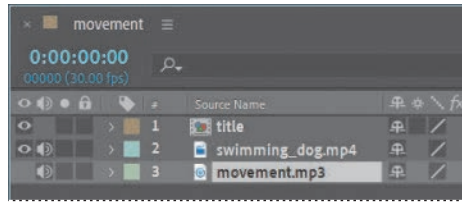
About layers

Layers are the components you use to build a composition. Any item that you add to a composition—such as a still image, moving-image file, audio file, light layer, camera layer, or even another composition—becomes a new layer. Without layers, a composition consists only of an empty frame.

Using layers, you can work with specific footage items in a composition without affecting any other footage. For example, you can move, rotate, and draw masks for one layer without disturbing any other layers in the composition, or you can use the same footage in more than one layer and use it differently in each instance. In general, the layer order in the Timeline panel corresponds to the stacking order in the Composition panel.

► **Tip:** To deselect all layers, click a blank area of the Timeline panel or press F2.

- 6 Click an empty area of the Timeline panel to deselect the layers, and then drag the title layer to the top of the layer stack, if it is not already there. Drag the movement.mp3 layer to the bottom of the layer stack.



- 7 Choose File > Save to save your project so far.

Adding effects and modifying layer properties

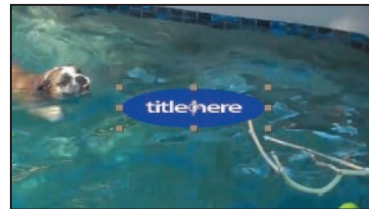
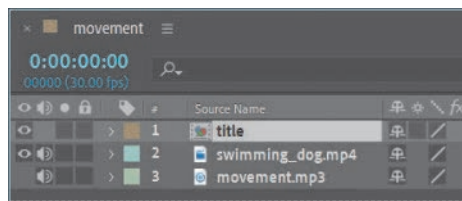
● **Note:** This exercise is just the tip of the iceberg. You will learn more about effects and animation presets in Lesson 2, “Creating a Basic Animation Using Effects and Presets,” and throughout the rest of this book.

Now that your composition is set up, you can start having fun—applying effects, making transformations, and adding animation. You can add any combination of effects and modify any of a layer’s properties, such as size, placement, or opacity. Using effects, you can alter a layer’s appearance or sound, and even generate visual elements from scratch. The easiest way to start is to apply any of the hundreds of effects included with After Effects.

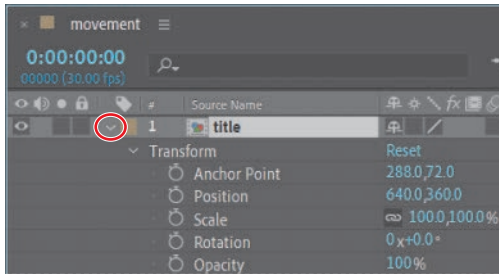
Transforming layer properties

The title is currently in the center of the screen, obscuring the dog and distracting from the action. You’ll move it to the lower left corner, where it will remain visible but not in the way.

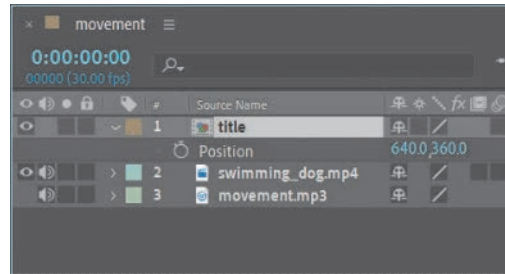
- 1 Select the title layer (layer 1) in the Timeline panel. Notice that layer handles appear around the layer in the Composition panel.



- Click the triangle to the left of the layer number to expand the layer, and then expand the layer's Transform properties: Anchor Point, Position, Scale, Rotation, and Opacity.
- If you can't see the properties, scroll down the Timeline panel using the scrollbar at the right side of the panel. Better yet, select the title layer name again, and press P.



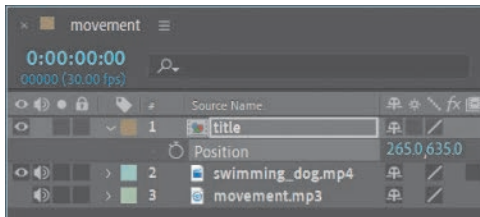
Expand Transform to see all its properties.



