Instructor's Summary for
Murach's JavaScript (2nd Edition)

This summary introduces you to the instructor's materials we've developed for this book and helps you get started using them. At the least, we recommend that you read the topics under "What's included in the instructor's materials" because they not only describe the components but also our underlying instructional philosophy. We also recommend that you read "How to get started with our instructional materials" because that provides the installation procedures that you'll need.

Mike Murach & Associates, Inc.
1-800-221-5528 ● (559) 440-9071 ● Fax: (559) 440-0963
murachbooks@murach.com ● www.MurachForInstructors.com

About the structure of the book

To present the JavaScript skills that your students need in a manageable progression, this book is divided into three sections that represent the three levels of expertise that your students will develop with this book.

Section 1: Get off to a fast start with JavaScript

This section presents a six-chapter course in JavaScript that gets your students off to a great start. This section works for programming beginners as well as for students with some programming experience because it lets them set their own pace. If they're beginners, they'll move slowly and do all the exercises. If they have some programming experience, they'll move more quickly and do just the exercises that you assign. When they finish this section, your students will be able to develop real-world JavaScript applications of their own. This will put your course far ahead of what you can accomplish with competing books.

Section 2: JavaScript essentials

This section presents the essential JavaScript skills that every web developer should have. The six chapters in this section not only expand upon what your students have learned in section 1, but they also present new skills, like how to use arrays, web storage, and JavaScript libraries...how to create object-oriented JavaScript applications... how to handle exceptions...and how to use regular expressions. For some courses, this may be as far as you need to go because sections 1 and 2 are a solid JavaScript course by themselves.

Section 3: Advanced JavaScript skills

If you have the time and your students are ready for it, this section presents the advanced skills that will take your students to the expert level. This includes skills like how to work with events, images, and timers in building applications like image rollovers and slide shows...how to use closures, callbacks, namespaces, and the module pattern to make applications bulletproof...and how to use JSON to transmit and store data. This section finishes with an introduction to jQuery that shows your students how jQuery can be used for the DOM scripting in JavaScript applications so the code is easier to read, debug, and maintain.

Our thoughts on using this book

As we build a book and its instructional materials, we realize that we offer more content and materials than most courses or instructors can use. With that in mind, we offer these thoughts on how you might use our book:

- If you're able to assign and complete the first 13 chapters of the book in your course, you've taught a powerful course. Then, if you can add anything from chapters 14 through 17, your course becomes even stronger.

- All of our chapters have a top-down structure so the most important skills are taught first. This means you can assign the first part of a difficult chapter without assigning all of it. For instance, you could assign the topics on namespaces and the module pattern in chapter 15 without getting into customizing properties.

- You can assign chapter 17 whether or not you assign chapters 14-16. That chapter introduces jQuery, and that's a good way to end the course. It also makes an ideal introduction to a full-term course in jQuery.

- As you'll see, the instructor's materials include additional exercises besides those in the book itself. Some of these have students apply the chapter skills to new problems, so they can get a wider perspective on how they'll use what they're learning in the real world. As a result, you may want to review some of these exercises in class even if you don't assign them.

- Instructors often tell us that their students keep our books to use for reference on the job later on. So don't worry if you can't cover all the content…your students will still get their money's worth out of our book!

What's included in the student download

To help your students get the most from our book, our website lets them download (1) the book applications, (2) the starting code for the exercises in the book, and (3) *the solutions to the exercises*. Appendix A in the book shows your students how to download and set up these materials on their own systems.

Book applications

All of the applications in this book and some of the extended examples are included in what we refer to as the "book applications." These are all stored in a folder named *book_apps* when they're downloaded.

Once they've done the download, your students can run the book applications to see how they work. They can review all of the code in any application when the book only presents the coding highlights. And they can copy and paste code from the book applications into their own HTML, CSS, and JavaScript files.

Exercise starts

To help your students master the skills of each chapter, each chapter ends with exercises. For each exercise, the students start from folders and files that contain some of the code that the exercise requires. That way, your students get the most practice in the least time. When downloaded, these files are stored in a top-level folder named *exercises*.

If you review the exercises, you'll see that they guide the students through the process of building a variety of web pages. These exercises force the students to use all of the critical skills that are needed for website development. In fact, if your students can successfully do all of the exercises, they will be well on their way to a professional level of competence.

Exercise solutions

To help students get over any learning obstacles when they're working on their own, the download also provides the solutions to the exercises in a top-level folder named *solutions*. That way, students can check the solutions to see how something is done whenever they're wasting time on what is likely to be a trivial coding mistake. We think that providing the solutions is the right approach didactically because it helps students learn faster and better.

We realize, however, that this makes it more difficult for an instructor to use the book exercises to test their students. That's why the instructor's materials include a second set of chapter exercises as well as short exercises that can be used for testing the skills of your students. The solutions for these extra exercises and short exercises are included in the instructor's materials, and these solutions are only available to instructors and trainers.

