



Adobe® Flash® CS5

The Professional Portfolio

AGAINST THE CLOCK
mastering graphic technology

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Acknowledgements

ABOUT AGAINST THE CLOCK

Against The Clock, long recognized as one of the nation's leaders in courseware development, has been publishing high-quality educational materials for the graphic and computer arts industries since 1990. The company has developed a solid and widely-respected approach to teaching people how to effectively utilize graphics applications, while maintaining a disciplined approach to real-world problems.

Having developed the *Against The Clock* and the *Essentials for Design* series with Prentice Hall/Pearson Education, ATC drew from years of professional experience and instructor feedback to develop *The Professional Portfolio Series*, focusing on the Adobe Creative Suite. These books feature step-by-step explanations, detailed foundational information, and advice and tips from industry professionals that offer practical solutions to technical issues.

Against The Clock works closely with all major software developers to create learning solutions that fulfill both the requirements of instructors and the needs of students. Thousands of graphic arts professionals — designers, illustrators, imaging specialists, prepress experts and production managers — began their educations with Against The Clock training books. These professionals studied at Baker College, Nossi College of Art, Virginia Tech, Appalachian State University, Keiser College, University of South Carolina, Gress Graphic Arts Institute, Hagerstown Community College, Kean University, Southern Polytechnic State University, Brenau University, and many other educational institutions.

ABOUT THE AUTHOR

Erika Kendra holds a BA in History and a BA in English Literature from the University of Pittsburgh. She began her career in the graphic communications industry as an editor at Graphic Arts Technical Foundation before moving to Los Angeles in 2000. Erika is the author or co-author of more than twenty books about Adobe graphic design software. She has also written several books about graphic design concepts such as color reproduction and preflighting, and dozens of articles for online and print journals in the graphics industry. Working with Against The Clock for more than ten years, Erika was a key partner in developing The Professional Portfolio Series of software training books.

CONTRIBUTING ARTISTS AND EDITORS

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Finally, thanks to **Angelina Kendra**, editor, for making sure that we all said what we meant to say.

Walk-Through


Project 4

Ocean Animation

Your client, Big Ocean Preserve, wants to add an interactive animation to the kids' side of its Web site. As part of the Flash development team, your job is to build the required animation, and then add the necessary controls to make the bonus function as expected.

This project incorporates the following skills:

- Importing and merging artwork from Adobe Photoshop
- Importing symbols from external Flash file libraries
- Understanding the difference types of Flash symbols
- Building frame-by-frame animations
- Creating motion tweens to animate various object properties
- Creating an animated animation
- Animating in three dimensions
- Preparing symbol instances for scripting
- Adding basic tween commands to instances on the Stage



Project Goals

Each project begins with a clear description of the overall concepts that are explained in the project; these goals closely match the different "stages" of the project workflow.

Project Meeting

client comments

Our organization focuses on natural resource conservation and habitat preservation on the central California coast. This area is home to a number of endangered species, and we work to educate people about observing these creatures without intruding and interfering with them. We've been told that some kind of interactivity will be an important part of capturing a younger audience. Although we think cartoon fish dancing across the screen would minimize the seriousness of our message, we understand that we have to do something to make the site more interesting for children.

We were thinking about an "aquarium" screen since we used to have, and we thought that kind of thing would be a good balance between our interactivity and positive social games.

art director comments

Since the client clearly wants to avoid a cartoon look, I had the staff artist create some fish and other illustrations that are fairly realistic. I also found a good photo of a turtle that will work well with the other elements.

One of the animations — the swaying help icon — should play constantly, and will not be controlled by buttons.

Three animations will be controlled by the buttons. First, a fish hiding in a cave will appear and blow bubbles. Second, a turtle will swim across the scene and get bigger to create the effect of the turtle swimming toward you. Finally, a school of different fish will swim in the other direction, in a "train" across the scene.

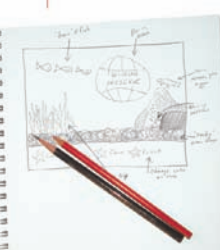
One other animation — the organization's logo — will play as soon as the file opens, and then not again until the entire file is reset.

The programming for this isn't very complicated, so you should be able to create it with Flash's built-in Code Snippets.

Project objectives

To complete this project, you will:

- Create symbols from imported Photoshop artwork
- Import symbols from other Flash files
- Place and manage instances of symbols on the Stage, and control the visual properties of those symbols
- Control timing using keyframes
- Create animated movie clip symbols
- Create motion tweens to automate changes in object properties
- Use the Motion Editor to numerically control properties at specific points in time
- Animate a lone animation
- Animate an object in three-dimensional space
- Add interactivity to button symbols



The Project Meeting

Each project includes the client's initial comments, which provide valuable information about the job. The Project Art Director, a vital part of any design workflow, also provides fundamental advice and production requirements.

