

Microsoft® Technology Associate Certification Exam Review Kit:

**98-375 HTML5 Application Development
Fundamentals**

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Microsoft Technology Associate Certification Exam Review Kit:

98-375 HTML5 Application Development Fundamentals

About This Exam Review Kit

Microsoft Technology Associate Certification Exam Review Kit: 98-375 HTML5 Application Development Fundamentals

Exam Review Kit Description

- This Microsoft Technology Associate (MTA) Certification Exam Review Kit contains a series of 20 review lessons intended to reinforce concepts in preparation for the *MTA Certification Exam: 98-375 HTML5 Application Development Fundamentals* and serve as a resource and guide for teachers and faculty to create their own additional student learning experiences.
- It is assumed that students taking an MTA certification exam have completed or are currently taking academic courses, have job experience that addresses the exam objective domain, or both.
- The Exam Review Kits:
 - Are intended to supplement (not supplant) existing academic courses
 - Are not intended to serve as foundational content for academic courses
 - Are tied directly and closely to the objective domain of each individual MTA certification exam
 - Are platform-specific or -agnostic in accord with the objective domain of each MTA certification exam
- Each certification exam evaluates approximately 20 objectives; this Exam Review Kit includes 20 review lessons each with 50 minutes of learning activities.
- The materials for each review lesson include a trainer prep guide, lesson delivery materials, student in-class and post-class activities, and additional learning resources.

Audience

- This Exam Review Kit is intended for students attending high schools and two-year colleges and technology workers who are preparing for the MTA Certification Exam: 98-375 HTML5 Application Development Fundamentals and seek to prove introductory knowledge of and skills with HTML5 development.
- It is recommended that exam candidates be familiar with the concepts of and have hands-on experience with the technologies described here, either by taking relevant training courses or by working with tutorials and samples available on MSDN. Although

minimal hands-on experience with the technologies is recommended, job experience is not assumed for these exams.

- Candidates for this exam are in the process of expanding their knowledge and skills in the following areas:
 - Manage the application life cycle
 - Manage the state of an application
 - Publish an application to a store
 - Build the user interface by using HTML5
 - Format the user interface by using CSS
 - Update the UI by using JavaScript
 - Respond to the touch interface
 - Access device and operating system resources

Student Prerequisites

This course requires that you meet the following prerequisites:

- It is assumed that students taking an MTA certification exam have completed or are currently taking academic courses, have experience that addresses the exam objective domain, or both.

Exam Review Kit Outline

This Exam Review Kit provides lessons that reinforce previous learning in the objectives of the MTA Certification Exam: 98-375 HTML5 Application Development Fundamentals. Each of the 20 teaching plans in this collection is intended to be used in a single 50-minute review session.

The following table provides the lesson breakdown with MTA Exam Objective mapping.

Lesson No: Lesson Name	Mapping Exam OD
Lesson 1: Manage the Application Life Cycle	1.1. Understand the platform fundamentals. This objective may include but is not limited to: packaging and the runtime environment: app package, app container, credentials/permission sets, host process, leveraging existing HTML5 skills and content for slate/tablet applications

	<p>1.2. Manage the state of an application.</p> <p>This objective may include but is not limited to: manage session state, app state, and persist state information; understand states of an application</p> <p>1.3. Debug and test a HTML5-based touch-enabled application.</p> <p>1.4. Publish an application to a store.</p> <p>This objective may include but is not limited to: Windows Store; third-party stores</p>
Lesson 2: Build the User Interface by Using HTML5	<p>2.1. Choose and configure HTML5 tags to display text content.</p> <p>2.2. Choose and configure HTML5 tags to display graphics.</p> <p>This objective may include but is not limited to: when, why, and how to use Canvas; when, why and how to use SVG</p> <p>2.3. Choose and configure HTML5 tags to play media.</p> <p>This objective may include but is not limited to: video and audio tags</p> <p>2.4. Choose and configure HTML5 tags to organize content and forms.</p> <p>This objective may include but is not limited to: tables, lists, sections; semantic HTML</p> <p>2.5. Choose and configure HTML5 tags for input and validation.</p>