Press P to see just the Position property.

This keyboard shortcut displays only the Position property, which is the only property you want to change for this exercise. You'll move this layer to the lower left corner.

- Change the coordinates for the Position property to **265, 635**. Or use the Selection tool to drag the title to the lower left corner of the screen.



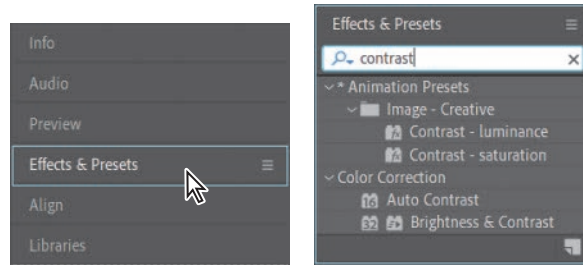
- Press P to hide the Position property, or click the triangle to the left of the layer number to hide all properties.

Adding an effect to correct color

After Effects includes several effects to correct or modify color in your projects. You'll use the Auto Contrast effect to adjust the overall contrast in the clip and intensify the color of the water.

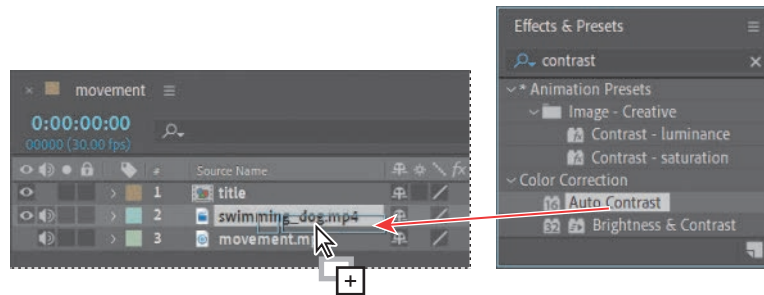
● **Note:** If you double-click a layer in the Timeline panel, After Effects opens the layer in the Layer panel. To return to the Composition panel, click the Composition tab.

- 1 Select the `swimming_dog.mp4` layer in the Timeline panel.
- 2 Click the Effects & Presets panel (in the panel stack at the right side of the application window) to open it, and type **contrast** in the search box.

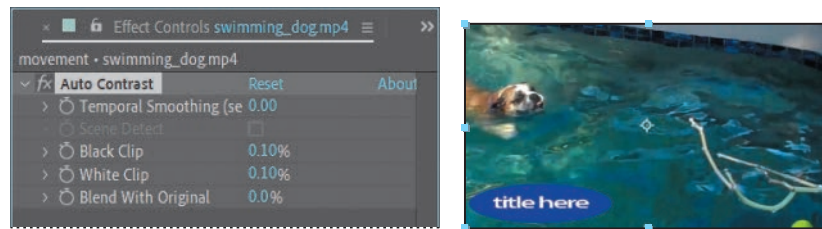


After Effects searches for effects and presets that contain the letters you type, and displays the results interactively. Before you have finished typing, the Auto Contrast effect—located in the Color Correction category—appears in the panel.

- 3 Drag the Auto Contrast effect onto the `swimming_dog` layer in the Timeline panel.

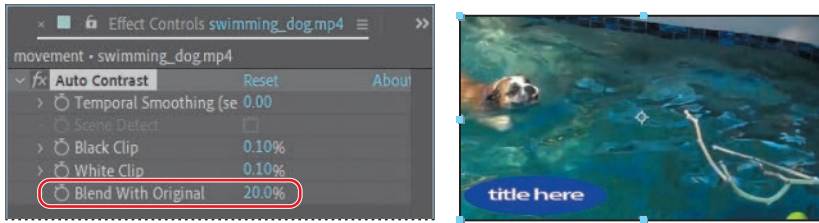


After Effects applies the effect and automatically opens the Effect Controls panel in the upper left area of the workspace.



The contrast intensifies colors a little more than we need. You'll customize the settings to reduce the effect.