Project Objectives

Each Project Meeting includes a summary of the specific skills required to complete the project.

Real-World Workflow

Projects are broken into logical lessons or "stages" of the workflow. Brief introductions at the beginning of each stage provide vital foundational material required to complete the task.

Stage 1: Importing Bitmaps and Symbols

In this project, much of the artwork was created in Adobe Photoshop — a common workflow for Flash animation projects. It's important to understand that artwork from a Photoshop file is imported into Flash as bitmap objects, which (as you learned in Project 1) are raster images that can create the large file sizes. Fortunately, the Flash symbol infrastructure means that objects in a Flash library are downloaded only once; you can use multiple instances of a symbol without increasing overall file size. You should also keep in mind that the quality of a bitmap object is defined by its resolution.

You should also keep in mind that the quality of a bitmap object is defined by its resolution. Bitmap objects can typically be reduced in size, but enlarging them much beyond 100% could significantly reduce the image quality.

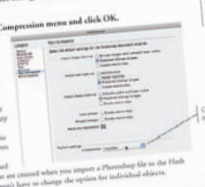
Finally, it's important to realize that Flash is designed to create files that will be viewed on a digital screen. Flash recognizes the actual number of pixels in a bitmap image rather than the default pixels per inch (ppi). If you import a 3" x 3" bitmap image that is sized at 300 ppi (typical of print quality images), that image is 900 pixels x 900 pixels high. In Flash, the image is still 900 pixels x 900 pixels, but those pixels occupy 12.5" x 7.5 ppi (typical screen resolution).

IMPORT Adobe Photoshop ARTWORK

Importing a Photoshop file to the Flash Stage is very similar to importing an Illustrator file. Because of the different nature of the two applications, however, you have fewer options when you work with Photoshop files.

- Download PLS_01_Project4.zip from the Student Files Web page.
- Expand the ZIP archive in your WIP folder (Macintosh) or copy the archive contents into your WIP folder (Windows). This results in a folder named **Aquarium**, which contains the files you need for this project. You should also use the folder to save the files you create in this project.
- In Flash, create a new Flash document for ActionScript 3.0.
- Choose File>Save. Save the file in your WIP-Aquarium folder as a Flash file named **ocean fla**.
- Open the Flash Preferences dialog box and click PSD File Importer in the list of categories.
- Choose Lossless in the Compression menu and click OK.

When you import a Photoshop file, you can define the compression settings for each resulting bitmap object. By default, Flash applies lossy compression, which can create smaller file sizes but can also degrade the quality of resulting images. By changing the setting in the Preferences dialog box, you can change the default for all bitmap objects that are created when you import a Photoshop file to the Flash Stage. This means you won't have to choose the options for individual objects.



COPY ASSETS FROM EXTERNAL LIBRARIES

When objects already exist in a Flash file, it is a fairly simple process to copy them from one file to another. If both files are open, you can simply copy a symbol instance from the Stage of one file and paste it into the Stage of the other file. The necessary assets are automatically placed into the library of the second file. You can also simply open the Library panel of an external file, which enables you to access the assets in that library without opening the second file Stage.

- With **ocean fla** open, choose File>Open. Navigate to **creatures fla** (in the WIP-Aquarium folder) and click Open. When more than one file is open, each file is represented by a tab at the top of the document window. You can click any document tab to make that file active.
- In the Library panel, Shift-click to select the Fish1, Fish2, and Turtle items in the Library. Control-click-click one of the selected items and choose Copy from the contextual menu.
- Click the Library menu at the top of the Library panel and choose ocean fla to display that file's library. Use this menu to switch between the libraries of all open files.
- Control-right-click the empty area at the bottom of the Library panel (below the existing assets) and choose Paste from the contextual menu. The Air bitmap item is also pasted because it is used in the Fish2 movie clip.


Note: Press Shift to select multiple items.

Note: When the Library panel is active, the Library panel shows the library for the currently active file.

Note: the document tabs show there are two open files.

Note: the Library panel shows the library for the currently active file.

Note: although creature fla is active, the Library panel now shows the library of the ocean fla file.