<p>Lesson 3: Format the User Interface by Using CSS</p>	<p>3.1. Understand the core CCS concepts.</p> <p>This objective may include but is not limited to: separating presentation from content - create content with HTML and style content with CSS; managing content flow - inline vs. block flow; managing positioning of individual elements - float vs. absolute positioning; managing content overflow - scrolling, visible, and hidden; basic CSS styling</p> <p>3.2. Arrange user interface (UI) content by using CCS</p> <p>This objective may include but is not limited to: using flexible box and grid layouts to establish content alignment, direction, and orientation; proportional scaling and use of "free scale" for elements within a flexible box or grid; ordering and arranging content; concepts for using flex box for simple layouts and grid for complex layouts; grid content properties for rows and columns; using application templates</p> <p>3.3. Manage the flow of text content by using CSS.</p> <p>This objective may include but is not limited to: regions and using regions to flow text content between multiple <div> sections - content source, content container, dynamic flow, flow-into, flow-from, msRegionUpdate, msRegionOverflow, msGetRegionContent(); columns and hyphenation and using these CSS settings to optimize the readability of text; using "positioned floats" to create text flow around a floating object</p> <p>3.4. Mange the graphical interface by using CCS.</p> <p>This objective may include but is not limited to: graphics effects - rounded corners, shadows, transparency, background gradients, typography, and Web Open Font Format; 2D and 3D transformations - translate, scale, rotate, skew, and 3D perspective transitions and animations; SVG filter effects; Canvas)</p>
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<p>Lesson 4: Code by Using JavaScript</p>	<p>4.1. Manage and maintain JavaScript.</p> <p>This objective may include but is not limited to: creating and using functions; using Windows Library for JavaScript, jQuery, and other third- party libraries</p> <p>4.2. Update the UI by using JavaScript.</p> <p>This objective may include but is not limited to: locating/accessing elements; listening and responding to events; showing and hiding elements; updating the content of elements; adding elements</p> <p>4.3. Code animations by using JavaScript.</p> <p>This objective may include but is not limited to: using the animation library</p> <p>4.4. Access data access by using JavaScript.</p> <p>This objective may include but is not limited to: sending and receiving data; transmitting complex objects and parsing; accessing databases and indexed DB; loading and saving files; App Cache</p> <p>4.5. Respond to the touch interface.</p> <p>This objective may include but is not limited to: gestures, how to capture and respond to gestures</p> <p>4.6. Code additional HTML5 APIs.</p> <p>This objective may include but is not limited to: GeoLocation, Web Workers, Web Sockets</p> <p>4.7. Access device and operating system resources</p> <p>This objective may include but is not limited to: Windows Runtime (WinRT); in memory resources such as contact lists and calendar; hardware capabilities such as GPS, accelerometer and camera</p>
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Exam Review Kit Materials

The following materials are included in this Exam Review Kit:

- Trainer Preparation Guides: A plan for teacher and student activities in reviewing the learning objectives and providing the key points that are critical to the success of the in-class review experience
- Lesson Presentations: A Microsoft PowerPoint® presentation to structure a classroom lecture and discussions
- In-class Activities: A student activity for applying the knowledge and skills reviewed in the lesson
- Post-class Activities: An additional student activity for out-of-class review
- In- and Post-class Activity Answer Keys: Solutions to Activities
- Additional learning resources: Various resources to expand reviewing and learning opportunities
- Student Study Guides are available at:
http://www.certipoint.com/Portal/desktopdefault.aspx?page=common/pagelibrary/MTA_study_guides.html

Software Requirements

The following software is suggested for this series of review lessons:

- Workstations with Microsoft Expression Web 4 installed.
- Internet connectivity
- PowerPoint 2007
- Additional software may be required for individual lessons, as listed in the lesson materials within each module.

Acknowledgments

About the Authors



Peggy Fisher

Peggy teaches computer science, including courses in programming (C#, Microsoft Visual Basic, and Java) and web design with Microsoft Expression Studio, at Indian Valley High School (IVHS), a rural high school in central Pennsylvania. Prior to beginning her teaching career, Peggy worked for a large insurance company near Philadelphia. She started as a job coordinator, moved to development, became a systems analyst and manager, and then was promoted to director. She has been at IVHS for the past eight years and truly enjoys her new career. Peggy also teaches part time at Pennsylvania

State University in the Continuing Education program. Her goal in teaching is to instill the love of learning so that her students not only will graduate but also become life-long learners. Peggy is an author of the *Database Management Fundamentals MTA Exam Review Kit*.



Patricia Phillips

Patricia taught computer science for 20 years in Janesville, Wisconsin. She served on Microsoft's National K-12 Faculty Advisory Board and edited the Microsoft MainFunction website for technology teachers. For the past seven years, she has worked with Microsoft in a variety of roles related to K-12 curriculum development and pilot programs, including Expression Studio web design, XNA game development, and MTA Certification Exam Review Kits. She is currently the editor of the Computer Science Teachers Association newsletter, the *Voice*.

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Susan Boone teaches web mastering in the Houston, Texas, Independent School District. She has 32 years of teaching experience in a variety of technology topics. In addition to her classroom responsibilities, Susan trains other teachers in web technologies and works to involve more female students in computing. She is an author of *Introduction to Web Design using Microsoft Expression Studio* and an officer of the TA/CS SIG (Technology Application/Computer Science Special Interest Group) of TCEA (Texas Computer Education Association).

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