# Design Principles

Web Development Life Cycle

"Anytime a business spends money, someone should be accountable for the return on investment. A website is no different." *AHFX.net*

Why is it important to identify the purpose and goals of a web site? The first important step (that is often neglected) in the website creation process, is to determine the purpose of your web site. Too often a website lacks the focus of a clear purpose and visitors are quickly confused and click away.

It's an established fact that Internet users today are increasingly impatient and intolerable. A website visitor will not spend their precious time trying to figure out what the site is about (or how it can benefit them). A website with a well-defined purpose stands out and a visitor should instantly recognize it without effort.

The homepage is what many people see when first encountering a website, and it can lead to a lasting impression, negative or positive, that can affect the visitor's decision to return to it. The homepage is a website's initial chance to make an impression, so a site visitor must see exactly what they're looking for the moment they arrive. Defining the purpose of the website will help you see what will attract users to the site.
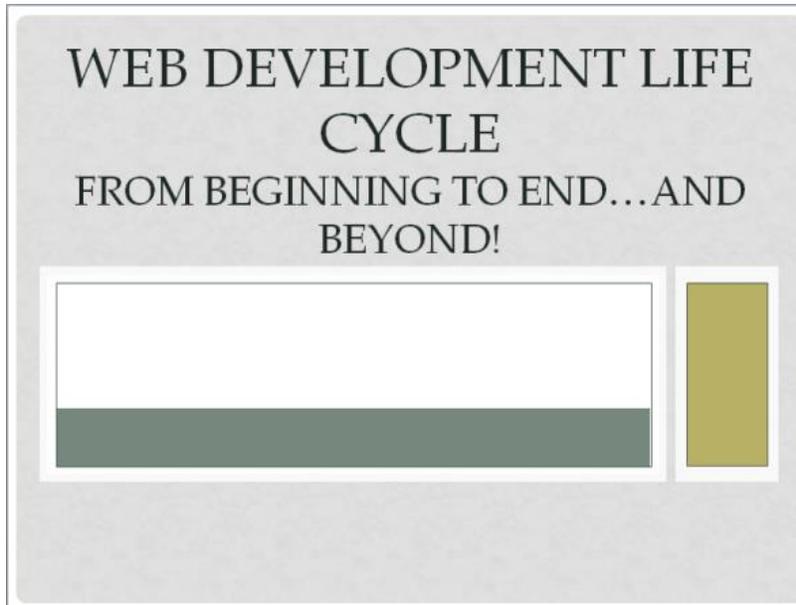
Assignment: Web Site Purpose—Virtual Field Trip

Directions: Let's take a virtual field trip. You are going to examine 10 different websites and see if you can determine the purpose of the website by only exploring the homepage. Download the *Web Site Purpose Virtual Field Trip worksheet* from itsLearning and complete.

Assignment: Web Development Life Cycle Note Guide

Directions: Download the *Web Development Life Cycle Note Guide* from itsLearning. After reading the Web Development Life Cycle presentation, complete the worksheet.

Document Content & Typography

When someone visits a website you've designed, the odds are that they don't care much about the colors, images or sounds, they're immediately looking at the text. No matter how many bells and whistles you've built into a website, everyone relies on text to accomplish whatever they're visiting the site to do.

Users don't read, they scan. Analyzing a web-page, users search for some fixed

points or anchors which would guide them through the content of the page. Users don't search for the quickest way to find the information they're looking for. Neither do they scan web-page in a linear fashion, going sequentially from one site section to another one. Instead users satisfice; they choose the first reasonable option.

As the Web is different from print, it's necessary to adjust the writing style to users' preferences and browsing habits. Promotional writing won't be read. Long text blocks without images and keywords marked in bold or italics will be skipped. Exaggerated language will be ignored.

Talk business. Avoid cute or clever names, marketing-induced names, company-specific names, and unfamiliar technical names. For instance, if you describe a service and want users to create an account, "sign up" is better than "start now!" which is again better than "explore our services".

An optimal solution for effective writing is to:

- use short and concise phrases
  - come to the point as quickly as possible
- use scannable layout
  - categorize the content
  - use multiple heading levels
- use visual elements and bulleted lists which break the flow of uniform text blocks
- use plain and objective language
  - a promotion doesn't need to sound like advertisement
  - give your users some reasonable and objective reason why they should use your service or stay on your web-site

Actually it's really hard to overestimate the importance of white space. Not only does it help to reduce the cognitive load for the visitors, but it makes it possible to perceive the information presented on the screen. When a new visitor approaches a design layout, the first thing he/she tries to do is to scan the page and divide the content area into digestible pieces of information.