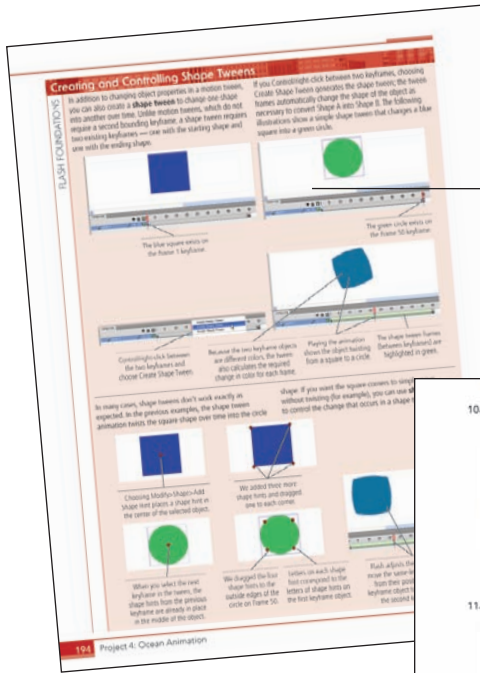


Step-By-Step Exercises

Every stage of the workflow is broken into multiple hands-on, step-by-step exercises.

Visual Explanations

Wherever possible, screen shots are annotated so you can quickly identify important information.



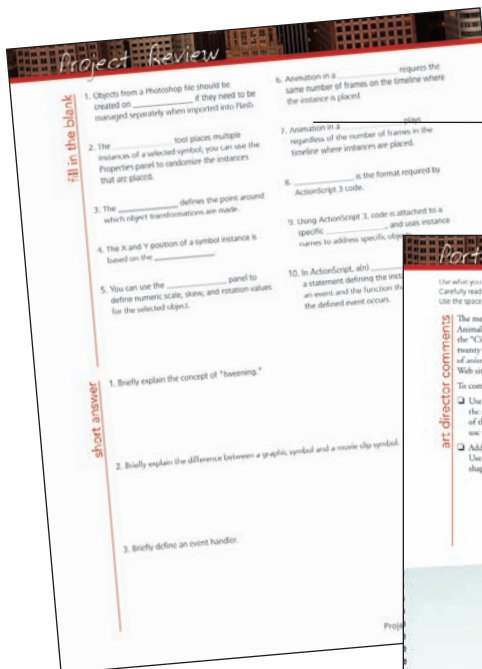
Flash Foundations

Additional functionality, related tools, and underlying graphic design concepts are included throughout the book.



Advice and Warnings

Where appropriate, sidebars provide shortcuts, warnings, or tips about the topic at hand.



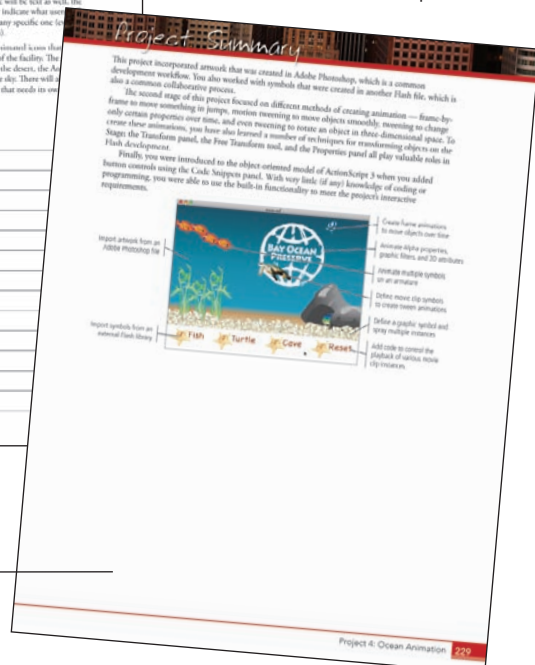
Project Review

After completing each project, you can complete these fill-in-the-blank and short-answer questions to test your understanding of the concepts in the project.



Portfolio Builder Projects

Each step-by-step project is accompanied by a freeform project, allowing you to practice skills and creativity, resulting in an extensive and diverse portfolio of work.



Visual Summary

Using an annotated version of the finished project, you can quickly identify the skills used to complete different aspects of the job.

Projects at a Glance

The *Against The Clock Portfolio Series* teaches graphic design software tools and techniques entirely within the framework of real-world projects; we introduce and explain skills where they would naturally fall into a real project workflow.

The project-based approach in *The Professional Portfolio Series* allows you to get in depth with the software beginning in Project 1 — you don't have to read several chapters of introductory material before you can start creating finished artwork.

Our approach also prevents “topic tedium” — in other words, we don't require you to read pages and pages of information about text (for example); instead, we explain text tools and options as part of a larger project (in this case, as static text in a solar system model and as dynamic text in a video playback module).

Clear, easy-to-read, step-by-step instructions walk you through every phase of each job, from creating a new file to saving the finished piece. Wherever logical, we also offer practical advice and tips about underlying concepts and graphic design practices that will benefit students as they enter the job market.

The projects in this book reflect a range of different types of Flash jobs, from animating creatures in the ocean to building a model of the solar system to programming an interactive game. When you finish the eight projects in this book (and the accompanying Portfolio Builder exercises), you will have a substantial body of work that should impress any potential employer.

