adobe photoshop elements 14

CLASSROOM IN A BOOK®
The official training workbook from Adobe

Instructor Notes
Introduction

The Adobe® Photoshop® Elements 14 Classroom in a Book® course presents tips, techniques, and solutions for using Adobe Photoshop Elements. These Instructor Notes are intended to complement the information in the Adobe Photoshop Elements 14 Classroom in a Book.

The information is organized to follow the sequence of instruction in each lesson. However, the notes are not intended to expand on each and every exercise but rather to point out potential teaching opportunities not specifically covered in the lesson or areas where students might easily be confused.

Course strategy

The book includes a Getting Started chapter and 10 lessons, which will take different amounts of time to complete. You can teach approximately one chapter per session but, depending upon the number and duration of sessions in your course, you may wish to combine related exercises from some of the shorter lessons, or split up some of the more involved lessons.

To this end, you should make your own assessment of the complexity of the various exercises in each lesson. Some non-essential exercises—and those that require Internet access, where that is not available in the classroom—may be best assigned as follow-up work to be completed at home.

The following lesson summaries will help you to structure your course:

• **Getting Started** covers setting up a work folder to store the files generated during the lessons and downloading the sample images used in the exercises from the Account page at peachpit.com. If students do not have access to the Internet in class, you’ll need to download the sample images for at least the first lesson or two before your course begins and distribute them to your students.

  This chapter also introduces the key concept of the catalog file, outlines the conventions used in the book for denoting command strings and for separating equivalent terms and commands for Windows and Mac OS, and lists help, support, and learning resources.

  In the classroom this section is best combined with Lesson 1, so that students will already have an established lessons folder when they create their first catalog, import the Lesson 1 images, and explore the workspace. The concept of the catalog file and the use of help and resources are revisited in Lesson 1; for both subjects, emphasis and reiteration are worthwhile at the beginning of the course.
Lesson 1 provides an introduction to the Photoshop Elements interface and workspace that is basic to all the following lessons. Students create a catalog file and import sample images before learning how navigate the workspace, move between modules, work with panels, and make use of the various viewing modes. Methods for importing images and other media are covered in more detail in Lesson 2.

Lesson 1 also touches on the subject of **Keyword Tags**, which is expanded in more detail in Lesson 3.

This lesson also covers the various methods for accessing Help. If Internet access is not available in class, students should be encouraged to explore these resources in their own time. To this end, it may be helpful to assign a series of questions and have your students find answers online before the next class.

*Note: The sample images to be imported for Lesson 1 are also referenced through Lessons 2 and 3. If your first class does not follow the exercises as presented in the book, your students should at least prepare for the following sessions by creating a working catalog and importing the Lesson 1 sample images.*

**Tip:** Lesson 2 covers importing images from a digital camera or memory card reader, so you may wish to have your students come to class prepared for this.

**Lesson 2 and 3** should be treated as linked parts of an integrated exploration of the Elements Organizer. This is reflected in the fact that these two lessons reference a single, combined lesson folder—the same set of images (together with those imported for Lesson 1) will be taken through all the stages of the Organizer workflow, from import to searching. Through the course of Lessons 2 and 3, each exercise builds on the last, so that the success of each step is dependent on the completion of those preceding it.

Lesson 2 begins with a series of exercises covering the various methods for importing images, and then introduces the People, Places, and Events views in the Organizer, outlining the workflow respective to each of them.

Lesson 3 looks at ratings, keyword tags, version sets, stacks, and albums, showing how these ‘traditional’ sorting tools can be applied within the People, Places, and Events organizational model; then, looks at a variety of ways to search and filter the catalog.

**Lessons 4 through 9** all focus on the Editor module, beginning with exercises that deal with different aspects of image adjustment, correction, retouching and repair, and concluding with creative projects that explore image merging and manipulation, filters and effects, and the use of the graphics library and type tools. Lessons 4 and 9 in particular may be too involved to complete all the exercises in a single class session, so you may find possibilities for recombining exercises from these lessons to suit your schedule.

**Lesson 4** begins with coverage of the simple one-click editing techniques that can be applied in the Organizer and in Full Screen mode, and then introduces some of the fundamental concepts and terminology behind digital image
editing. Exercises explore the use of the histogram as an analytical tool and illustrate the concepts of color correction and lighting adjustment, which are further elaborated in Lesson 5 and 6 respectively.

Lesson 4 introduces the new Guided Edit interface and the Quick Edit mode’s new Smart Looks effects. The lesson also details steps for batch processing files with automatic adjustments; then, concludes with an examination of the Camera Raw workspace that reiterates the technical concepts of white balance, color temperature and tint, and the relationship between the histogram and the shadows, highlights, and levels controls.

**Lesson 5** focuses on working with color, while **Lesson 6** deals with exposure problems. Lesson 5 includes a section on setting up multiple files to compare the results of various approaches to a correction problem—a technique that will be used again in Lesson 6. Exercises dealing with making selections are also referred to in subsequent lessons. Lessons 5 and 6 both feature the use of layers and blending modes, and techniques for selective editing.

**Lesson 7** moves beyond correction and adjustment to explore a variety of tools and techniques for re-composing, retouching, and re-interpreting photos.

**Lesson 8** is another “stand-alone” lesson, though it does depend to some extent on skills learned in earlier lessons. Lesson 8 deals with a variety of methods for combining multiple photos using the Photomerge tools, and also includes an exercise on creating a composite image manually that will increase the student’s familiarity with using selections, layers, and masks.

- **Lesson 9** introduces the Create mode—where students will create a photo book that includes not only photos from the catalog, but also type and artwork such as themes, backgrounds, frames, and clip art from the Graphics library.

The lesson begins by exploring the Graphics library, and then steps the student through the Photo Book project—the most complex of those available in the Create menu. In the course of the project, students learn basic skills for working with design elements such as backgrounds, frames, and text objects that are applicable to any of the simpler projects, and also become more familiar with the Layers panel.

The section “Refining your Photo Book layout using layers and effects” in the revisits and reinforces several techniques used in the four preceding lessons.

This lesson also covers the creative use of text, filters, and the filter gallery, with more references to the use of layers, layer masks, and blending.

- **Lesson 10** deals with printing, sharing and exporting, as well as catalog backups. This lesson covers several topics that will be more effective if your students have Internet access, including online; however, most of the exercises can still be followed even without a printer or Internet connection.
New and enhanced features

Several lessons in this edition introduce new tools or cover new enhancements to features and workflows in Photoshop Elements 14:

**Lesson 1** Lesson 1 introduces a new bulk import feature that lets you browse for images and import files from multiple folders in a single batch.

