

How to deploy for multiple screens

Ethan Marcotte, a developer in Boston, coined the phrase *responsive design* to describe a website that adapts to the size of the viewer’s screen. A demonstration site built by Ethan Marcotte illustrates this concept; visit <http://www.alistapart.com/d/responsive-web-design/ex/ex-site-FINAL.html> to experience responsive design (Figure 1). Notice that as you narrow the width of the browser window, the text reflows and the images get slightly smaller. Once the browser window is less than 1300 pixels wide, the images stack into two rows but continue to become smaller as the window narrows. When the browser narrows to 600 pixels, the content again reflows. The navigation bar moves to the top of the page and the image behind the logo disappears. This is all being done through percentage-based widths for content known as a *flexible grid*. For viewers, it means the content will always be properly formatted to fit the screens or devices on which they are viewing the it.



Figure 1 A responsive design website at three browser widths

Adobe Dreamweaver streamlines the task of building responsive design websites for multiple screens with its integrated Fluid Grid Layouts and CSS media queries. Dreamweaver uses Fluid Grid Layouts to create designs that scale themselves to multiple screen sizes and devices. CSS3 Media Queries is a more advanced option used to define custom CSS files for mobile, tablet, and desktop devices, permitting device-specific user interfaces to be built on the same HTML markup.

Fluid Grid Layouts

Fluid Grid Layouts provides for flexible content resizing within a browser window. The browser on a device checks the embedded media query and uses the corresponding CSS code to display the web page. You can create a new document that works across multiple screens by using the Fluid Grid Layouts option (Figure 2).

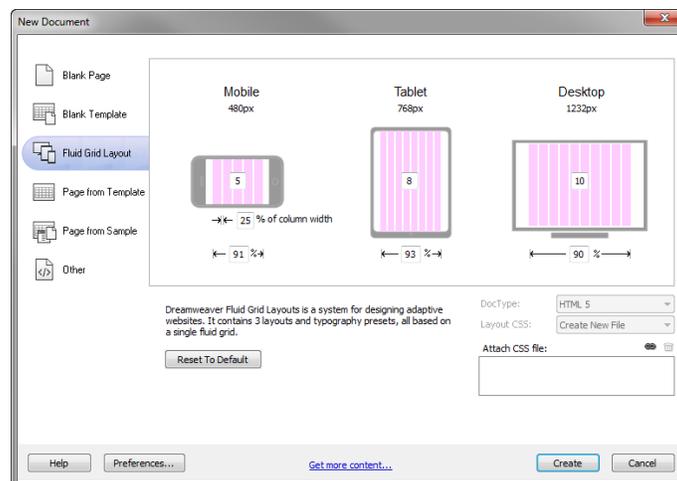


Figure 2 New Document dialog box, Fluid Grid Layout category

To create a Fluid Grid Layout:

1. Start Dreamweaver.
2. Select File > New Fluid Grid Layout.
The New Document dialog box appears (Figure 2).
3. In the Mobile, Tablet, and Desktop text boxes, set the number of grids to 2, 3, and 4, respectively.
4. Under Mobile, set the % Of Column Width to 10.

This number defines the *gutter* or space between each pair of columns in the grid.

5. Set the overall width percentage of the Mobile, Tablet, and Desktop layouts to 100, 100, and 88, respectively.

The grid widths are 100% for the mobile phone and tablet layouts. On the desktop, the width of the grid is 88%, which means that it will fill out 88% of the browser window and center the content, with equal space (6%) on each side.

6. Click Create.

The Save Style Sheet File As dialog box appears (Figure 3).

7. Save the CSS file as **grids.css** in your site root folder.

The layout opens in Design view.

8. Select File > Save and save the document as **grids.html** in your site root folder.

The Copy Dependent Files dialog box appears. The files boilerplate.css and respond.min.js work together to normalize and adjust the content to display across many devices.

9. Click Copy in the Copy Dependent Files dialog box.

The layout is currently set to Mobile. In turn, click the Tablet icon and the Desktop icon in the Status bar at the bottom of the Document window (Figure 5) to compare the Fluid Grid Layouts.

10. Click the Mobile icon to switch back to the two-column Mobile layout.

It is a best practice in responsive design to focus on “mobile first,” because this format forces you to concentrate on content first, visual design second.

Notice that one block of content is already in place at the top of the layout (Figure 6).