[16 pixels] is not big. It's the text size browsers display by default. It's the text size browsers were intended to display... It looks big at first, but once you use it you quickly realize why all browser makers chose this as the default text size.
~ Oliver Reichenstein

Complex structures are harder to read, scan, analyze and work with. If you have the choice between separating two design

segments by a visible line or by some whitespace, it's usually better to use the whitespace solution. Hierarchical structures reduce complexity (Simon's Law): the better you manage to provide users with a sense of visual hierarchy, the easier your content will be to perceive. White space is a valuable design element. White space is not necessarily white. It just means blank space so there is separation between elements.

Typography can be easily overlooked. Spending even a few minutes with the text that will be the centerpiece of your design can transform it from something any web designer could slap on a page to an element that supports the rest of the design. Thursday Bram wrote an excellent blog article for Web Design Depot, 10 Web Typography Rules Every Designer Should Know. Be sure you read the 10 rules.

Assignment: Question for Thought 3

Directions: Describe the inverted pyramid style of writing and why it is used on Web sites (you'll probably need to do a little Internet research). Place your response in the itsLearning textbox. Do not attach a separate document and be sure to proofread before submitting.

Assignment: Usability: Typography Presentation

Directions: Create a presentation on Typography (either PowerPoint or Prezi). Presentation must include:

- Define Typography
- A brief History of Typography
- Information about using Fonts on a Website
- Web Safe Fonts

Your target audience is beginning Web students. The presentation must be educational as well as entertaining. The goal is to educate them about the use of typography in web pages and motivate them to make the right choices regarding font selection when designing a web page. Download the full assignment from itsLearning.

Usability

Who are you designing a website for, you or the visitor? I hope you answered "the visitor." Simplicity should be the goal of all page design. On the web, the KISS (keep it simple stupid) approach is the best approach. Websites have a purpose and a target audience. A website's job is to communicate the purpose to the target audience using multiple medias and using those medias well.

Web usability is an approach to make web sites easy to use for an end-user, without the requirement that any specialized training be undertaken.(Wikipedia.com) Usability is a measure of the interactive user experience associated with a user interface, such as a website or software application. A user-friendly interface design is easy-to-learn, supports users' tasks and goals efficiently and effectively, and is satisfying and engaging to use.

Usability depends on a number of factors including:

- how well the functionality fits user needs
- how well the flow through the application fits user tasks
- how well the response of the application fits user expectations

From the user's perspective, usability is important because it can make the difference between performing a task accurately and completely or not, and enjoying the process or being frustrated.

According to Larisa Thomason, a senior web analyst at NetMechanic, Inc., "Search engine promotion is important: most visitors use a search engine to find your site. But once they arrive, they have to be able to actually use the site and understand the content. Otherwise, your site is a waste of their time."

Web usability means designing for your visitors instead of for yourself or your client. A site that conforms to user expectations makes visitors more comfortable and more apt to visit again and recommend the site to their friends. Good usability is critical to your site's success!

WEBSITE USABILITY

Evaluating and Planning for Web Design
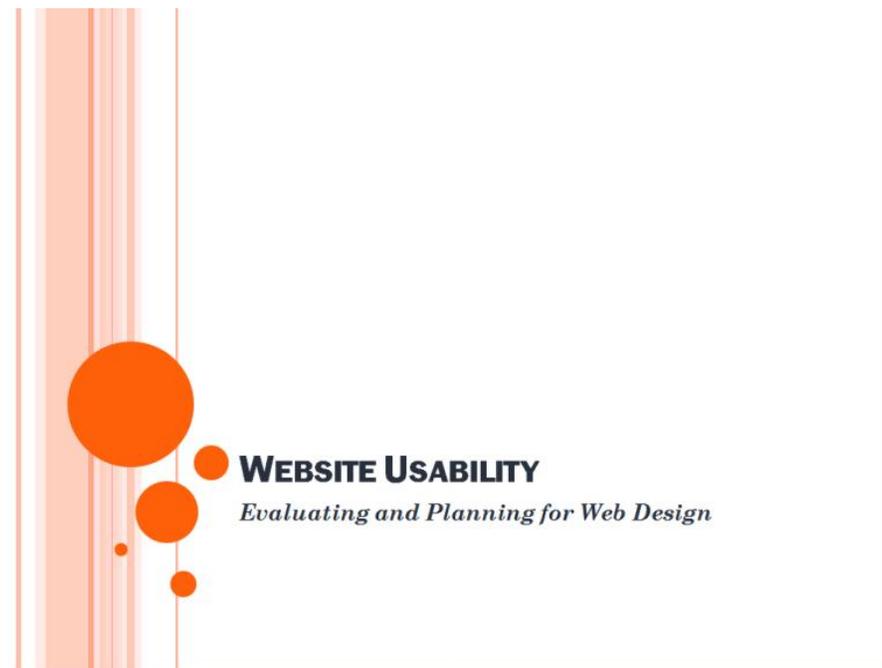
Click on the picture to read the presentation