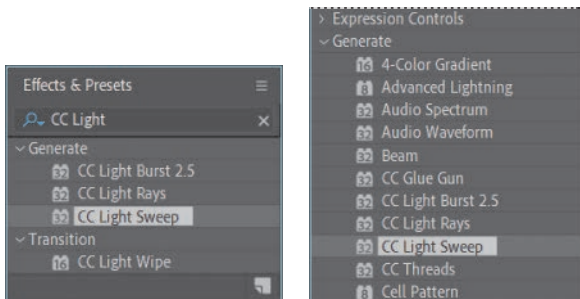
- 4 In the Effect Controls panel, click the number next to Blend With Original, type **20%**, and press Enter or Return to accept the new value.



Adding a stylistic effect

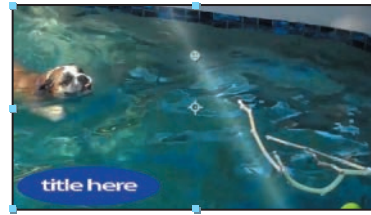
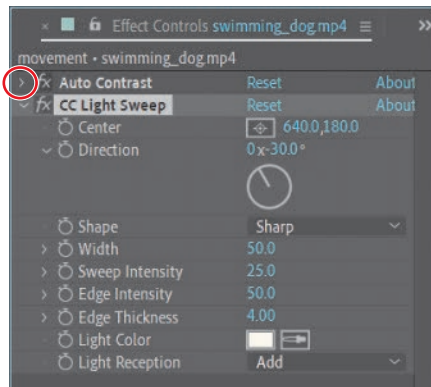
After Effects also includes many stylistic effects. You'll add a beam of light to the clip to add an artistic touch. You'll change the settings of this effect to modify the angle and intensity of the light.

- 1 Click the *x* in the search box in the Effects & Presets panel to clear it, and then locate the CC Light Sweep effect by doing one of the following:
 - Type **CC Light** in the search box.
 - Click the triangle next to Generate to expand the category in alphabetical order.



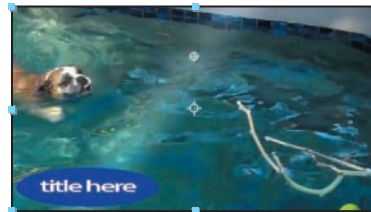
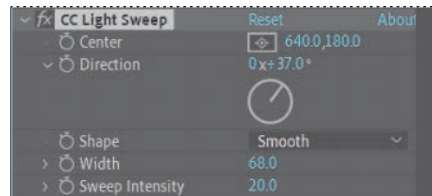
- 2 Drag the CC Light Sweep effect in the Generate category onto the swimming_dog layer name in the Timeline panel. After Effects adds the CC Light Sweep settings to the Effect Controls panel under the Auto Contrast effect.

- 3 In the Effect Controls panel, click the triangle next to the Auto Contrast effect to hide those settings so that you can see the CC Light Sweep settings more easily.



First, you'll change the angle of the light.

- 4 For Direction, type 37°.
- 5 From the Shape menu, choose Smooth to widen and soften the light beam.
- 6 For Width, type 68 to widen the beam a bit more.
- 7 Change the Sweep Intensity value to 20 to make the beam a little more subtle.



- 8 Choose File > Save to save your work so far.

Animating the composition

So far, you've started a project, created a composition, imported footage, and applied some effects. It all looks great, but how about some movement? You've applied only static effects.

In After Effects, you can change any combination of a layer's properties over time using conventional keyframing, expressions, or keyframe assistants. You'll explore many of these methods throughout the lessons of this book. For this project, you'll apply an animation preset to introduce the title to the screen, and you'll animate the title's color over time.

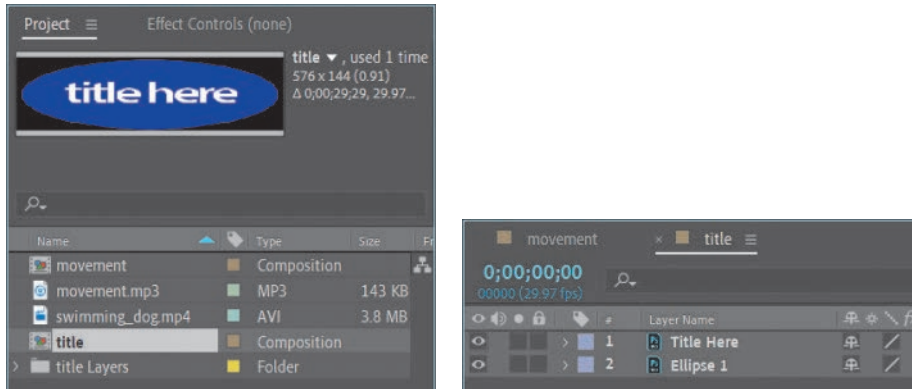
Preparing the text composition

In this exercise, you'll work with a separate composition—the one you imported from a layered Photoshop file.

