

Module#3 Accessible Learning

Name: _____ Class number: _____
Section: _____ Schedule: _____ Date: _____

Lesson title: Responsive Design

Learning targets:

1. Fluid Grid Systems
2. Fluid Image Use
3. Media Queries

A. Introduction

What are Fluid Grid Systems?

Responsive Web Design is an approach to design web content that appears regardless of the resolution governed by the device. It's typically accomplished with viewport breakpoints (resolution cut-offs for when content scales to that view). The viewports should adjust logically on tablets, phones, and desktops of any resolution.

Responsive designs respond to changes in browser width by adjusting the placement of design elements to fit in the available space. If you open a responsive site on the desktop and change the browser window's size, the content will dynamically rearrange itself to fit the browser window. On mobile phones, the site checks for the available space and then presents itself in the ideal arrangement.

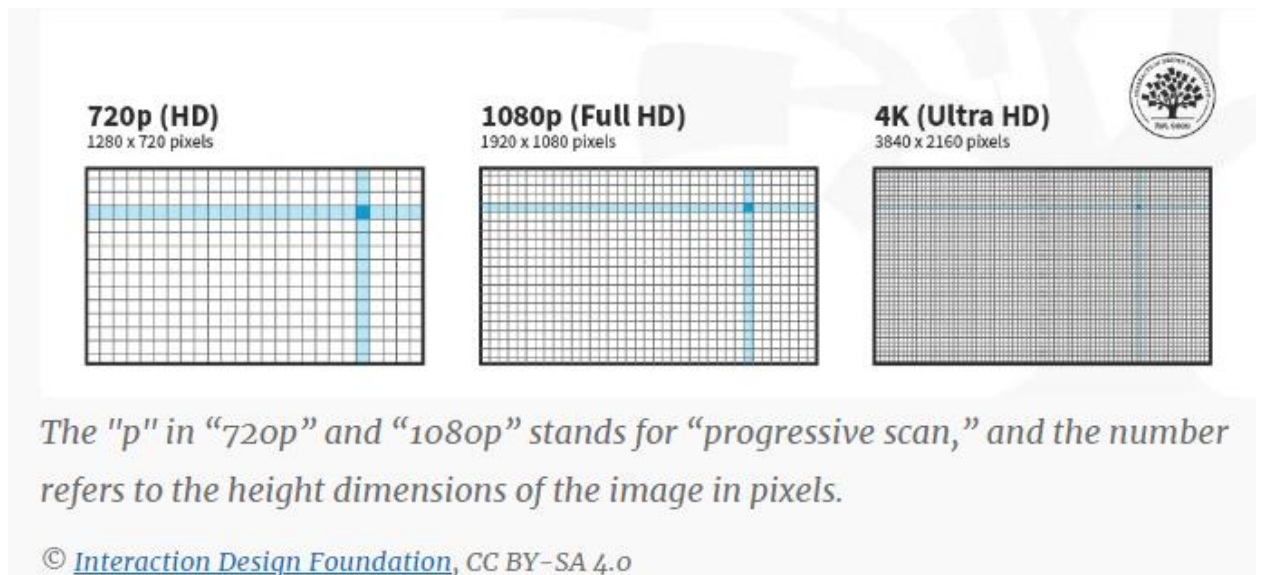
B. Main Lesson

The 3 Major Principles of Responsive Design

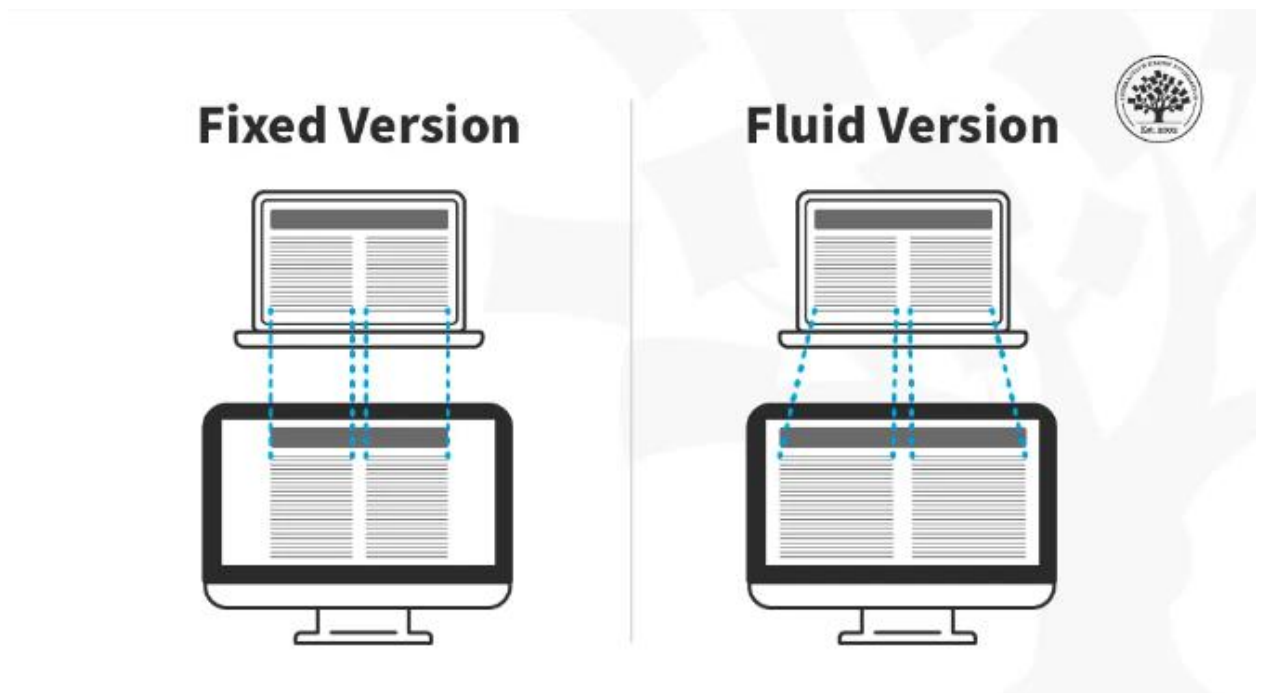
Three main principles drive responsive design.

