

TRAINER PREPARATION GUIDE 2.5: CHOOSE AND CONFIGURE HTML5 TAGS FOR INPUT AND VALIDATION

Lesson Objective 2.5:

Choose and configure HTML5 tags for input and validation.

Required materials to teach this lesson:

1. Microsoft® Expression® Studio 4 (preferred) and an additional browser (Internet Explorer® 9 does not support the majority of tags)
2. 98-375-ENU-2.5-LP
3. 98-375-ENU-2.5-IC
4. 98-375-ENU-2.5-ICKEY
5. 98-375-ENU-2.5-PC

Preparation tasks

Technical preparation activities:

1. The lesson demonstration requires an application (either Expression Web or Notepad) to create an HTML5 document.
2. The demonstration shows how to create a simple contact form that includes name, email address, and date. If you can view it in Safari, you will see the placeholder text and date selection. Internet Explorer 9 and earlier versions do not take advantage of this new feature.
3. Copy the following code into your HTML page:

```
<!doctype html>
<html>
<head>
  <title>Contact Us</title>
<meta charset="UTF-8">
</head>
<body>
  <header>
    <div id="header">
      <h1>Enter your contact information below</h1></div>
    </header>
  <form>
    <fieldset>
      <legend>Contact Information</legend>
      <p><label>Name:<input type="text" title="Enter first and last
name"
      placeholder="First and Last Name" ></label></p>
      <p><label>E-mail Address<input type="email"></label></p>
      <p><label>Date:<input type="date" name="date"></label></p>
    </fieldset>
```

```
<p> <button type="submit">Submit</button></p>
</form>
</body>
</html>
```

4. As you preview the page in a browser, discuss the possible uses of these new tags. Involve students in adding more of the new input type tags, including a datalist.

5. **Vocabulary:**

attribute: a name-value pair within a tagged element in markup languages such as SGML and HTML that modifies certain features of that element.

validation: the process of analyzing data to determine whether it conforms to predetermined completeness and consistency parameters.

6. **Additional readings and resources:**

MSDN®:

Better Web Forms with HTML5 Forms: <http://msdn.microsoft.com/en-us/magazine/hh547102.aspx>

Internet Explorer Learning: <http://msdn.microsoft.com/en-us/ie/aa740476>

Other resources (books, e-reference):

Making Forms Fabulous with HTML5:
<http://www.html5rocks.com/en/tutorials/forms/html5forms/>

W3Schools: <http://www.w3schools.com/html5>

Note: HTML5 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 Studio 4, or at least Expression Web 4 (with Service Pack 2), and an additional browser such as Firefox or Safari (Internet Explorer 9 does not support the majority of tags).

Instructional preparation activities:

1. Review the instructor notes in the notes view of Microsoft PowerPoint® presentation 98-375-ENU-2.5-LP.
2. Make copies of student documents available as needed.
3. Print various form elements (progress, meter, datalist, keygen, and output) on individual slips of paper and distribute to students at the beginning of class. Ask students to write a detailed description of the elements on the paper with the term. This could be done during the last five minutes of class as the students' "ticket out," or it could be done at the beginning to reinforce the answers to the guiding questions.
4. Follow the instructions for the demonstration ahead of time. Confirm that the available browsers support the HTML5 features in the demo.

Lesson sequence (50 minutes)

Activating prior knowledge/lesson staging (10 minutes):

Guiding questions:

1. **What do the new form elements (progress, meter, datalist, keygen, and output) add to a web page?** Progress is a control that shows the status of a task being completed, such as a file being uploaded. Meter is used for scalar measurement within a known range, such as temperature or weight measurement. Datalist is used to show a list of options; it is used with the new list attribute for the input element. Keygen is a control for key-pair generation. The output control displays the result of a calculation; an example would be the sum of the values of two input elements.
2. **HTML5 introduces 13 new input types and several new input attributes. How are these new types used to make user interaction easier?** The new types of input include autocomplete, autofocus, required, list, max, and min. HTML5 also includes validation for input type fields such as url, email, color, and date. The new attributes add value by providing input validation, placeholder text, identification of required fields, autofocus, search, and more.
3. **How does the use of semantic tags make creating forms easier?** The semantic tags allow the developer to organize the information on the page and understand the expected form input based on the tag name. Using semantic tags also helps when additional scripting is needed to validate form fields and to provide a connection to CSS.

Lesson activity (30 minutes):

1. Teacher instruction
 - a. Use the PowerPoint presentation 98-375-ENU-2.5-LP to review choosing and configuring HTML5 tags for input and validation.
 - 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.
3. Have students work in pairs to answer the additional questions written by students. Answer any questions that cannot be answered by students, or collect them for follow-up later.
4. Provide the Post-class Activity document for additional review.