- 1 Select the Project tab to display the Project panel, and then double-click the title composition to open it as a composition in its own Timeline panel.

● **Note:** If the Project tab isn't visible, choose Window > Project to open the Project panel.

This composition is the layered Photoshop file you imported. Two layers—Title Here and Ellipse 1—appear in the Timeline panel. The Title Here layer contains placeholder text that was created in Photoshop.



At the top of the Composition panel is the Composition Navigator bar, which displays the relationship between the main composition (movement) and the current composition (title), which is nested within the main composition.

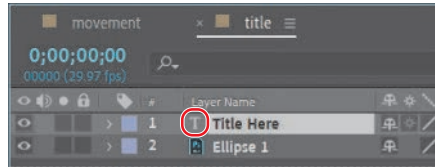
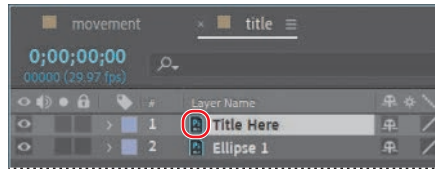


You can nest multiple compositions within each other; the Composition Navigator bar displays the entire composition path. Arrows between the composition names indicate the direction in which information flows.

Before you can replace the text, you need to make the layer editable.

● **Note:** If you see a warning about missing fonts or layer dependencies, click OK. If Adobe Fonts opens, activate the missing font.

- 2 Select the Title Here layer (layer 1) in the Timeline panel, and then choose Layer > Create > Convert To Editable Text.



A T icon appears next to the layer name in the Timeline panel, indicating that it is now an editable text layer. The layer is also selected in the Composition panel, ready for you to edit.

The blue lines at the top, bottom, and sides of the Composition panel indicate title-safe and action-safe zones. Television sets enlarge a video image and allow some portion of its outer edges to be cut off by the edge of the screen. This is known as *overscan*. The amount of overscan is not consistent between television sets, so you should keep important parts of a video image, such as action or titles, within margins called *safe zones*. Keep your text inside the inner blue guides to ensure that it is in the title-safe zone, and keep important scene elements inside the outer blue guides to ensure that they are in the action-safe zone.

Editing text

You'll start by replacing the placeholder text with real text. Then you'll format it to fit the space better.

- 1 Select the Horizontal Type tool (T) in the Tools panel, and drag over the placeholder text in the Composition panel to select it. Then type **on the move**.



● **Note:** After Effects offers robust character and paragraph formatting controls, but the default settings—whatever typeface appears when you type—should be fine for this project. You'll learn more about type in Lesson 3, "Animating Text."

About the Tools panel

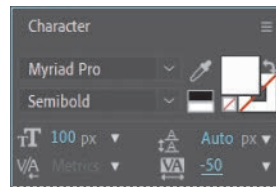
As soon as you create a composition, the tools in the Tools panel in the upper left corner of the After Effects application window become available. After Effects includes tools that enable you to modify elements of your composition. Some of these tools—the Selection tool and the Hand tool, for example—will be familiar to you if you use other Adobe applications, such as Photoshop. Others will be new.



A. Home **B.** Selection **C.** Hand **D.** Zoom **E.** Rotation **F.** Camera tools **G.** Pan Behind
H. Mask and Shape tools **I.** Pen tools **J.** Type tools **K.** Brush **L.** Clone Stamp **M.** Eraser
N. Roto Brush and Refine Edge tools **O.** Puppet tools

When you hover the pointer over any button in the Tools panel, a tool tip identifies the tool and its keyboard shortcut. A small triangle in the lower right corner of the button indicates that one or more additional tools are hidden behind it. Click and hold the button to display the hidden tools, and then select the tool you want to use.