Other principles may come into play for certain designs, but these three bind all responsive sites

1. **Fluid Grid Systems** - In print, publishers determine the size of what is displayed (and where) in absolute measures. When the internet arrived, this trend continued, and designers defined websites in pixel sizes.

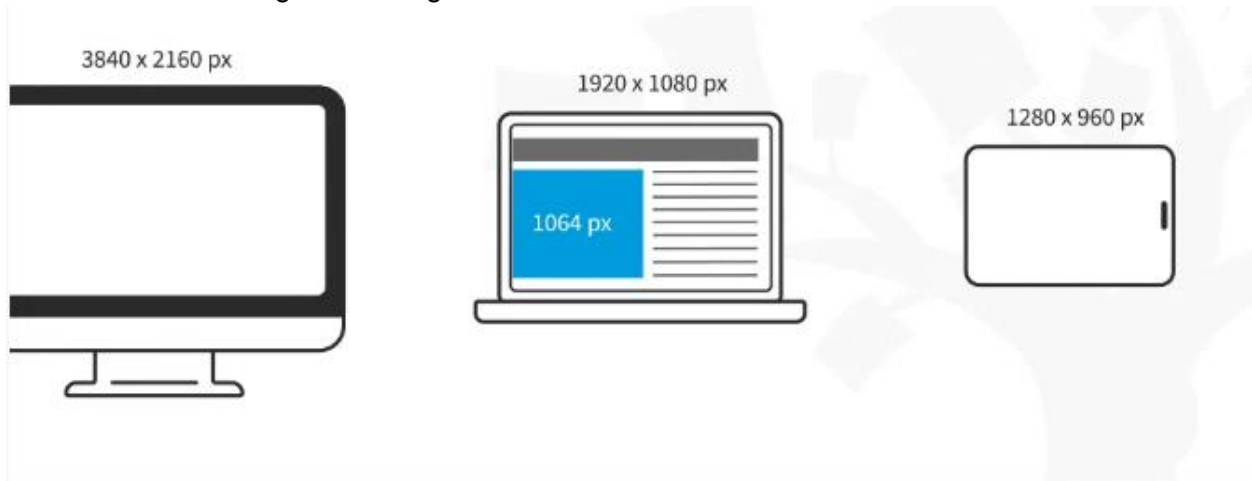


For responsive design, the absolute size method doesn't work because devices vary in size. Therefore, responsive design uses relative sizes.



In this image, you can see that the fixed version of the content has the same width regardless of the device, whereas in the fluid version, the content fills the available screen space of the device.

- 2. Fluid Image Use** - When you use fluid grids to define a layout using relative values (such as percentages), nothing on a layout will have a constant size across all devices. This means that images in your layout will need to be resized for each screen real estate. That's where fluid images enter the picture! Much like water, fluid images take on the size of their container. So, you can create a single image and instruct the browser to scale the image according to the size of the container.



For non-photographic images, such as icons, you can use SVG files. These file formats are lightweight, and you can scale them to any resolution without quality loss.

- 3. Media Queries** - Media queries are instructions to alter the site's layout based on certain conditions. For example, a two-column approach might not be practical in the screen real estate of a smartphone.

You can use a media query to instruct the browser to rearrange the screen real estate if the screen size is smaller than a particular size. This specific size at which the layout breaks is called a “breakpoint.”

Responsive Web Design



Media queries work best with a "[mobile first](#)" approach where you define what you want on mobile and then scale up from there. You'll need to [test](#) content to see where breakpoints occur and plan them. Eventually, you may find you can predict breakpoints based on a device's screen resolution.

The Takeaway

Responsive design is the default approach in web design. It is crucial for accessible and search-engine-optimized experiences. To create responsive designs, [UX designers](#) work with fluid grids and images. You must work closely with developers to specify breakpoints and test if they render correctly.

Best practices for responsive design include the use of a mobile-first approach, with three or more breakpoints, prioritizing or hiding content, minimalism, accessibility and the use of design patterns to enhance the ease of use.

References and Where to Learn More

To learn more about why responsive web design is important for accessibility, read the [WCAG's success criterion guideline](#).

Learn more about the [mobile-first approach](#) proposed by Luke Wroblewski.

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Author:

<https://www.interaction-design.org/literature/article/responsive-design-let-the-device-do-the-work>