Assignment: Usability: Planning a Website Assignment Sheet

Directions: Download the "Usability: Evaluating Websites Assignment Sheet" from itsLearning to complete the assignment.

Testing

Testing cannot be emphasized enough. Test often. Test early. Testing your website is an integral and ongoing process. A website should be tested in multiple web browsers and on multiple computers to ensure that the website renders properly. External links should be checked often to make sure they are still valid and do not lead to 404 error page not found. Link rot (when external links are broken because they have been moved or no longer exist) create websites that are dated and neglected. Many people may think that the job is done once a website is published to a web server. However, website maintenance is a continual process to keep a website current and fresh.

Click on the picture to read the presentation

Ethical Issues and Practices in the Web Development Industry

Paul McNally, a web applications developer, posted in his 2008 WebLog, "With the production of a web application, especially one that is to be used for e-commerce there are a series of ethical issues and responsibilities that fall upon the website company and the ISP Host. With an e-commerce site there is the highly important issue of Personal Privacy.

Some Websites hold information on their registered users; information is held and may be gathered about users. This information may range from buying habits to names and addresses and email addresses. This information is highly sought after in today's capitalist, market driven society.

It is important that users of a Website know that their information will not be passed on to any third parties without their explicit permission or used in situations that may be inappropriate to them or others.

The Data Protection Act of 1998 states that "Data disclosed by a party to another party may only be used for the specific purposes it was disclosed for. The data can only be kept for an appropriate length of time and must not be disclosed to other parties (without consent of data the owner)."

Information regarding how users' information will be used should be stated clearly on the website, and not shared without explicit permission. As an example, acceptable use may be to use a members email address to inform them of new products or special offers with a newsletter, but to always give users the option to opt out of such mailings and never overdo it as this would be interpreted as spamming the user, which is not good practice and is also not profitable."

Other ethical issues include:

- Child Internet Protection Act
- U.S. Copyright laws
- Hackers, Spammers, and Trolls

Why should users, particularly children and teenagers, aim to be safe and secure online?

Our principal has hired a research company to collect information that will help us make the school better for you. Several observers will watch students and record where each of you goes, how many times you go there, and how long you stay there, including to the water fountain, your locker, the bathroom, the cafeteria, and to visit another student. You will be identified only by a number. At the end of the day, the research company will put all the data together and write a report for the principal.

Do you have a Facebook account? Have you ever read the Privacy Policy statement (it changes from time to time)? Why do social networking websites like Facebook have a privacy policy? What about MySpace (which is making a come back)...does it have a safety policy? Google+? SnapChat? Instagram? Why are safety or privacy policies needed? Read more about your privacy with Snapchat in Nicole Fleming's blog, Snap. Chat. Delete? Privacy policies tell you how the site maintains accuracy, access, security, and control of the personal information it collects; how it uses the information, and whether it provides information to third parties.

Have you ever googled your own name to find out what other people can find out about you? You might be surprised at what is available about you for public consumption. Is it information that you would want college recruiters, potential employers, teachers or

even your parents to see or know about you? You might be surprised to learn that college admissions and employers hire other people to do Internet searches on potential candidates and use this information before offering admission, scholarships or employment.

The story (located in the speak bubble) is not true and no one will be collecting information about you in this school. However, this is the kind of information that many websites collect whenever you visit them. Companies can learn all kinds of things about you, based on where you go and what you do when you're online. Most people think no one knows who they are or what they do when they are online. Believing they are anonymous is why people sometimes do things online that they would not do face to face. However, it is nearly impossible to be completely anonymous online.