**Lessons 2 and 3** In Elements Organizer 14, the Media, People, Places, and Events views introduced in Photoshop Elements 11 have been extended and enhanced to make tagging, sorting and searching workflows easier and more intuitive. The addition of an Unnamed mode means that the People view is no longer unpopulated before any faces have been tagged; People Recognition now stacks unnamed faces by similarity, making the tagging process quicker and easier from start to finish. These changes are paralleled in the other Organizer views. In the new UnPinned mode in the Places view, you can browse those images in the catalog that have no location information, and drag them directly to the map. New Named and Suggested modes in the Events view add flexibility in sorting media files by time.

For a full description of the new features in Elements Organizer 14, go to: helpx.adobe.com/elements-organizer/using/whats-new.html

**Lessons 4 through 10** In the Editor, Photoshop Elements 14 delivers enhancements in all three editing modes.

Lesson 4 introduces a new Smart Looks feature in the Quick edit mode’s Effects panel, and a new-look interface in the Guided Edit mode, with interactive previews and new guided procedures across several categories. New exercises cover the Shake Reduction feature and a new guided edit that simplifies the task of resizing an image. Lesson 5 covers major enhancements to the Refine Selection brush.

Lesson 6 introduces the new Haze Removal tool, and Lesson 7 explores new Guided Edits from the Fun Edits category.

For a full description of the new and enhanced features in the Editor, go to: helpx.adobe.com/photoshop-elements/using/whats-new.html

Getting Started

The Adobe Photoshop Elements 14 Classroom in a Book does not provide detailed instruction on installation of the application software. Depending on your course structure and the class time available, you may either choose to handle installation before your first class, or to guide students through the process in the first lesson.

If class time is short, you may also choose to set up the Lessons and work folders on each student’s computer before your first lesson. If you take this approach, you can have your students begin with Lesson 1, which reiterates the remaining information from the Getting Started chapter.
Lesson 1: A Quick Tour of Photoshop Elements

This lesson presents an introduction to Adobe Photoshop Elements intended to provide your students with an overview of the workspace and familiarize them with the basic workflow and procedures used to import, view, and select digital images.

Goals for this lesson

The overall objective for Lesson 1 is to make your students sufficiently familiar with the user interface to be able to locate the tools, commands, and controls they’ll need to import, view, and select images.

- Students should understand the concept of the catalog file, and how to create, and then switch between, catalogs.
- They should be able to identify and locate the key elements of the interface, including menus, the Task bar, the left and right panels, the Editor’s Panel Bin (and panels in general), and image windows.
- They should be able to access and use the various views and working modes.

A secondary goal is to introduce your students to the different means of finding more information about Photoshop Elements so that they learn how to help themselves and gain confidence and independence. They should be aware of and able to access:

- Help, in the application and on the Web.
- The Help PDF.
- Links to Help in the application.
- Tool tips and Hot-linked tips.

Workflow overview

Begin the lesson with a brief, broad overview of the catalog file and the two primary workspaces with their different working modes and views, explaining how each might fit into a typical workflow. Point out how the Organizer and Editor together provide an integrated solution, with tools and options to help manage every stage, from import to output.

The library catalog file

The catalog file is a key concept in understanding how Photoshop Elements works. You should take the time to make sure that your students understand what the catalog file is, referring to the somewhat fuller description on page 3 in the chapter “Getting Started.” Students should understand the virtual nature of the import process and of album groupings, and the advantages of this approach for working with files stored in multiple locations.
Students will create and load a new, dedicated catalog to manage the sample images for the lessons. The process is not reiterated in later lessons, so you might wish to ensure that your students become familiar with the Catalog Manager and the possibility of using multiple catalogs. You can point out that the name of the currently active catalog is displayed in the lower left corner of the Organizer window.

**Getting photos from files and folders**

This will be the only import procedure in this lesson. All of the other methods of importing, including downloading photos from a camera, will be covered in detail in Lesson 2.

**About keyword tags**

Any import process involving the Classroom in a Book lesson files provides an opportunity for discussion of Keyword Tags, though this subject will be explored in detail in Lesson 3.

**The Organizer workspace**

You can begin with a general tour of the screen, which will help orient your students and provide a review of the names of the workspace elements. Point out the menu bar, the Media, People, Places, and Events views, the Search box, the Create and Share tabs, the Task Bar, the Albums and Folders lists, and the different options for the right panel group. Draw attention to the fact that the name of the currently active catalog is displayed in the lower right corner of the Organizer window.

Having already imported tagged lesson files, you can briefly demonstrate the Keywords list in the Tags panel. Discuss the concept of tagging, and then have students expand the Imported Keyword Tags category. Demonstrate the use of the arrow beside a listed tag’s name to filter the photos displayed in the browser.

Make sure that your students are comfortable with using the Media Browser in both thumbnail and single image views, and are aware of the Zoom slider below the browser pane and the use of the arrow keys to navigate through a selection of images in the single image view.

**Reviewing and comparing**

Make your students aware of the Full Screen entry points in the View menu and the Task bar. Have your students familiarize themselves with the interactive filmstrip and the control bar, in both compact and expanded mode; then, play and pause the slideshow, and customize the transitions and playback settings.

Detailed coverage of the Quick Organize panel will be more effective combined with the discussion of keyword tagging in Lesson 3. The Quick Edit panel is explored in the section “Editing in Full Screen mode” in Lesson 4.
Selecting images

Make sure that students are comfortable with making multiple selections in the Media Browser, both by using modifier keys and by dragging a selection marquee, and are aware of the different ways to deselect images. Students should be aware of the keyboard shortcuts for the Edit menu’s Select All and Deselect All commands.

Reconnecting missing files to a catalog

Though Photoshop Elements usually manages to track down missing files without help, it will be handy for students to know what to do if the automatic search fails.

You should take the opportunity to make sure students understand that it’s preferable to work with their image files and the folders that contain them from within the Organizer, where changes to a file or folder’s name or location will be automatically tracked and recorded in the catalog.

Switching between the Organizer and the Editor

Before exploring the Editor workspace, you can point out the variety of methods for switching back and forth between the Organizer and the Editor.

