

TRAINER PREPARATION GUIDE 4.1: MANAGE AND MAINTAIN JAVASCRIPT

Lesson Objective 4.1:

Manage and maintain JavaScript.

Required materials to teach this lesson:

1. Microsoft® Expression® Web 4 (preferred) or Notepad++. Notepad++ provides real-time feedback for writing JavaScript. Download: <http://www.notepadplusplus.org/>.
2. 98-375-ENU-4.1-LP
3. 98-375-ENU-4.1-IC
4. 98-375-ENU-4.1-ICKey
5. 98-375-ENU-4.1-PC

Preparation tasks

Technical preparation activities:

1. The demonstration shows the students how to use JavaScript to write a function that dynamically gets the current date and time when the user presses a button.
2. Copy the code below into an empty HTML page and save the file as javademo.html:

```
<!DOCTYPE html>
<html>
<head>
<meta charset=utf-8>
<title>JavaScript Demonstration</title>
<style>
body{font-family:Arial, Helvetica, sans-serif; color:blue;}
</style>
<script type="text/javascript">
function displayDate()
{
    document.getElementById("demo").innerHTML=Date();
}
</script>
</head>
<body>
<h1>What is the current date and time? </h1>
<p id="demo">This is a paragraph.</p>
<button type="button" onclick="displayDate()">Display Date</button>
</body>
</html>
```

3. When you preview the page in a browser, click the Display Date button. The content in the paragraph element is replaced with the current date and time.
4. **Vocabulary:**

animation: the creation of moving images (animation) using computer technology.

dynamic content: website or blog content that changes frequently and engages the reader. Dynamic content can include animations, video, or audio.

interactive: allowing or involving the exchange of information or instructions between a person and a machine such as a computer.

5. **Additional readings and resources:**

MSDN®:

JavaScript Fundamentals: [http://msdn.microsoft.com/en-us/library/6974wx4d\(v=VS.94\).aspx](http://msdn.microsoft.com/en-us/library/6974wx4d(v=VS.94).aspx)

JavaScript Reference: [http://msdn.microsoft.com/en-us/library/yek4tbz0\(v=VS.94\).aspx](http://msdn.microsoft.com/en-us/library/yek4tbz0(v=VS.94).aspx)

Windows® Library for JavaScript reference: <http://msdn.microsoft.com/en-us/library/windows/apps/br211669.aspx>

Other resources (books, e-reference):

W3Schools: <http://www.w3schools.com/>

jQuery Documentation: http://docs.jquery.com/Main_Page

Note: Support for HTML5 and CSS3 is changing and developing quickly. The list of resources is current as of January 2012. Check resources for current and up-to-date information at the time of classroom use.

Instructor computer setup:

1. A workstation with Expression Web 4 (with service pack 2) or Notepad (preferably Notepad++, which can be downloaded from <http://www.notepadplusplus.org>).

Instructional preparation activities:

1. Review the instructor notes in the notes view of Microsoft PowerPoint® presentation 98-375-ENU-4.1-LP.
2. Make copies of student documents available as needed.
3. Complete the instructions for the demonstration before class.

Lesson sequence (50 minutes)

Activating prior knowledge/lesson staging (5 minutes):

Instruct students to answer each question in the "Guiding questions" section of the In-class Activity document or in their personal class notes.

Guiding questions:

1. **What is the difference between a global and a local variable?** In JavaScript, a global variable is created outside any specific method or function. It is then available to all code inside the script tags. A local variable is defined as a variable defined inside a method or function. A local variable can only be used by the function that defines it.
2. **How can you avoid problems if a browser does not support JavaScript?** Avoid problems by adding comment code: `<!--` before the first JavaScript statement, and adding an end comment after the JavaScript code `//-->`. This prevents the page from displaying the code, because HTML would render this as a comment and therefore does not display on the page.
3. **What is the purpose of using Windows Library or jQuery for JavaScript in your website?** The Windows Library for JavaScript contains JavaScript and CSS files that provide several additional

controls and CSS style rules that make it easier to build a website with a consistent Windows look and feel. jQuery is a fast and concise JavaScript Library that simplifies HTML document traversing, event handling, animating, and Ajax interactions for rapid web development. (from <http://jquery.com>)

Lesson activity (35 minutes):

1. Teacher instruction (35 minutes)
 - a. Use the PowerPoint presentation 98-375-ENU-4.1-LP to review managing and maintaining JavaScript.
 - b. An In-class Activity document is available for use as needed.

Lesson review (10 minutes):

1. Lead students in a discussion of the guiding questions.
2. During and after the discussion, have students list any questions they have or any topics with which they would like more assistance. Have students change the code to display the time of day (similar to the demo code, but replacing date with time).
3. Have students work in pairs to create the code suggested above.
4. Provide the Post-class Activity document for additional review.