

TRAINER PREPARATION GUIDE 3.2: ARRANGE USER INTERFACE (UI) CONTENT BY USING CSS

Lesson Objective 3.2:

Arrange user interface (UI) content by using CSS.

Required materials to teach this lesson:

1. Microsoft® Expression® Web 4 (preferred), Microsoft Visual Studio®, or Notepad. If available, use a different browser, such as Firefox or Safari, that supports most of the Flexible Box properties. (These properties are scheduled to be included in Internet Explorer® 10.)
2. 98-375-ENU-3.2-LP
3. 98-375-ENU-3.2-IC
4. 98-375-ENU-3.2-ICKey
5. 98-375-ENU-3.2-Resources.zip
6. 98-375-ENU-3.2-PC

Preparation tasks

Technical preparation activities:

1. The lesson demonstration requires an Internet browser, preferably Microsoft Internet Explorer 10 (or Firefox or Safari), as well as an application such as Expression Web or Notepad for viewing HTML5 and CSS documents.
2. The demonstration shows students how to use new CSS3 Flexbox properties.
3. When you preview the page in a browser, discuss the possible uses of these new properties and how they can reduce the reliance on using the float property.

4. Vocabulary:

children: some container elements on an HTML page contain other containers; this is referred to as a parent/child relationship. The parent element may have none, one, or many children.

flexbox: a page layout that takes the available space into account when defining box dimensions, which enables relative sizes and positioning.

float: a property that specifies whether a box (an element) should have flexible positioning (as opposed to absolute positioning).

justify: to align lines of text evenly along both the left and right margins of a column by inserting extra space between the words in each line.

user interface: the portion of a program or website with which a user interacts.

5. Additional readings and resources:

MSDN®:

Flexible box ("Flexbox") Layout: [http://msdn.microsoft.com/en-us/library/526950c2\(v=vs.85\).aspx](http://msdn.microsoft.com/en-us/library/526950c2(v=vs.85).aspx)

CSS: [http://msdn.microsoft.com/en-us/library/hh673536\(v=vs.85\)](http://msdn.microsoft.com/en-us/library/hh673536(v=vs.85))

Other resources (books, e-reference):

Hands On: Windows® 8 HTML5 Platform: http://ie.microsoft.com/testdrive/Graphics/hands-on-css3/hands-on_flex.htm

HTML Rocks: <http://www.html5rocks.com/en/tutorials/flexbox/quick/>

W3Schools: <http://www.w3schools.com/cssref/default.asp#flexbox>

Note: HTML5 and CSS3 are 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) and access to the Internet (preferably with multiple browsers such as Internet Explorer and Safari).

Instructional preparation activities:

1. Review the instructor notes in the notes view of Microsoft PowerPoint® presentation 98-375-ENU-3.2-LP.
2. Make copies of student documents available as needed.
3. Complete the instructions for the demonstration before class. Check to see if the available browsers support the HTML5 features in the demonstration.
4. For an additional activity, distribute notecards to students with each of the new flexbox properties printed on them. Have students find the definition and use of the property. Create a “property” wall with the notecards from the activity.

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 additional features are added to the box model by using the Flexible Box Model?** The flexible box model establishes content alignment, direction, and orientation, including the ability to align child content horizontally and vertically. Unused space can be assigned to a specific child or distributed among several child elements. It is optimized for interface design.
2. **What are the various ways to allocate excess space using the Flexible Box Model?** The developer can specify how excess space along the layout axis (horizontal or vertical) of a series of elements can be proportionately allocated to increase the size of given elements; how excess space along the layout axis of a series of elements can be allocated to fall before, after, or between the series of elements; and how excess space perpendicular to the layout axis of an element can be shaped around the element—for instance, extra space above or below buttons that have been laid out side by side. (This topic is best described visually.)
3. **How does the new Flexible Box Model eliminate the need for using float?** The flexible model includes a container that automatically “floats” based on the properties assigned, such as box-align after, box-pack justify, box-orient vertical, and so on.

Lesson activity (35 minutes):

1. Teacher instruction
 - a. Use the PowerPoint presentation 98-375-ENU-3.2-LP to review arranging user interface (UI) content by using CSS.
 - 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 make a list of deprecated tags they have discovered during their research.
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.