The Editor workspace

Once again, you can begin with a general tour of the screen, pointing out the toolbox and drawing attention to the tool-specific options and controls in the Tool Options pane. Have your students show and hide the Tool Options pane, making sure they are know how to activate and disable the Auto Show behavior, which can be confusing.

Demonstrate the use of the Photo Bin to switch between docked image windows in the Edit pane, pointing out that the active image is indicated by a highlighted title tab and a blue border in the Project Bin. Draw attention to the picker for the three edit modes across the top of the Panel Bin. Have your students switch to Quick and Guided edit modes, where they will see only the active image.

The exercise has students enable floating document windows, which gives you the opportunity to explore the options for arranging image windows that are available from both the Window > Images menu, and from the menu on the Layout button in the Task bar below the Edit pane. Encourage students to experiment with floating, tabbed, and docked image windows in order to develop a feel for the way they prefer to work with their images.

Working with panels and the Panel Bin

The exercise steps in this section serve as a limited checklist for exploring the behaviors of docked and floating panels and panel groups. Point out the associated
menu commands in the Window menu, on the More button in the Task bar, and the options menus in the headers of panels and panel groups.

**Customizing the Panel Bin**
Encourage students to experiment in order to increase their productivity and enjoyment by personalizing the flexible Expert mode workspace to suit their own working preferences.

**Getting Help and accessing additional resources**
Rather than treat this as a classroom exercise, focus on pointing out the interface elements involved—the Help menu, links to help in the application, Tool tips and the Hot-linked Tips found throughout the Photoshop Elements interface.

Refer students to the list at the end of the Getting Started chapter, and encourage them to explore online Help, Community Help, and online support and learning resources at home.

**Homework Assignment**

*Lessons 2 includes a series of exercises that involve importing images from a digital camera or memory card reader, so you may wish to brief your students to come to the second class prepared for this.*

These exercise convey some important concepts and techniques and should not be skipped. You should study the exercises carefully so that you understand the requirements and decide what approach to take with your students.

The exercises as presented in the book require several batches of photos taken at different times on the same day. You might want to set a homework assignment so that your students are prepared for this project.

Ideally, they should take 4 or 5 batches of photos grouped by capture time—each batch consisting of 3 or 4 photos of a single subject. (See the Zoo subfolder inside the Lesson02-03 folder; it contains batches of shots of various animals.)

Alternatively, if a student’s camera will allow them to copy images from their computer to the camera’s memory stick, they can copy the images from the Zoo folder to the memory stick so that they can follow the steps in the exercise exactly as written.

If you prefer, you could also have your students simply follow the exercise in the book and then perform the exercise in their own time.
Questions
1. Where can you find a panel that is not currently in the Panel Bin?
2. How can you hide a panel without closing it?
3. How can you add a floating panel to the Panel Bin?

Answers
1. A panel that is not currently in the Panel bin can be accessed via the Window menu.
2. To collapse a floating panel so that you see only its header bar, double-click its name tab. You can collapse grouped floating panels in the same manner. Click the name tab again to expand the panel or group.
3. To dock a floating panel to the Panel Bin (Expert mode Custom workspace only), drag it into the Panel Bin and release the mouse button when you see a blue line indicating the new position for the panel. You can either place the panel above or below other panels, or drag it onto another panel to create a tabbed panel group.

Lesson 2: Importing and Sorting Photos
This introduces details all of the methods for importing photos into the Photoshop Elements catalog. It also outlines a variety of techniques to begin organizing, sorting, searching, and viewing photos in the each of the four Organizer views.

Scheduling
Lessons 2 and 3 should be treated as linked parts of an integrated exploration of the Elements Organizer. This is reflected in the fact that these two lessons reference a single, combined lesson folder—the same set of images (together with those imported for Lesson 1) will be taken through all the stages of the Organizer workflow, from import to searching. Through the course of Lessons 2 and 3, each exercise builds on the last, so that the success of each step is dependent on the completion of those preceding it. Lesson 3 depends, and expands, on the work done in Lesson 2 to demonstrate a variety of methods for finding photos.

Goals for this lesson
The objectives for Lesson 2 are to expose your students to a variety of methods of importing images and provide them with some basic techniques for organizing and sorting the imported images so that they can later be accessed with ease.
• Your students should be familiar with the options in the import dialogs, and should be able to get photos from a digital camera or import them from folders on the hard disk using a variety of methods.

• They should be aware of the options available in the Advanced mode of the Photo Downloader dialog. They should understand that the advanced import options will help them to apply several levels of organization automatically to a batch of photos during the import process, which will save them a lot of work after the images are already in the catalog.

• Students should be aware of and able to use the keywords and folders lists to help them access the images they want in a catalog.

• They should understand People, Places, and Events tags, and know how to launch the People Recognition, Add Places, and Add Event workflows from within the Media view.

• They should be able to switch between the Media, People, Places, and Events views, and be comfortable with the various working modes for each view.

Getting photos

Begin by reiterating the nature and function of the catalog, which is a key concept in Photoshop Elements. Your students should become familiar with the idea that they can create new catalogs for specific projects or as the most basic level of organization in their growing image collection, and with using the Catalog Manager to switch between them.

Your students will import the Lesson 2 images in batches—employing a different import method for each batch. You’ll notice that the files inside the Lesson02 -03 folder are already organized in separate sub-folders for this purpose.

There is a separate exercise for each import method:

• Dragging photos from Windows Explorer / Mac OS Finder

• Automatically fixing red eyes during import revisits the Import From Files And Folders command used in Lesson 1. Remind students that this command can be accessed from the File > Get Photos And Videos menu, and also from the menu on the Import button or from.

• Importing images in bulk

• Importing from a camera

In each case your students will encounter the Import Attached Keyword Tags dialog box, which is common to all import operations. Take this opportunity to look at the Advanced mode in this dialog box, which is not covered in any of the import exercises. You can point out the potential for of using existing keywords to apply a basic level of catalog organization at this stage.
Importing from a digital camera

This exercise introduces the Photo Downloader in basic import mode. If you arranged for your students to come to class prepared for this set of exercises, you should have them click Cancel at step 8, leaving the way clear for a more organized import in the next exercise.

Advanced Photo Downloader options

Important: This first exercise involves using the Advanced Photo Downloader Options while downloading images from a digital camera or card reader—but the exercise requires several batches of photos taken at different times on the same day.

If you have not been able to have your students prepare for this lesson adequately it may be preferable to have them follow the exercise in the book, and then go home and repeat it with images from their own cameras—perhaps as a homework assignment. The exercise is fairly involved but teaches important concepts and techniques and should not be skipped.