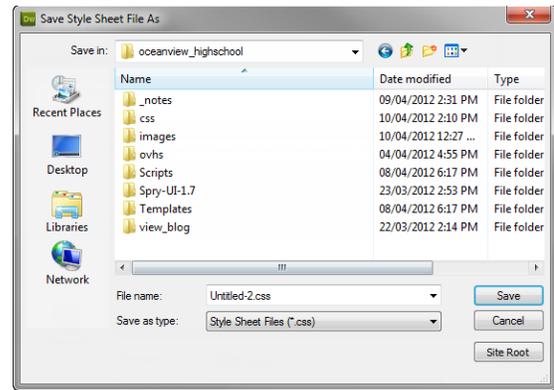


Figure 3 Save Style Sheets File As dialog box

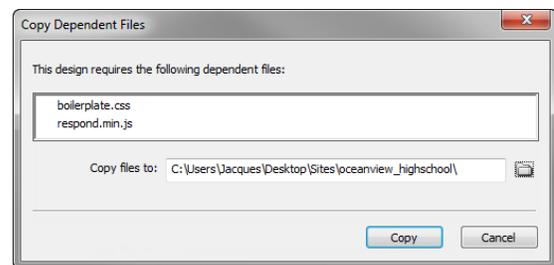


Figure 4 Copy Dependant Files dialog box

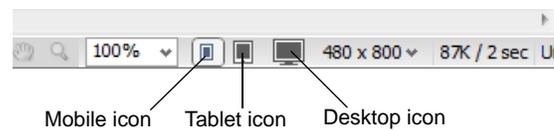


Figure 5 Status bar

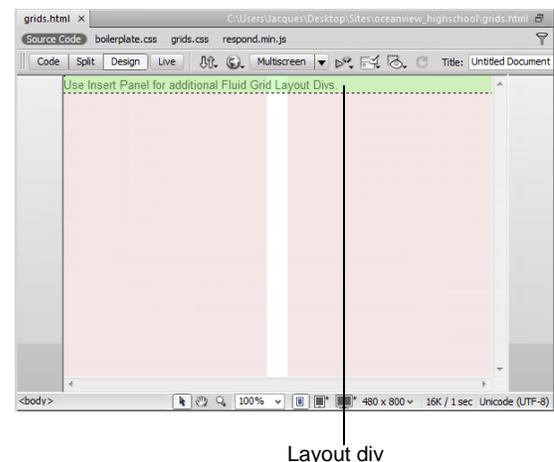


Figure 6 Fluid Grid Layout, Mobile layout

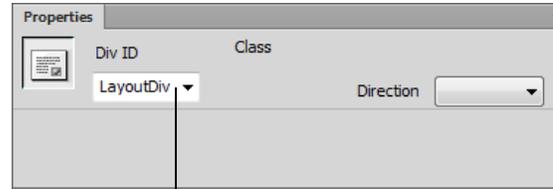
11. Open the Properties panel (Window > Properties).
12. In Design view, click the outline of the layout div (Figure 6) to select it.
The Div ID information appears in the Properties panel (Figure 7).
13. Enter **header** in the Div ID name text box.
14. Open the Insert panel (Window > Insert), if it is not already open.
15. Select Layout from the Category pop-up menu.
16. Click the Insert Fluid Grid Layout Div Tag button (Figure 8).
The Insert Fluid Grid Layout Div Tag dialog box appears (Figure 9).
17. Enter **nav** in the ID text box.
18. The option Start New Row is selected by default.

This tells Dreamweaver and the browser to make this content fill the entire width of the current grid layout. Deselecting this option allows the element to float beside another element on the page.

19. Click OK to insert the div tag into the page.
A Fluid Grid Layout div is nothing more than an HTML <div> element with a unique ID assigned to it.
20. Click the Insert Fluid Grid Layout Div Tag button to insert another Fluid Grid Layout div into the page and rename it **content**.

You now have three stacked divs (labeled Header, Nav, and Content) across two columns in the Mobile layout (Figure 10).

21. Click the Tablet icon (Figure 5) to switch to the Tablet layout.
22. In Design view, click to select the Nav div.
23. Drag the right handle to narrow the width of the div to fill only the left column (Figure 11).
24. Click to select the Content div, and resize it to span two columns.