The eight Flash CS5 projects are described briefly here; more detail is provided in the full table of contents (beginning on Page viii).

project 1

Corvette Artwork

- Setting up the Workspace
- Drawing in Flash
- Painting and Coloring Objects



project 2

Talking Kiosk Interface

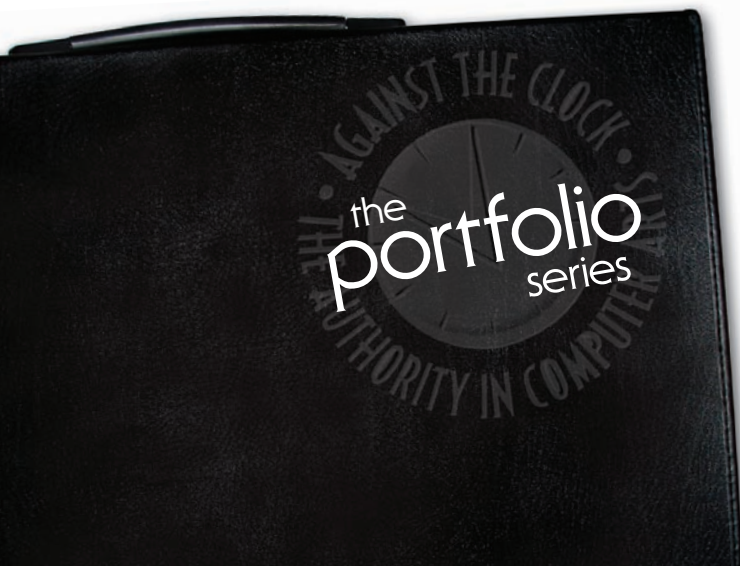
- Working with Symbols
- Working with Sound
- Creating Frame Animations



project 3

Solar System Model

- Modeling Complex Animations
- Creating Animated Movie Clips
- Working with Text
- Adding Movie Controls



project 4

Ocean Animation

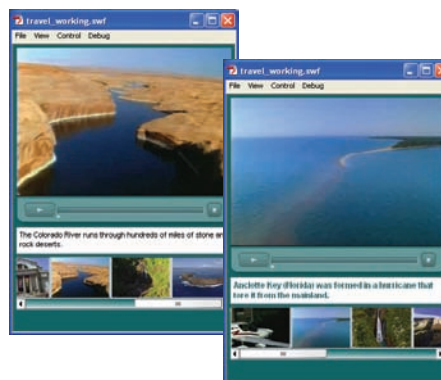
- ❑ Importing Bitmaps and Symbols
- ❑ Animating Symbols
- ❑ Programming Basic Timeline Control



project 7

Travel Video Module

- ❑ Encoding Video for Flash
- ❑ Working with Components



project 5

Gator Race Game

- ❑ Preparing for ActionScript
- ❑ Working with ActionScript 3
- ❑ Creating Custom Functions
- ❑ Working with Variables and Arrays
- ❑ Scripting Loops
- ❑ Adding Sound with ActionScript



project 8

Seabreeze Web Site

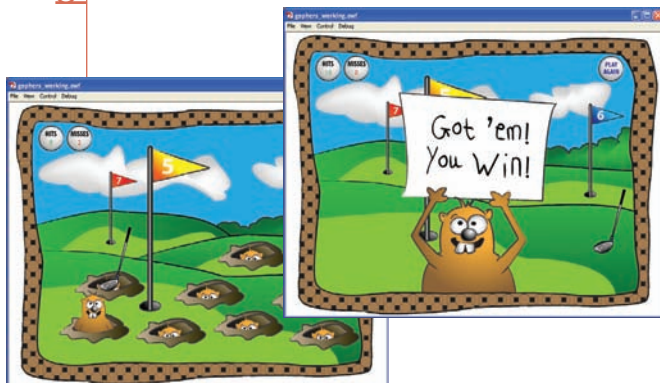
- ❑ Building Site Navigation
- ❑ Loading External Content



project 6

Gopher Golf Game

- ❑ Preparing Game Artwork
- ❑ Programming Interactivity



Some experts claim most people use only a small fraction — maybe 10% — of their software’s capabilities; this is likely because many people don’t know what is available. As you complete the projects in this book, our goal is to familiarize you with the entire tool set so you can be more productive and more marketable in your career as a graphic designer.

It is important to keep in mind that Flash is an extremely versatile and powerful application. The sheer volume of available tools, panels, and features can seem intimidating when you first look at the software interface. Most of these tools, however, are fairly simple to use with a bit of background information and a little practice.

Wherever necessary, we explain the underlying concepts and terms that are required for understanding the software. We are confident that these projects provide the practice you need to be able to create sophisticated artwork by the end of the very first project.

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