You should study the exercise carefully and step through it yourself so that you understand the requirements and decide what approach to take while you are planning the lesson.

Unless your students are simply following the exercise in the book, you will need to take care to adapt your references to the illustrations and Keyword Tag names in the exercise.

Using watched folders (Windows only)

In this lesson your students will set up a watched folder, but the exercise does not demonstrate its use specifically. To this end, you might have them drop a file into the watched folder after it is set up. Be sure to point out that the Windows “My Pictures” folder is watched by default.

Importing from a PDF document

This exercise uses a PDF document provided in the Lesson02-03 folder and is self-explanatory. Be sure to discuss the options that are not specifically covered in the course of the exercise.

Automatically finding faces for tagging

The reasonably successful completion of this set of exercises will serve as the foundation for your students’ exploration of the People view. The tagging exercises may require a little care and patience, in that students will need to recognize the faces in the sample images to get the best results in the exercises to follow.
Welcome to the Media, People, Places, and Events views

The exercises that make up the remainder of this exercise make up a detailed exploration of the Organizer’s three tagging views. Having begun People tagging in the media view, students are then introduced to the People view. Before switching to the Places view, they will return to launch the Add Location workflow from the Media view. Similarly, they will create a new Event from the Media view before looking at the Events view. Make sure that students understand that the Media view is not an essential part of these tagging procedures—the process can start in the People, Paces, and Events views, where the new Unnamed, UnPinned, and Suggested modes give access to those media files in the catalog that are as yet un-tagged. For extra teaching opportunities, look for functionality, commands and options not specifically explored in the exercises.

The People, Places, and Events tags created and applied through this portion of the lesson form an essential basis for the exercises in Lesson 3; students should take care to complete all of the steps as directed so that their catalogs will be structured as expected.

Questions

1. How can you tell which is the currently active catalog?
2. What can you do if you can see that People Recognition has missed a face or faces in a photo in the enlarged single image view?
3. How can you create an Event within an existing Event?

Answers

1. The name of the currently active catalog is always displayed in the lower right corner of the Organizer window.

2. In the enlarged Single Image view, click the Mark Face button in the Task bar. Drag the new face tagging box onto the face and use the handles around the box to surround it neatly; then, click the green check mark to confirm the position. Type a name for the face; then, press Enter / Return.

3. In the Suggested Events view, locate the existing event using the calendar at the right; then, move the slider to the right to increase the number of suggested stacks until the subset of photos you want has been isolated. For example, you may have an existing Event named Wedding Anniversary, with photos taken throughout the day and into the evening. Moving the Number Of Groups slider will divide the event so that you can identify the photos taken at dinner. Once you have the subset you want, select the group and click Add Event.
Lesson 3: Tagging, Grouping and Searching Photos

This lesson continues the exploration of the Organizer where Lesson 2 left off, beginning with a look at ratings, keywords, version sets, stacks, and albums, and then examining a variety of ways to search and filter the catalog.

Scheduling

Lesson 3 not only references the images imported for both of the preceding lessons, but also assumes that the catalog is already structured as a result of the People, Places, and Events tagging done in Lesson 2—the exercises will not produce the results described unless that work has been completed as directed.

Goals for this lesson

The objectives for Lesson 3 are to expand your students’ knowledge of the tools and techniques for tagging, sorting and grouping photos, to reinforce their familiarity with the Organizer’s various workspaces and workflows, and to demonstrate how the structure they have applied to the catalog can be leveraged to find photos.

• Your students should be able to apply keyword tags from anywhere in the Organizer, order and manage those tags in the Tags panel’s Keywords list, and understand how to use them as a means of sorting and finding photos.

• Students should be able to identify—and work with—Stacks and Version Sets, and should know how to create and modify both Local and Mobile Albums.

• They should be comfortable with moving selections of images between the Media view and the People, Places, and Events workspaces.

• They should be able to use the filtering capabilities of all four of the Organizer working views, and be familiar with all of the search tools.

Getting started

This lesson is a direct continuation of the process begun in Lesson 2. You can start by reviewing the work done in that lesson so that your students are reacquainted with the workspace and reminded of the organizational state of the catalog file.

Working with star ratings

The lesson begins with a short exercise that introduces students to star ratings. The instructions leave the choice of images to be rated up to the student, so the tendency may be to move on once the very simple process is understood. Encourage your students to spend a little time applying ratings so that they’ll see worthwhile results in the searching and filtering exercises to follow.
Tagging photos with keywords

Begin with a discussion on the purposes and advantages of keyword tagging. Explain how keywords can complement People, Places, and Events tags, adding yet another dimension to the sorting matrix that can be used to refine a search.

Organizing and customizing the Keywords list

The exercises in this section are well illustrated and fairly self-explanatory, allowing your students to become familiar with the Tags panel and the Keywords list while setting up a hierarchy of categories and sub-categories in preparation for the tagging exercises to follow.

Creating and applying keyword tags

In the course of this single, two-page exercise, students move through all four of the Organizer views, with the objective that they understand that keywords can be applied from anywhere in the Organizer and that selections can be “carried” backward and forwards between the Media view and any of the three filtered views. Though the process flows quite intuitively, the intention of the exercise is to expose the students to a range of options, rather than to propose the optimum workflow; look for teaching opportunities by following up the commands options that were not used in the exercise steps.

Working with Version Sets and Stacks

The exercises in this series are fairly straightforward. However, both Version Sets and Stacks in their collapsed state effectively hide some images from view in the Media Browser, so be sure to draw your students’ attention to the fact that these groupings can be identified by the respective badge icons displayed on their thumbnails.

It might be useful to emphasize a few additional tips that will help to quickly clarify several issues that might be confusing to a new user:

- The topmost image in a Version set or Stack can be changed by selecting a different image in the grouping and choosing Edit > Version Set > Set As Top Item or Edit > Stack > Set As Top Photo.
- If you edit a photo in the Organizer, Photoshop Elements automatically creates a version set. If you edit an image in the Editor you need to choose File > Save As, and then activate the option Save In Version Set With Original.
- If you edit a photo that’s already in a version set, the edited copy is placed at the top of the existing version set.
- If you edit a photo that’s already in a stack, the photo and its edited copy are put in a version set that is nested inside the stack.
Many actions applied to a collapsed stack, such as editing, printing, and e-mailing, are applied to the top item only. To apply an action to multiple images in a stack, expand the stack and select the images or un-stack them first.