Div ID name text box

Figure 7 Properties panel

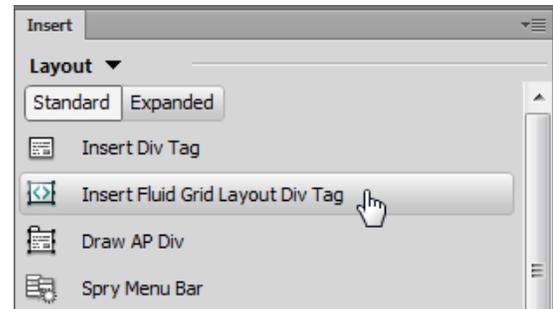


Figure 8 Insert panel, Layout category

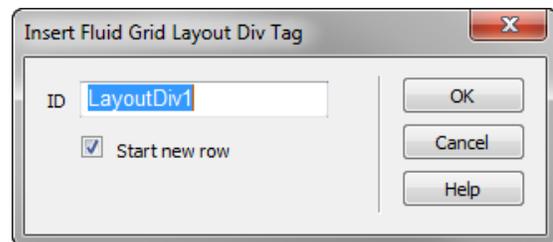


Figure 9 Insert Fluid Grid Layout Div Tag dialog box

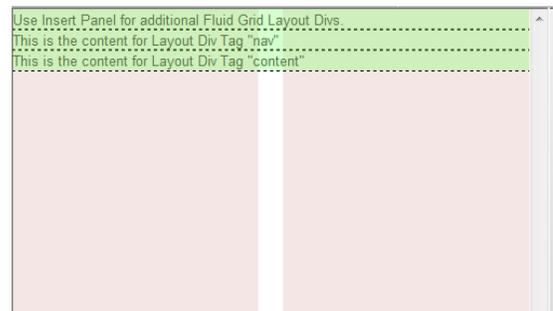


Figure 10 Three divs across two columns

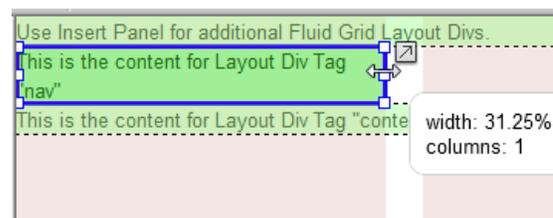


Figure 11 Resize div in Design view

25. Click the Move Up A Row button on the right side of the Content div (**Figure 12**).

The Content div moves up a row, beside the Nav div (**Figure 13**).



Figure 12 Divs in Tablet layout, before move



Figure 13 Divs in Tablet layout, after move

26. Click the Desktop icon (**Figure 5**) at the bottom of the Document window to switch to the Desktop layout.
27. Arrange the divs so the Nav div spans one column and the Content div spans the remaining three columns in the four-column Desktop layout (**Figure 14**).

You may need to scroll to see the right ends of the divs.



Figure 14 Divs in Desktop layout

28. Click grid.css in the Related Files bar at the top of the document window (**Figure 15**).

Split view opens, showing grids.css in Code view.

29. Scroll in Code view to locate the beginnings of the Mobile, Tablet, and Desktop layout code sections (at about lines 29, 58, and 89, respectively) (**Figure 16**).

Each time you add a Fluid Grid Layout div element to the page, a rule is created in the CSS for each device. Notice the “@media” declarations, which indicate the beginning of a media query. The Tablet media query, appears at about line 60, and it only applies when a screen has a width of at least 481px—in other words, most mobile phones would ignore these rules because their screens are not that wide.

30. Select File > Save All to save the document and the dependent files.

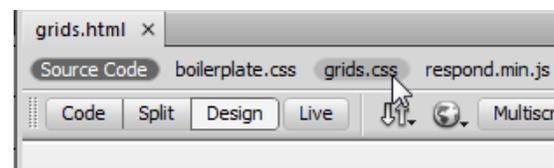


Figure 15 Related Files bar

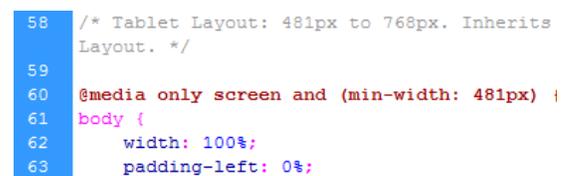


Figure 16 CSS code view detail

Preview layout

Once you've established a suitable Fluid Grid Layout for your content across all of the devices, you can add content and preview it by using the Multiscreen Preview function in Dreamweaver (**Figure 17**).