What's included in the instructor's materials

The instructor's materials for *Murach's JavaScript (2nd Edition)* will help any college instructor or corporate trainer run an effective course. Besides the materials in the student download, these resources include instructional objectives, test banks, PowerPoint slides, a second set of exercises, and short exercises for quizzes or tests in computer lab. A summary of these materials follows.

Book applications, exercise starts, and solutions

These are the same materials that your students can download from our website. We've included them in the instructor's materials so you can demonstrate and review the book applications and exercise solutions in class, without having to download them yourself.

Objectives

Since we believe that instructional objectives should be the start of any educational methodology, we provide a set of objectives for each chapter in the book. We prepared these objectives based on the principles presented by Robert F. Mager in his classic book, *Preparing Instructional Objectives*. As a result, our objectives describe the skills that your students or trainees should have when they complete a chapter, and you should be able to test whether they have those skills.

If you review the objectives, you'll see that the first objectives for each chapter are what we refer to as *applied objectives*. These ask the students to apply what they've learned as they develop web pages and websites. These of course are the critical objectives of a web development course, and they are best tested by having the students or trainees do exercises like the ones that we provide.

After the applied objectives for each chapter, you'll find what we refer to as *knowledge objectives*. These objectives define skills like identifying, describing, and explaining the required concepts, terms, and procedures. These objectives determine whether your students are able to talk intelligently about the topics that are presented. And these objectives can be tested by the test banks that we provide.

To help you get the most from the instructional objectives, we include them at the start of the PowerPoint slides for each chapter. As we see it, if you can convince your students that they only need to have the skills that are described by the objectives, their study becomes more focused and efficient.

Test banks

To test comprehension, you can use the test banks that we've created; there's one for each chapter in the book. We developed these test banks in ExamView, and we provide them in multiple formats: ExamView, Rich Text (RTF), the current Blackboard formats, and Respondus.

Each test bank provides questions that are designed to test the skills described by the objectives for that chapter, and each test question is designed to test the skill described by one objective. This keeps the promise to the students that they will only be expected to have the skills that are described by the objectives.

In our test banks, we use only completion and multiple-choice test questions because they have the highest validity. To us, that means that the students or trainees who get the best scores are also the ones with the best knowledge and skills. In contrast, matching and true/false questions have low validity, so we don't use them.

Extra exercises and solutions

Because we provide the solutions for the book exercises in the student download for this book, the instructor's materials include a second set of exercises. You'll find these exercises in the document named *Extra exercises*. There's a Word version of this document so you can modify the exercises if you want to, as well as a PDF version that you can distribute to your students if you don't want to make any changes. The instructor's materials also provide the starting folders and files for these exercises so you can distribute them to your students, as well as the folders and files for the solutions so you can demonstrate and review them in class.

Since both the book exercises and the extra exercises force students to use all of the critical JavaScript skills, you can assign either set. The differences are (1) the students will have the solutions for the book exercises, and (2) the extra exercises provide less guidance than the book exercises (which you may prefer). The advantages of using the book exercises are (1) they're included in the book, and (2) the folders and files for the exercises are part of the student download; you don't have to distribute anything.

Because the book exercises are so easy to use, we suggest that you start by assigning them to your students. Then, if you want to test your students by having them do other exercises, you can use the extra exercises. Even if you don't assign any of the extra exercises, you might want to demonstrate some of them and present their code in class so your students can see other applications of the skills they're learning. For your convenience, each extra exercise is encapsulated in a single slide at the end of the PowerPoint slides for each chapter.

Short exercises for quizzes or tests

No matter which set of chapter exercises you assign, be sure to review the short exercises that are in the document named *Short exercises*. Each of these exercises is designed to test just one or two web development skills, and each is designed so it can be done in from 5 to 30 minutes. These exercises are presented in both Word and PDF documents, and their screen shots are also presented at the end of the PowerPoint slides for each chapter. As a result, you can often assign an exercise in computer lab just by displaying its PowerPoint slide.

You can use the short exercises to provide quick reinforcement for something that you've just presented or for quick tests. For instance, short exercise 5-1 asks the students to upgrade the code in one of the chapter applications by applying one of the skills presented in the chapter. And short exercise 7-1 asks the students to improve the validation of one of the chapter applications. If the students have the skills, they should be able to do the short exercises in less than 30 minutes, and often in less than 15 minutes. If they don't have the skills, this will help them realize what they need to know. Call it reinforcement, call it classroom stimulation, call it a quiz, or call it a test: We think the short exercises will help make any class more effective.

PowerPoint slides

The PowerPoint slides present all of the critical information that's presented in the figures of the book. That includes all of the screen shots, diagrams, tables, and code that you may want to review in class. As a result, these slides make it easy for you to review any of the skills that your students have difficulty with.