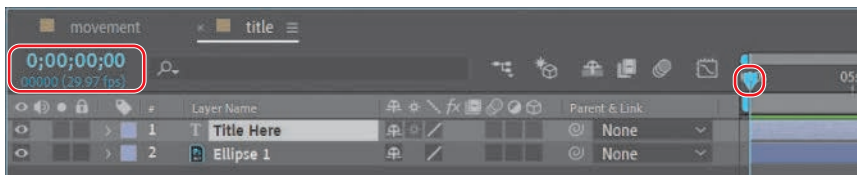
- 2 Select the text again. Then, in the Character panel (docked on the right side of the screen), change the text size to **100 px** and the tracking to **-50**.



Animating text with animation presets

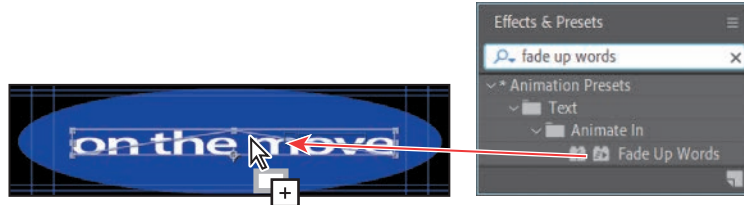
Now that the text is formatted, you can apply an animation preset. You'll use the Fade Up Words preset, so the words will appear in order over time.

- 1 Select the Title Here layer in the Timeline panel again, and make sure you're at the first frame of the animation by doing one of the following:
 - Drag the current-time indicator all the way to the left of the time ruler, to 0:00.
 - Press the Home key on your keyboard.



► **Tip:** If you don't see the Effects & Presets tab, choose Window > Effects & Presets.

- 2 Select the Effects & Presets tab to display the Effects & Presets panel. Then type **fade up words** in the search box.
- 3 Select the Fade Up Words effect in the Animate In category, and drag it onto the **on the move** text in the Composition panel.



After Effects adds the effect. Because it's a simple effect, there are no settings in the Effect Controls panel.

- 4 Manually preview the effect by dragging the current-time indicator from 0:00 to 1:00. The words fade in, so that they are all onscreen by 1:00.



About timecode and duration

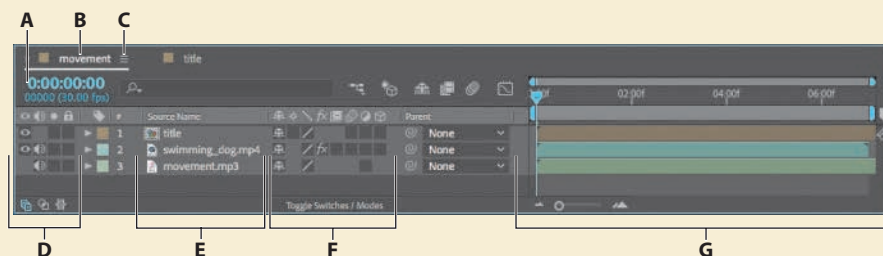
The primary concept related to time is *duration*, or length. Each footage item, layer, and composition in a project has its own duration, which is reflected in the beginning and ending times displayed in the time rulers in the Composition, Layer, and Timeline panels.

The way you view and specify time in After Effects depends on the display style, or unit of measure, that you use to describe time. By default, After Effects displays time in Society of Motion Picture and Television Engineers (SMPTE) timecode: hours, minutes, seconds, and frames. Note that the figures are separated by semicolons in the After Effects interface, representing drop-frame timecode (which adjusts for the real-time frame rate), but this book uses a colon to represent non-drop-frame timecode.

To learn when and how to change to another system of time display, such as frames, or feet and frames of film, see After Effects Help.

About the Timeline panel

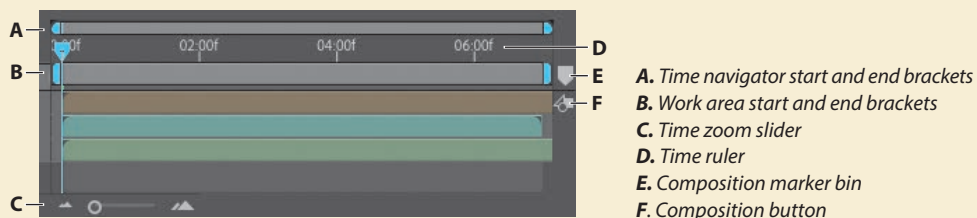
Use the Timeline panel to animate layer properties and set In and Out points for a layer. (In and Out points are the points at which a layer begins and ends in the composition.) Many of the Timeline panel controls are organized in columns of related functions. By default, the Timeline panel contains a number of columns and controls, as shown here:



A. Current time **B.** Composition name **C.** Timeline panel menu **D.** Audio/Video Switches column
E. Source Name/Layer Name column **F.** Layer switches **G.** Time graph/Graph Editor area

Understanding the time graph

The time graph portion of the Timeline panel (the right side) contains a time ruler, markers to indicate specific times, and duration bars for the layers in your composition.