If you apply a keyword tag to a collapsed stack, the keyword tag is applied to all items in the stack. When you run a search on the keyword tag, the top photo in the stack appears in the search results marked with the stack icon. If you want to apply a keyword tag to only one photo in a stack, expand the stack and apply the keyword tag to that photo selectively.

You can access Version Set and Stack commands by either by right-clicking the group and choosing from the context menu or by using the Edit menu.

Creating Albums

This series of exercises is quite straightforward, but be sure to begin with a discussion of the properties and advantages of albums for grouping photos. Point out that the Albums list can be used to filter the catalog with one click, making albums a great way to save the results of a search—even just temporarily. Discuss the similarities and differences between albums and folders—which are also listed in the left panel as image sources, and direct your students’ attention to the issues that are raised in the margin tips and notes associated with the exercises.

Filtering and finding photos

Rather than starting with an examination of specific search tools and commands, this series looks first at the intuitive filtering capabilities that are built into the Organizer views. You can begin by expanding on the introduction on page 82, stepping students through a review of the lesson thus far—pointing out that they have already been using many of these “search” features without thinking about it.

Finding people, places, and events

For extra teaching opportunities, look for functionality, commands, and options not specifically explored in the exercises. Before teaching the remaining exercises in this lesson, point out the basic interface elements used for finding photos in the Organizer:

- **The Folders panel**  Find photos by folder location. Work from the Folders panel to move, manage, rename, or delete files and folders so that the changes you make on your hard disk will be tracked and recorded in the catalog file.

- **The Timeline**  (Window > Timeline) Click a month or set a range to find photos and media files by date, by import batch, or by folder location.

- **The Text Search box**  Enter search terms to return matching keywords, file and album names, captions, notes, dates and other embedded text metadata.
• **The Tags panel** Click the search box beside a keyword or a People, Places, or Events tag to isolate photos with that tag. Click the search box beside more tags to narrow the search by shared keywords, location, or time. Save multiple-criteria search parameters to streamline your workflow.

• **The Find menu** Find photos by date, caption, file name, history, media type, metadata, or color similarity. Commands are also available for finding photos and media files that have unknown dates, are un-tagged, or are not in an album.

• **The Find bar** (Visual Similarity searches) Drag and drop a photo, keyword tag, creation, or album onto the Find bar to locate similar or matching photos.

## Saving complex searches

In Photoshop Elements 14, Saved Searches replace the Smart Albums you may be familiar with from previous versions. Have your students complete the exercise, and then encourage small groups to come up with possibilities for multiple-criteria searches that might return different results over time.

## Finding photos by visual similarity

This feature has been enhanced for Photoshop Elements 14. Encourage your students to create a separate catalog of their own photos and experiment with the visual similarity, object-match, and duplicate images searches.

### Questions

1. How can you refine or narrow a text search to find photos in the catalog?
2. How can you hide files from view in the Media Browser?
3. How can you change the thumbnail image displayed in the Media Browser to represent a particular Stack or Version Set?

### Answers

1. You can use the operators: “and,” “or,” and “not” if they are preceded and followed by a space. For example, you could type “vacation and kids” to find only images with both words in their metadata, not just either one. You can also use special keywords to narrow the search—to a specific type of media, for example.

2. In order to hide files from view in the Media Browser use the menu options under Edit > Visibility.

3. First, expand the Stack or Version Set; then right-click the image you wish to be displayed for the collapsed group. From the context menu, choose Stack > Set As Top Photo or Version Set > Set As Top Item.
Lesson 4: Image Editing Background & Basics

This lesson introduces some of the fundamental concepts and terminology behind digital image editing, and also serves to familiarize students with the Editor’s user interface and working modes. The exercises provide an introduction to a range of easy techniques that will give your students the satisfaction of achieving quick results while gaining hands-on experience in all three editing modes.

The last segment of Lesson 4 deals with the Camera Raw window and also serves as a review of the image editing concepts and terminology introduced earlier.

Scheduling

Lesson 4 is intended as an introduction to photo editing and a “test drive” of the Editor workspace. Depending on your course structure, you could take several different approaches. One possibility would be to have students work through this chapter as a homework assignment in preparation for Lessons 5, 6, and 7, which focus separately on color, exposure, and retouching. Another option is to recombine exercises from this lesson with related projects from the other editing lessons.

Goals for this lesson

The objectives for Lesson 4 are to familiarize your students with the Editor workspace, to introduce the technical concepts behind color correction and lighting adjustment, and to demonstrate the idea that each of the three edit modes can provide different solutions to a single editing problem.

• Your students should be comfortable with the Editor workspace.
• They should understand the differences between the three edit modes.
• They should have a basic idea of the issues involved in color correction and lighting adjustment and an understanding of the concept of white balance.
• They should know how to use a histogram to help assess the tonal range of a photo, and understand the relationship between the histogram curve, levels controls, and the shadows, highlights and mid-tone contrast in an image.
• They should know where to find correction tools and commands, from basic automatic options to the more complex operations.
• Your students should know what a raw image is, and understand the advantages of the format.

Expanding on the exercises

The majority of the projects and exercises in Lesson 4 and all the following chapters detail practical, step-by-step editing techniques that are well illustrated and explained and usually quite easy to follow.
For teaching opportunities, look for those dialog box options, menu commands, tool settings, and underlying concepts in each exercise that are not specifically covered.

**Editing photos in the Organizer**

Lesson 4 begins with coverage of the simple one-click editing techniques that can be applied in the Organizer and in Full Screen mode, giving students the satisfaction of fast, tangible results that will make them aware of the possibilities for enhancing their own images.

**Recognizing what your photo needs**

This series of exercises introduces some of the fundamental technical concepts and terminology behind digital image editing.

Exercises explore the use of the histogram as an analytical tool and illustrate the concepts of color correction and lighting adjustment, which are further elaborated in Lesson 5 and 6 respectively.

**Making easy color and lighting adjustments**

The exercises in this section look at some of the quickest editing solutions, and aim to show that those solutions are not necessarily any less successful or sophisticated.

The first two exercises detail steps for batch processing files with automatic editing commands—a process that students will repeat at the start of each of the two following lessons. The next six exercises explore the Quick edit and Guided edit modes, while comparing the effectiveness of different tools and techniques. This segment ends with a look at the Smart Brush in Expert mode, demonstrating that complex results can be achieved quickly and easily using preset adjustments and effects painted directly onto the edit preview, without the need to make complex selections.