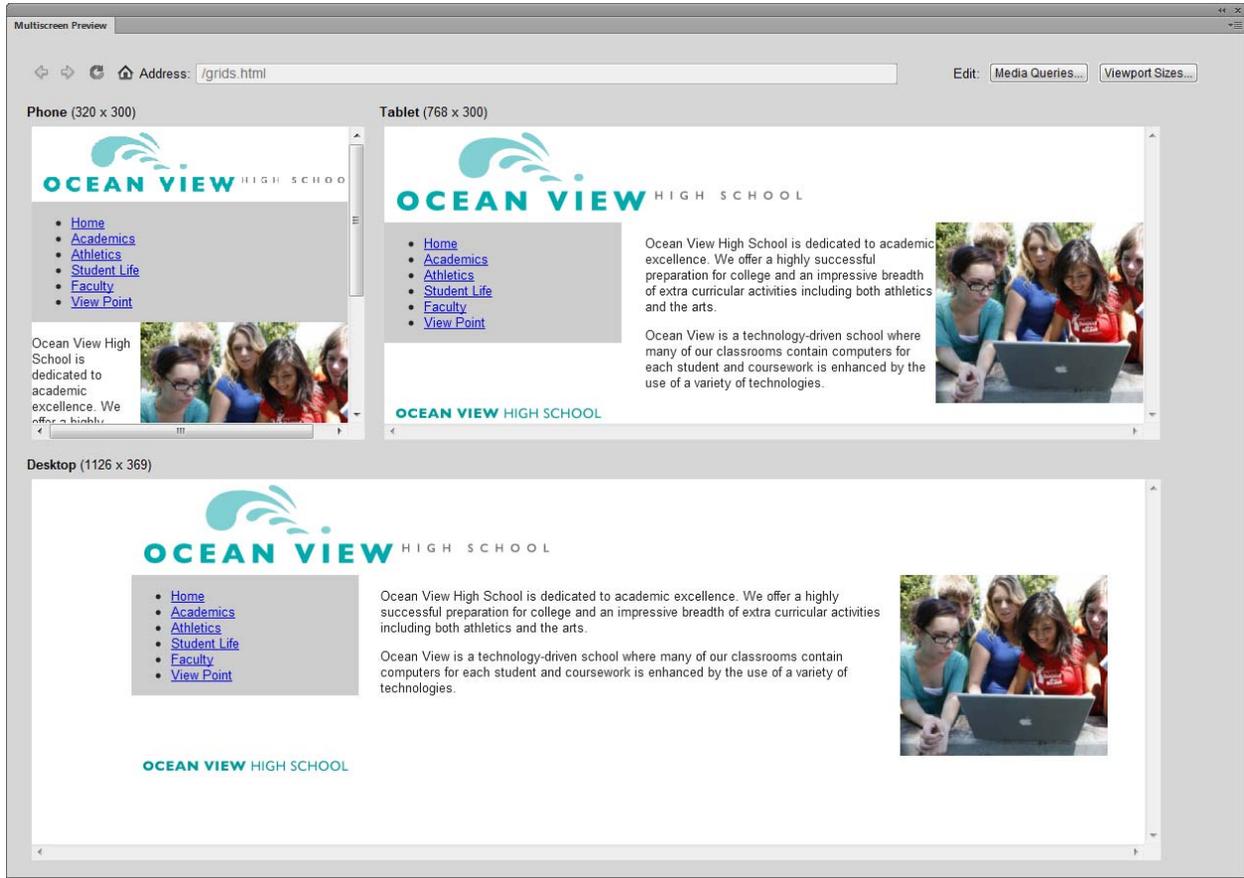


Figure 17 Multiscreen Preview panel

To preview the Fluid Grid Layout:

1. Use the Insert panel to add an assortment of graphics, text, and links to the grid.html file. You can fine-tune the layout of page elements by using the CSS panel.
2. Toggle among the Mobile, Tablet, and Desktop layouts to compare them (**Figure 18**).



Figure 18 Content in Mobile layout

- Click the Multiscreen button in the Control panel at the top of the Document window (**Figure 19**).

The Multiscreen Preview panel opens (**Figure 17**).

Multiscreen Preview supports the following screen types:

- Phone (default screen size: 320 x 300 pixels)
- Tablet (default screen size: 768 x 300 pixels)
- Desktop (default screen width: 1126 pixels)

Note: If you know the dimensions of any other devices you want to target, you can specify additional orientations and styles for different devices by using the Design/Live View Sizes menu (**Figure 20**). For example, you can create a screen dimension of 480 x 272 pixels for a Sony PSP device.

The phone, tablet, and desktop dimensions used for previewing are set to default sizes. However, you can change the default sizes by clicking the Viewport Sizes button in the Multiscreen Preview panel.