Did the "Day in Your Life" video scare you? Perhaps not, but it should make you think twice about the data you sharing on the Internet. Websites do sell your information (most anonymous but not all). Aggregate data can be collected even when a website's visitors remain anonymous. The data helps companies figure out what visitors' interests are, so they can place ads or sell products that they might like.

Click on the picture to read the presentation

Assignment: Safe and Secure Quiz

Directions: Take the Safe and Secure quiz in itsLearning.

Assignment: Question for Thought 1

Directions: How can aggregate data be useful to companies that buy information from websites? How would it help them place ads or sell products on the Internet? Answer the questions and cite an example or two of companies using aggregate data. Place your response in the itsLearning textbox. Do not attach a separate document and be sure to proofread before submitting.


Web Design

You have **four** seconds to *wow*, impress, and convince the Web visitor to give your Web site a chance. Go!

Frederick Townes, owner of W3 EDGE, explains how the Internet can be a cruel place, where the laws of evolution apply. You have to adapt, be adept and adopt a new attitude about your site's aesthetics and the look and feel and the impression these design aspects have on visitors. Read Towner's article, [Web Design Aesthetics](#) so that visitors say *Wow!* instead of *No how!*.

Aesthetics - A Balancing Act
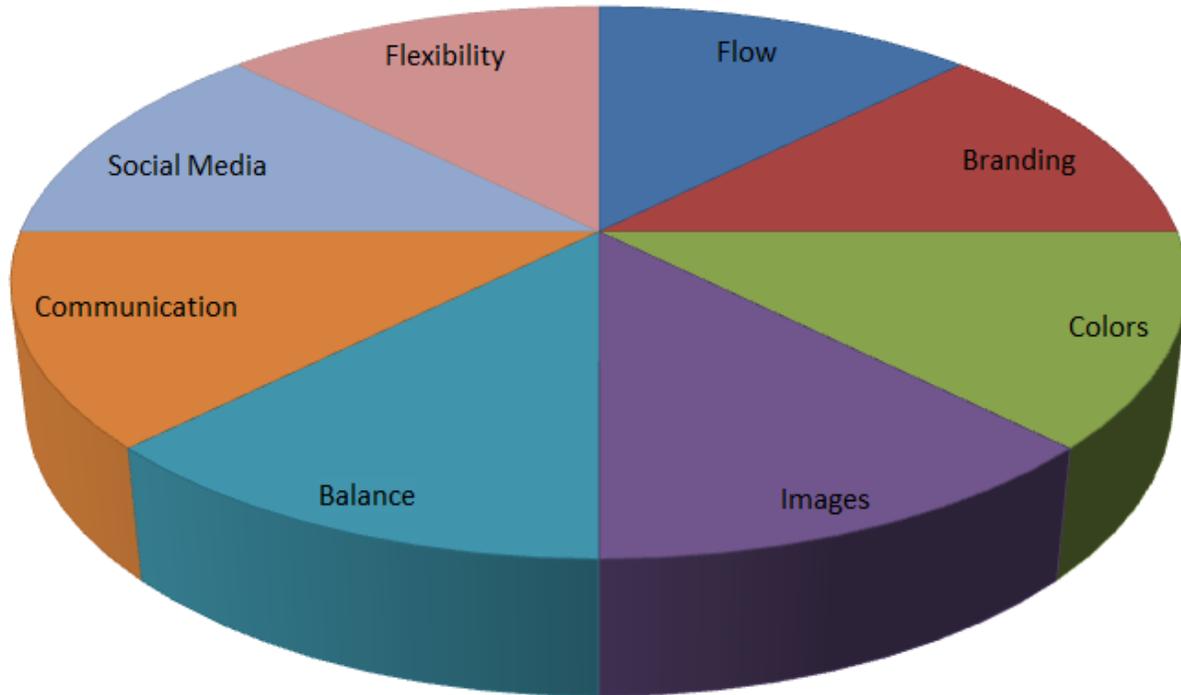
Good aesthetics is mostly common sense. The main components of an aesthetically and strategically appealing website are:

- Flow - the navigation of the website
- Branding - reflective of the company brand
- Colors - reflect good aura and energy (white never goes out of style)
- Images - custom better than stock
- Balance - consistency, professional, captivating
- Communication - send the right message
- Social media integration - keep in touch with the customer
- Flexibility - be different and unique

The aesthetics of your website is one of the most critical aspects for you to consider. Read more about Web aesthetics in Tim San Fillippo's blog, The Importance of Aesthetics in Web Design.