**Working with camera raw images**

The lesson concludes by reinforcing the technical concepts of white balance, color temperature and tint, and the relationship between the histogram, shadows, highlights, and levels controls through an examination of the Camera Raw workspace.

A suitable image is supplied in the Lessons folder for use in the exercises, so it is not essential that your students are able to capture a raw image.

**Scheduling**

Lesson 4 may be too involved to be completely covered in a single class session. Lessons 4, 5, 6, and 7 all include exercises that deal with different aspects of image
Questions

1. How can you edit an image without leaving the Organizer?
2. What options are available for adjusting lighting, exposure, and color in the Guided Edit mode?
3. How can you apply automatic fixes while working in the Editor?

Answers

1. The Instant Fix button in the Task bar opens the Photo Fix Options panel, which offers a cropping tool and a range of auto-adjustment tools for fixing some of the most common image problems. The same set of auto-adjustment tools can be found in the Quick Edit panel in Full Screen mode.

2. The relevant Guided Edit operations are found in the Basics and Color categories; Brightness And Contrast; Levels; Lighten And Darken; Enhance Color; Remove A Color Cast, and Correct Skin Tones.

3. You can find auto-adjustment buttons for Smart Fix, Levels, Contrast, Color, and Sharpen in the right panel in Quick edit mode. Several of these buttons can also be found in the controls for relevant operations in Guided Edit mode.

   Equivalent auto-adjustments are available from the Enhance menu in Expert mode. The Enhance menu also provides an Adjust Smart Fix command, which opens a dialog box where you can specify settings for automatic adjustments.

Lesson 5: Working with Color and Making Selections

This lesson explores the tools and options for correcting color problems in photos, starting with a few of the easy-to-use, one-step image correction features, and then touching on some the more advanced features and adjustment techniques.

Lesson 5 also introduces the selection tools, with exercises to foster selecting skills that will be called on at several points in subsequent lessons.

Lesson 5 details a technique for comparing the results of various approaches to a correction problem that is used again in both projects in Lesson 6. This lesson also briefly outlines the Whiten Teeth tool, providing an opportunity to introduce the Quick Edit mode’s Touch Up tools—variants of the Full Edit mode’s Smart Brush tool, which is covered in detail in Lesson 4.

▶ Tip: A 24-bit monitor is needed to see a color cast clearly. For best results, your students’ monitors should also be properly calibrated; otherwise it may not be clear whether a perceived color cast is in the monitor or in the image.
Goals for this lesson

The objectives for Lesson 5 are to expand on the concepts involved in color correction, increase your students’ fluency with the Editor workspace and their familiarity with the three Edit modes, and to expose them to a range of correction tools and techniques.

- Your students should be comfortable with working in all three Edit modes.
- They should have a good idea of the issues involved in color correction, including the causes of color imbalances, and the concept of White Balance.
- They should know where to find correction tools and commands, from basic automatic options to the more complex operations.
- Students should be able to make use of the different viewing modes and image window arrangements to compare images and solutions.
- They should be aware of tools and techniques for selecting and isolating areas in an image for selective editing.
- They should be aware of the issues and options relating to color management.

In addition to the lessons in this book, encourage students to do additional study about color correction. This chapter merely scratches the surface of image correction—a skill set that is very deep, extremely valuable, and involves concepts well beyond the scope of both this book and the Photoshop Elements documentation. Many books on correction and retouching are available from Peachpit Press.

Getting started

You can begin this lesson with a thorough exploration of the Editor Workspace. Be sure to review the tools in the Tool bar—drawing attention to the controls available in the tool options pane—as well as the Photo Bin, the View, Window, and Layouts menus, panels and the Panel Bin.

Expanding on the exercises

The majority of the projects and exercises in Lesson 5 and all the following chapters detail practical, step-by-step editing techniques that are well illustrated and explained and usually quite easy to follow. For teaching opportunities, look for those dialog box options, menu commands, tool settings, and underlying concepts that are not specifically covered in each exercise.

Questions

1. How can you add to or subtract from a selection?
2. How can you tweak the results of an automatic color adjustment?
3. How do you add files corrected in the Editor to the Organizer?
Answers

1. Each selection tool has Add To Selection and Subtract From Selection modes that can be activated by clicking the buttons at the left of the Tool Options pane. You can also hold down either the Shift key as you use a selection tool to add to a selection or the Alt / Option key to subtract from it.

2. Choose Enhance > Adjust Color > Color Variations to open the Color Variations dialog box. Radio buttons at the lower left enable you to treat Shadows, Midtones, Highlights, and Saturation separately. Increase or decrease the lightness and the Red, Green, and Blue color components for the selected tonal range by clicking the appropriate thumbnail variations.

3. For most files modified in the Editor, the Include In Organizer option is activated by default in the Save, Save As, and Save Optimized As dialog boxes. When you batch-edit files with the Process Multiple Files feature, this option isn’t part of the process, so you must add the edited files to the Organizer manually by choosing File > Get Photos And Videos > From Files And Folders.

Lesson 6: Fixing Lighting and Exposure Problems

This lesson revisits all three editing modes in the Editor, expands on techniques for making and saving selections, introduces adjustment layers and blending modes, and details a wide range of options for adjusting the tonal range of an image.

Scheduling

Lessons 4, 5, 6, and 7 all include exercises that deal with different aspects of image adjustment, correction, and repair—so you may find possibilities for recombining exercises from these lessons to suit your session schedule. Both projects in this lesson make use of a technique for comparing the results of various approaches to a correction problem, which is detailed in Lesson 5.

Goals for this lesson

The objectives for Lesson 6 are to expand on the concepts of exposure problems and tonal imbalance, to review your students’ knowledge of the three Edit modes, and to expose them to a range of tools and techniques for correcting and adjusting the tonal range.

- Students should be able to identify the extremes of tonal imbalance in an image and understand what needs to be adjusted in each case.
- They should be aware of a variety of tools and options for adjusting tonal range, including brightness and contrast, curves, levels, and shadows and highlights.

Tip: A 24-bit monitor is needed to see image detail clearly. For best results, your students’ monitors should also be properly calibrated; otherwise it may not be clear whether a perceived problem is in the monitor or in the image.
• They should be able to make use of the different viewing modes and image window arrangements to compare results of different editing approaches.