Note: Do not use the Multiscreen Preview panel as a browser. It is not intended to display dynamic media such as movies and audio clips.

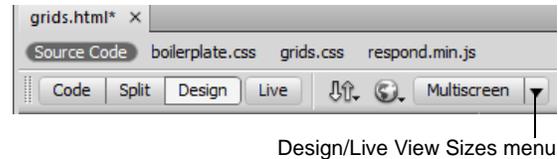


Figure 19 Control panel

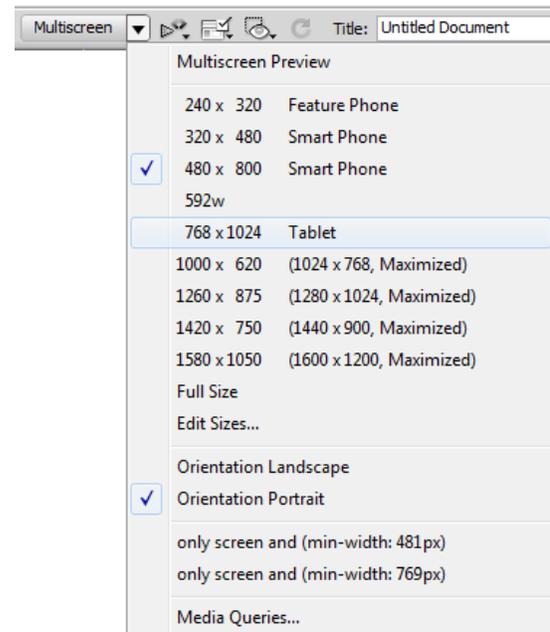


Figure 20 Design/Live View Sizes menu

CSS Media Queries

CSS media queries extends the concept of Fluid Grid Layouts. Advanced users might consider using CSS3 media queries to target designs for multiple devices by specifying a different CSS file for each unique device.

You can access the Media Queries dialog box (**Figure 21**) by using the Design/Live View Sizes menu (**Figure 20**).

Note: The Media Query Manager is not currently compatible with Fluid Grid Layouts.

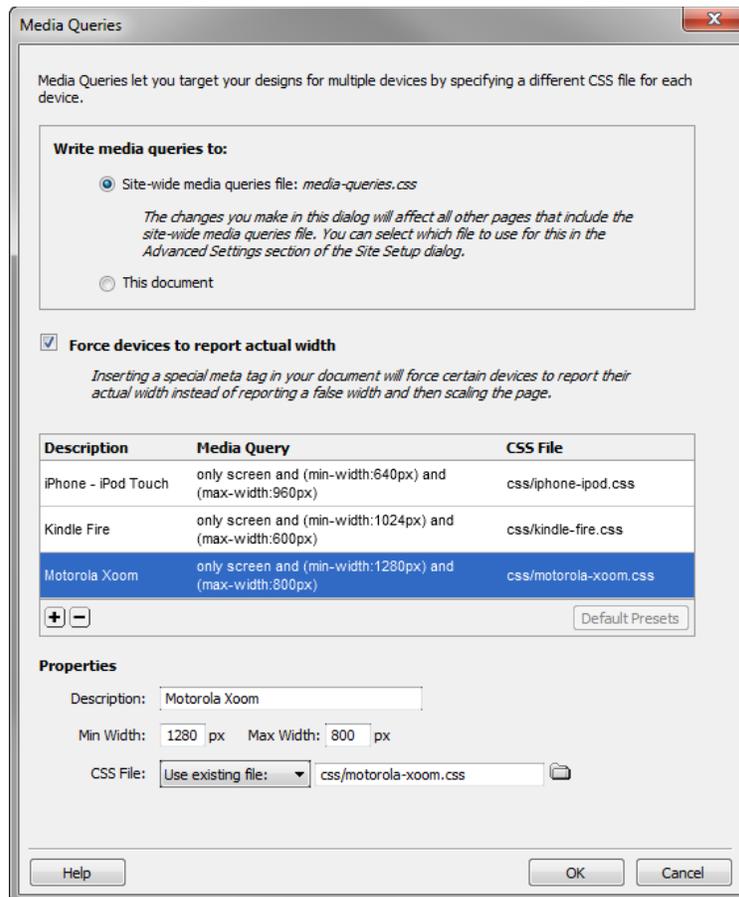


Figure 21 Media Queries dialog box

For more detailed information about media queries, please see Dreamweaver Help.