Beyond the book information, the slides for each chapter start with the instructional objectives so you can review them in class. And they end with the screen shots for the book exercises, the extra exercises, and the short exercises. That makes it easy for you to answer questions and provide additional information about these exercises.

If you want to modify any of the PowerPoint slides, you should know that we prepared them by abridging and editing the Word text for each figure and copying it into PowerPoint slides. As a result, you can't use PowerPoint to modify the text in the normal way. Instead, you need to double-click on the text for a slide to open it in Word, make modifications to the text in Word, and click outside the text to return to PowerPoint. You can also use PowerPoint in the normal way to add slides, delete slides, or add your own presentation notes to our slides.

How to get started

You can get the instructor's materials for our book as a download from our website or on an Instructor's CD. If you download the materials, you'll need to install them on your computer as described below. If you get the CD, you can do a preliminary review of our materials by opening and reviewing the files on it. But if you decide to adopt the book, you'll want to install the folders and files on your computer. Once the installation is done, you can do a thorough review of all of the materials that are provided.

In particular, you'll want to run some of the book applications and solutions to the various sets of exercises to see the level of competence that our book develops. You'll also want to click through some of the PowerPoint slides to see how they can help you review and reinforce the information that's presented in the book.

To help you find what you're looking for, the entire file structure for the instructor's materials is shown on the next page.

How to install the folders and files on a Windows system

1. Find the .exe file that you downloaded from our website *or* the file named Install.exe that's in the root of the Instructor's CD.

2. Double-click on the .exe file and respond to the dialog boxes that follow. This will install the folders and files onto your C drive in a folder structure that starts with

   `c:\murach\javascript`

How to install the folders and files on a Mac

1. Find the .zip file that you downloaded from our website *or* the file named MacInstall.zip that's in the root of the Instructor's CD.

2. Drag the .zip file to wherever you want to store the instructor's files on your Mac.

3. Double-click on the .zip file, and it will unzip the files and folders into a folder structure that starts with

   `javascript`

The student folders and files that get installed

javascript\student_download	Contents
book_apps	One folder for each chapter that contains the folders and files for the application or applications that the chapter presents.
exercises	One folder for each chapter that contains the folders and files that are needed for starting each exercise for that chapter.
solutions	One folder for each chapter that contains the folders and files that provide the solutions for the chapter exercises. The folder structure for the solutions is the same as it is for the exercises.

The instructor folders and files that get installed

javascript\instructors	Contents
Instructor's summary.pdf	This document in PDF format.
Objectives.docx Objectives.pdf	A document in both Word and PDF formats with the instructional objectives for all chapters (the individual chapter objectives are repeated in the chapter slides).
extra\Extra exercises.docx extra\Extra exercises.pdf	A document in both Word and PDF formats that presents a complete set of exercises that are similar to the exercises in the book.
extra\exercises_extra	The subfolders and files that the students need for doing the extra exercises. If you are going to assign these exercises, you need to distribute this folder to your students.
extra\solutions_extra	The subfolders and files that present the solutions to the extra exercises.
short\Short exercises.docx short\Short exercises.pdf	A document in both Word and PDF formats that presents short exercises that take from 5 to 30 minutes each to complete. These can be used in computer lab for concept reinforcement, quizzes, or tests.
short\exercises_short	The subfolders and files that the students need for doing the short exercises. You decide which of these you want to distribute to your students.
short\solutions_short	The subfolders and files that present the solutions to the short exercises.
slides	One PowerPoint file for each chapter that starts with the objectives and ends with the screen shots for the book exercises, extra exercises, and short exercises.
test_banks	ExamView, RTF, Blackboard, and Respondus subfolders that contain one test bank for each chapter.

Technical details that you should be aware of

As we developed the applications and exercises for our JavaScript book and its instructor's materials, we discovered two idiosyncrasies that you and your students should be aware of.

Web applications stored on a file server may not work properly when run in IE

As we developed the applications for this book, we found that some applications stored on our file server (not our web server) don't work properly when they're run in IE. However, they do work correctly when we run them from our own computers. Since your students should be working in Chrome most of the time and with files on their own computers, this shouldn't be an issue for them. But this is something to be aware of.

The bxSlider plugin doesn't work when run from Aptana

Chapter 17 shows how to use the bxSlider plugin to create a carousel. Unfortunately, the carousel doesn't display or work properly when run from Aptana. This is just something to keep in mind because it's easy to forget when all of the other applications run just fine from Aptana.

Any comments?

If you have any comments about our book or its instructional materials, we would be delighted to hear from you. If you discover any errors in our applications or solutions, we would appreciate hearing about them. And if you want to let us know that you're going to adopt our book for your course, that would make our day.

Just e-mail us at the addresses below. But whether or not we hear from you, we want to thank you for your interest in our JavaScript book.

Mary Delamater, Author   Judy Taylor, Educational Liaison
maryd@techknowsolve.com   judy@murach.com