• Your students should be familiar with all elements of the Editor workspace, and should be comfortable working between the three Edit modes.

• They should have a basic understanding of the uses of layer blending modes and adjustment layers, and be able to make and save a complex selection.

Expanding on the exercises

The projects and exercises in this lesson detail practical, step-by-step editing techniques that are well illustrated and explained and usually quite easy to follow.

For teaching opportunities, look for those dialog box options, menu commands, tool settings, and background concepts that are not specifically covered in each exercise.

Questions

1. Detail two ways in which layer blending modes can be used to address exposure problems.

2. What does the graph in the Levels dialog box represent?

3. When you have more than one image window open in Full Edit mode, how can you tell which is the active image?

Answers

1. If a photo is underexposed—too dark—duplicating the background layer and applying the Screen blending mode to the new layer may correct the problem. Inversely, if your photo is overexposed—too light—duplicating the background layer and applying the Multiply blending mode may be a solution. If either of these techniques produces too strong an affect, you can use the layer opacity setting to tone it down.

2. The Levels graph represents the distribution of tonal values across all the pixels in the image, from darkest at the left to lightest at the right. A trough (or gap) in the curve shows that there are few (or no) pixels mapped to that part of the range; a peak indicates the opposite.

3. The active image is indicated by a highlighted name tab, and by a blue border around its thumbnail in the Photo Bin.
Lesson 7: Reframing, Retouching, and Recomposing Images

This lesson will reinforce your students' familiarity with the Editor while extending their understanding of the use of selections to include masks, and introducing retouching tools such as the Healing Brush, the Spot Healing brush, and the Clone Stamp tool. The lesson can easily be extended to cover the creative use of some of the same tools and techniques to add objects to or remove them from an image. Lesson 7 also covers the Straighten tool, the Recompose tool and the Filter Gallery.

Scheduling

Lessons 4, 5, 6, and 7 all include exercises that deal with different aspects of image adjustment, correction, and repair—so you may find possibilities for recombining exercises from these lessons to suit your session schedule. While Lesson 5 covers color correction, Lesson 6 deals with exposure problems, and Lesson 7 with retouching. Lesson 7 makes further use of selective editing techniques from Lessons 5 and 6.

Goals for this lesson

The objectives for Lesson 7 are to familiarize your students to the Straighten, Crop, and Recompose tools for improving image composition, to expose them to a variety of techniques for retouching and repairing images, and to introduce them to the image canvas, the Type tool and the Filter Gallery. Lesson 7 also aims to consolidate selection skills and fluency with layers and blending modes.

• Your students should know how to use the Recompose, Content-Aware Move, Straighten, and Crop tools and understand the purpose of crop overlays.
• They should be familiar with the concept of the canvas and understand how to use it to create borders.
• Your students should understand the use of (and differences between) the Healing and Spot Healing brushes and the Clone Stamp tool.
• They should know how to use the History panel.
• They should know how to refine a selection and understand the difference between a selection and a mask.

Expanding on the exercises

The projects and exercises in this lesson detail practical, step-by-step editing techniques that are well illustrated and explained and usually quite easy to follow. For teaching opportunities, look for those dialog box options, menu commands, tool settings, and underlying concepts that are not specifically covered in each exercise.
Questions

1. How can you straighten a crooked photo using a vertical element such as a signpost as a reference?

2. How can you merge two or more layers?

3. What is the purpose of the Content-Aware setting for the Spot Healing Brush?

Answers

1. To straighten an image around a vertical reference such as an architectural element or a signpost, hold down the Ctrl key (Windows) or Command key (Mac OS) on your keyboard as you drag with the Straighten tool. The image will be rotated so that your reference line becomes vertical.

2. There are several ways to merge layers. You can select a single layer and choose Layer > Merge Down to merge the selected layer with the layer below it in the Layers panel. You can select multiple layers and choose Layer > Merge Layers or use the Layer > Merge Visible to merge all the layers currently set as visible in the Layers panel. The Layer > Flatten Image command will merge all the layers in an image.

   All of these commands can also be accessed from the Layers panel Options menu or by right-clicking / Control-clicking a layer in the Layers panel.

3. In Content-Aware mode, the Spot Healing Brush tool compares nearby image content to fill the area under the pointer, seamlessly maintaining detail such as shadows, object edges, and even perspective.

Lesson 8: Combining Images

Lesson 8 covers several simple methods for producing a better photo by combining multiple images. The first four of the five projects explore the Photomerge tools, while the fifth makes use of layers and masks to composite selections taken from separate images.

Scheduling

The projects in this lesson can be approached independently; the lesson could easily be broken up if you wish to recombine exercises to suit your course schedule.

Goals for this lesson

The objectives for Lesson 8 are to expose your students to the options offered by the Photomerge feature and to introduce the idea of creating composite images and even “digital illustrations” by the use of layers and a variety of selection and blending techniques.
• Your students should know how to use the Photomerge Panorama, Photomerge Group Shot, Photomerge Scene Cleaner, Photomerge Faces, Photomerge Exposure, and Photomerge Style Match features.

• They should understand the different layout options available for a Photomerge Panorama.

• They should understand the value of capturing multiple images to take advantage of Photomerge Group Shot, Scene Cleaner and Photomerge Exposure.

• Students should know how to create a composite image using selections from multiple images with layers, masks and the Defringe command.

Expanding on the exercises

The projects and exercises in this lesson detail practical, step-by-step techniques that are well illustrated and explained and usually quite easy to follow. For teaching opportunities, look for those dialog box options, menu commands, tool settings, and underlying concepts in each exercise that are not specifically covered.

This lesson does not include exercises for either Photomerge Faces or the new Photomerge Style Match feature. You can either treat this as an extra teaching opportunity in class, or assign projects based on these tools as homework—once students have worked with four Photomerge tools, the commonality of interface and process will make the other two very easy to learn.

Questions

1. What is the Photomerge Faces tool?

2. How can you quickly create the perfect vacation shot even though there are tourists cluttering your image?

3. What is a vanishing point? (Not covered in the lesson; see Photomerge Panorama > Interactive Layout > Perspective setting > Vanishing Point tool.)

Answers

1. This tool enables you to combine features from multiple images to create a composite face. After selecting the photos you’d like to merge, choose File > New > Photomerge Faces. You can use one image as the base image and merge features from the others to create a new face.