Before delving too deeply into animation, it will help to understand at least some of these controls. The duration of a composition, a layer, or a footage item is represented visually in the time graph. On the time ruler, the current-time indicator marks the frame you are viewing or editing, and the frame appears in the Composition panel.

The work area start and end brackets indicate the part of the composition that will be rendered for previews or final output. When you work on a composition, you may want to render only a portion of it by specifying a segment of the composition time ruler as a work area.

A composition's current time appears in the upper left corner of the Timeline panel. To move to a different time, drag the current-time indicator in the time ruler—or click the current-time field in the Timeline panel or Composition panel, type a new time, and press Enter or Return, or click OK.

For more information about the Timeline panel, see After Effects Help.

Animating effects using keyframes

You'll add an effect to the type layer, but this time, you'll animate its settings using keyframes.

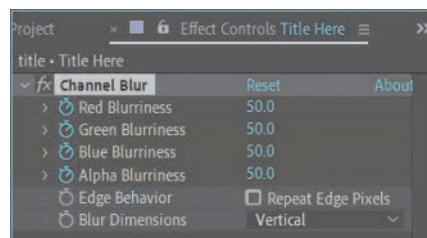
- 1 Go to the beginning of the time ruler by doing one of the following:
 - Drag the current-time indicator to the left in the time ruler so that it's positioned at 0:00.
 - Click the Current Time field in the Timeline panel or Composition panel, and type **00**. If you clicked in the Current Time field in the Composition panel, click OK to close the Go To Time dialog box.
- 2 Type **channel blur** in the search box in the Effects & Presets panel.
- 3 Drag the Channel Blur effect onto the Title Here layer in the Timeline panel.

After Effects adds the Channel Blur effect to the layer and displays its settings in the Effect Controls panel. The Channel Blur effect individually blurs the red, green, blue, and alpha channels in a layer. It will create an interesting look for the title.

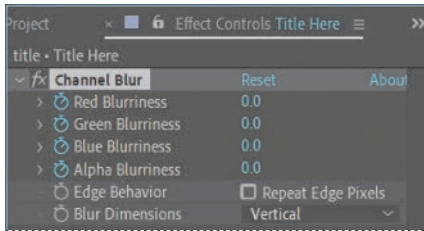
- 4 In the Effect Controls panel, set the Red Blurriness, Green Blurriness, Blue Blurriness, and Alpha Blurriness values to **50**.
- 5 Click the stopwatch icon (🕒) next to each of the settings you changed to create initial keyframes. The text will be blurred as it first appears.

Keyframes are used to create and control animation, effects, audio properties, and many other kinds of changes that occur over time. A keyframe marks the point in time where you specify a value, such as spatial position, opacity, or audio volume. Values between keyframes are *interpolated*. When you use keyframes to create a change over time, you must use at least two keyframes—one for the state at the beginning of the change, and one for the state at the end of the change.

- 6 From the Blur Dimensions menu, choose Vertical.



- 7 Go to 1:00 in the timeline.
- 8 Change the values to the following:
 - Red Blurriness: 0
 - Green Blurriness: 0
 - Blue Blurriness: 0
 - Alpha Blurriness: 0



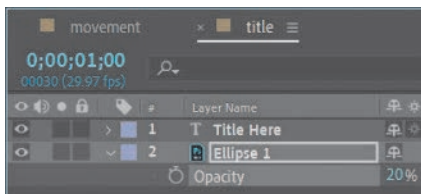
- 9 Manually preview the effect by moving the current-time indicator from 0 to 1:00.



Changing the opacity of the background

The title looks good, but the ellipse is too bright. You'll change its opacity so that the water in the video shows through.

- 1 In the Timeline panel, select the Ellipse 1 layer.
- 2 Press T to reveal the layer's Opacity property.
- 3 Change the Opacity value to 20%.



► **Tip:** To remember the keyboard shortcut for the Opacity property, think of it as *transparency*.