2. Provided you capture multiple images of the same scene, you can combine them to create the perfect photo by using the Photomerge Scene Cleaner to eliminate unwanted elements such as tourists or vehicles that are moving through the scene.
A vanishing point is the point at which receding parallel lines seem to meet when seen in perspective; for example, when a road stretches out ahead of you, it appears to grow narrower with distance, until it has almost no width at the vanishing point on the horizon.

Lesson 9: Getting Creative

Lesson 9 introduces the Graphics library, steps students through a complex project in the Create mode and explores the creative possibilities offered by layer masks and the Type tool variants.

Scheduling

The projects in this lesson can be approached independently in terms of skills and procedures; however, the opening exercises dealing with the Graphics and Favorites panels should be considered as part of the Photo Book project, as they include steps that locate and assemble assets for that project.

It should be possible to complete the lesson in a single class session but, depending on your course strategy, you could also separate the shorter projects at the end of the chapter and use them separately to liven up drier lessons made up of re-combined exercises from the preceding chapters.

Taken together, these projects also serve to consolidate the student’s understanding of layers and layer masks. All but one of the exercises include the use of text.

Goals for this lesson

The objectives for Lesson 9 are to introduce your students to the opportunities for showcasing their own images in creative photo projects offered in the Create mode, while promoting fluency with layers, layer styles, and various text tools and effects.

- Your students should be aware of all of the options available on the Create tab.
- Students should recognize the basic project workflow common to most creations, first specifying format and theme template, and then using the Pages, Layouts, Graphics, and Favorites panels to develop a design.
- They should be familiar with accessing the artwork available in the Graphics panel, both in Expert mode, and once a Create mode project is underway.
- They should be able to move between the advanced and basic modes to add filters, effects, layer styles and text to their projects.
- They should be comfortable with duplicating, locking, and moving layers, hiding and revealing layers, deleting layers and layer styles, and working with layer opacity and blending modes.
• They should be able to identify the different types of project as they appear in the Photo Browser.

• They should be aware of the Type tool variants and the purpose of all of the settings for the Type tool in the tool options pane.

Exploring the artwork library

The Create mode interface presents content in the Graphics panel in a way that students may find confusing. In basic mode, the Graphics menu offers only a small subset of the content in the library, with choices most likely to be appropriate for the theme selected. Switching to advanced mode extends the choices available, but the user needs to browse the menus visually as the Create mode’s Graphics panel does not incorporate filters.

The projects in this lesson make use of handy work-around that provides the opportunity for students to learn about the search and filter features in the Expert mode’s Graphics panel, making it easier for them to find the artwork they want. By adding selected items to the Favorites panel, which can be accessed in Create mode, students can avoid scrolling through the swatches on the Graphics tab. Point out that the Favorites panel can also store effects and text styles.

Downloading graphic assets

In Photoshop Elements 14, the majority of the artwork in the graphics panel is not installed with the application, but rather accessed online and downloaded on demand. If your students do not have Internet connection in class, you’ll need to consider a solution to this problem before attempting the Photo Book project.

Producing a Photo Book

This exercise is fairly complex, but is still quite self-explanatory. Draw attention to the fact that the order of images in the Project Bin will affect their automatic placement within any project template.

Draw attention to the margin tips and notes and the sections “Working with photos and frames” and “Adjusting a photo inside a frame,” which present basic skills applicable to any Create mode project. Encourage your students to explore the Create mode’s Layouts and Graphics panels.

Questions

1. In the context of creating a project, what is a theme?
2. How can you add pages to a photobook project?
3. How do you edit a Layer Style once you have applied it?
4. Can you edit the text in a type mask?

Tip: Remember that you can use margin tips and notes, as well as the Review Q&A at the end of the lesson, to help you identify additional teaching opportunities and discussion points.
Answers

1. A theme is a layout template that may include a background, photo frames, text styles, and other content from the artwork libraries. Any of these items can be rearranged, replaces, or deleted.

2. To add pages to a photobook project, click the Add Page button in the header of the Pages panel; a new spread will be added to the project, with the same layout characteristics as the preceding pages.

3. Select the relevant layer in the Layers palette, and then choose Layer > Layer Style > Style Settings, or double-click the fx icon to the right of the layer name.

4. Once you have created a type mask and clicked the Commit button you can no longer edit the text—the text has been converted to a selection outline. If you are unhappy with the result choose Select > Deselect and start again with the Type Mask tool.

Lesson 10: Printing, Sharing and Exporting

This lesson deals with output options and techniques for both images and projects.

Scheduling

Full completion of the exercises in this lesson depends heavily on the availability of a printer and Internet access, though all of the exercises can be followed as far as the final steps without these facilities.

There are some possibilities for re-combining some of the exercises with other lessons. Internet access will be required for completion of the exercises on ordering online prints, sharing by e-mail, and working with Mobile Albums and Adobe Revel. The online album project could be treated with the other creative projects in Lesson 9. Printing exercises could be linked to the section on color management in Lesson 5.

Goals for this lesson

The objectives for Lesson 10 are to acquaint your students with the opportunities for sharing their images and creative projects as printed output, in the form of a PDF document, on CD or DVD, by e-mail, or via a range of online services.

- Your students should become familiar with all of the sharing options offered on the Share tab.
- They should be comfortable with configuring the Print dialog boxes and understand how to set up and print an individual print, a contact sheet, or a Picture Package.
• They should know how to go about ordering professional prints online.
• They should know how to share images via e-mail as standard e-mail attachments and, on Windows, using the Photo Mail feature.
• Students should be able to create a Private Web Album at Adobe Revel from scratch or by converting an existing album, and be aware of the sharing and collaboration options for Mobile Albums.
• They should know how to export photos and projects to CD or DVD and how to prepare images for use on the Web.

Questions

1. What is a Picture Package layout?
2. Why should images be saved in JPEG format for use on the Web?
3. How can you disable sharing for a Mobile Album?

Answers

1. A Picture Package layout allows you to print a photo repeated at a variety of sizes on the same page. You can choose from a variety of layout options with an assortment of image sizes.

2. The JPEG file format reduces the file size by means of compression, can be displayed by any web browser, and is platform-independent.

3. Move the pointer over the listing for the Mobile Album in the Organizer's left panel, and then click the sharing icon (畅通) to the right of the album name. In the Album Web Share dialog box, click Stop Sharing; then confirm the change.

Tip: Remember to check out margin tips and notes, as well as the Review Q&A at the end of the lesson, to help you identify additional teaching opportunities and discussion points.