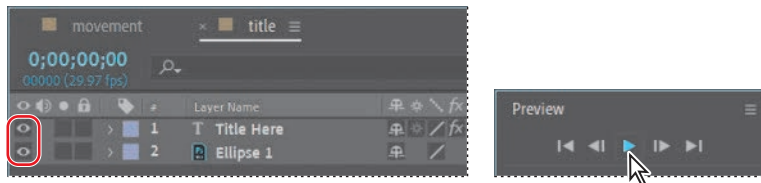
► **Tip:** To see how the title appears over the water, click the movement tab in the Timeline panel.

Previewing your work

You're probably eager to see the results of your work. You can preview your composition using the Preview panel, which is in the stacked panels on the right side of the application window in the default workspace. To preview your composition, click the Play/Stop button in the Preview panel, or press the spacebar on your keyboard.

- 1 In the title Timeline panel, hide all layer properties, and deselect all layers.
- 2 Make sure that the Video switch (📺) is selected for the layers that you want to preview—in this case, the Title Here and Ellipse 1 layers.
- 3 Press the Home key to go to the beginning of the time ruler.
- 4 Do one of the following:
 - Click the Play/Stop button (▶) in the Preview panel.
 - Press the spacebar.

▶ **Tip:** Verify that the work area brackets include all the frames you want to preview.



- 5 To stop the preview, do one of the following:
 - Click the Play/Stop button in the Preview panel.
 - Press the spacebar.



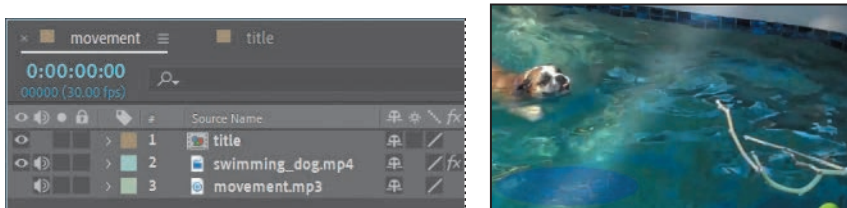
You've previewed a simple animation, so it probably played back in real time.

When you press the spacebar or click the Play/Stop button, After Effects caches the composition and allocates enough RAM to play the preview (with audio) as fast as the system allows, up to the frame rate of the composition. The number of frames played depends on the amount of RAM available to the application. Often, the preview will play in real time only after After Effects has cached all the included frames.

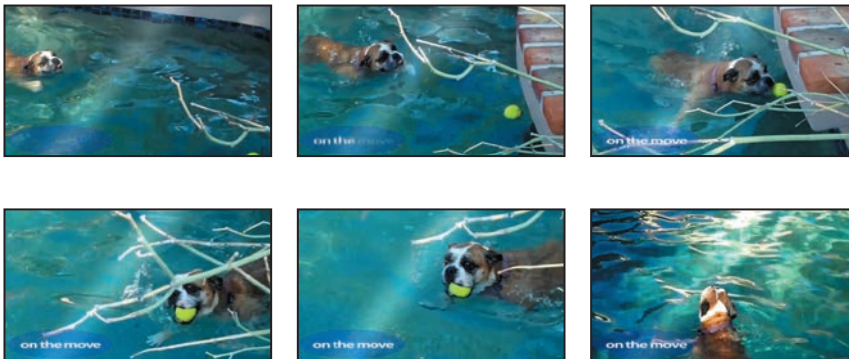
In the Timeline panel, the preview plays either the span of time you specify as the work area, or from the beginning of the time ruler. In the Layer and Footage panels, the preview plays only untrimmed footage. Before you preview, check which frames are designated as the work area.

Now you'll preview the entire composition—the animated text plus graphic effects.

- 6 Click the movement tab in the Timeline panel to bring it forward.
- 7 Make sure that the Video switch (👁) is turned on for all of the layers in the composition except the audio layer, and press F2 to deselect all layers.
- 8 Drag the current-time indicator to the beginning of the time ruler, or press the Home key.



- 9 To start the preview, click the Play/Stop button (▶) in the Preview panel, or press the spacebar.



A green progress bar indicates which frames are cached to RAM. When all of the frames in the work area are cached, the preview plays back in real time. Until all the frames are cached, the playback may be slower and the audio may drag.