The term **web design** is normally used to describe the design process relating to the front-end (client side) design of a website including writing mark up. Designing an effective web site requires more than just gathering relevant information and posting it on the web. Like a good paper or research presentation, a quality Web project demands as much attention to the selection, organization, and presentation of material as to the underlying research itself. You should strive, above all, to be both clear and engaging in

every aspect of site design. There is a first for everything and it is time for your very first web design project. While landing your first assignment is a huge accomplishment in itself, keeping your first client happy requires a whole different set of skills. You are not just a designer — you are also a project manager, and offering a great customer service experience is essential for winning over your clients' repeat business, so you will need to be on target from day one.

HOW TO START A WEB DESIGN PROJECT
A BEGINNER'S GUIDE

Congratulations on landing your first web design project! By now you've probably figured out that creating a website that's both visually appealing and pleasing to your client is no easy task. Here's everything you need to know to get started.

CLIENT COLLABORATION

DETERMINE THE PROJECT'S:
- Objectives
- Purpose
- Target audience
- Content and feature requirements

FINALIZE A FORMAL AGREEMENT ON:
- Budget
- Scope
- Timeline
- Ownership and rights

DON'T FORGET to get this in writing!

GATHER ALL NECESSARY MATERIALS FROM THE CLIENT AND/OR THIRD PARTIES

RESEARCH, INSPIRATION, AND PLANNING

CREATE USER PERSONAS TO DISCOVER TARGET USERS' WANTS AND NEEDS

COMPILE AND ORGANIZE YOUR DESIGN INSPIRATION
TIP: Inspiration can come from any medium, time, or place, not just other websites

CONSTRUCT A SITE MAP
TIP: Create a flowchart of the navigation structure and user experience

DESIGN

Step 1: Mock up the layout and intended functionality with a wireframe, which should include:

- Use of logos and other brand assets
- Headers and subheaders
- Contact information
- Search field
- Content
- Social sharing buttons
- Footer
- Global and local navigation systems

Step 2: Present your mock-up to the client for an approval cycle, which consists of:

Review and client feedback → Tweaking → Approval

TIP: The best time to make major changes is prior to coding

Step 3: Place your visual elements using a design software program

SET YOURSELF UP FOR SUCCESS

- Select typeface elements that are legible at various resolutions
- Dark color schemes get 36% more traffic than light color schemes
- Keep your interface intuitive and free of clutter

DEVELOPMENT

More than **49%** of all page views are on sites coded in HTML5, as of April 2013

Implementation options include:
- Application framework — e.g. RUBY ON RAILS
- CMS (Content Management System) — e.g. WORDPRESS

Add features and functionality such as:
- Shopping cart
- Live chat
- Contact form

TESTING AND LAUNCH

- Run diagnostic tests to check for bugs, broken links, spelling errors, etc.
- Ensure your website is compatible with multiple browsers
- If your website is running and polished, you're ready to hand it off to the client!

SOURCES:
http://www.designmodo.com/blog/web-design/phases-web-design-development-process/#.UAlKeoRE7g
http://www.smashingmagazine.com/2011/06/23/following-a-web-design-process/
http://zerolounch.com/2013-web-design-statistics/
http://1stwebdesigninfo/section-com/design-process/web-design-process/
http://www.usability.gov/how-to-and-tools/methods/wireframing.html
http://www.usability.gov/what-and-why/user-interface-design.html
http://1createawebsite.com/design/
http://designmodo.com/content/
http://designmodo.com/get-inspired-right/

designmodo

Assignment: 10 Principles of Effective Web Design worksheet

Directions: Read [10 Principles Of Effective Web Design](#) by Vitaly Friedman and answer the questions in itsLearning.

Assignment: Question for Thought 2

Directions: It would be a really good idea before you start a web design plan to read one or more articles on the topic. Both articles below are written by professional designers who want to give you suggestions for improving your site designs.

- Smart Webby: [Web Design Tips](#)
- Steve Krug: [How We Really Use the Web](#)
- Feel free to find your own article

Select one of the articles listed and write a one paragraph summary (~100 words) of the article. Place your paragraph directly in the itsLearning textbox. Do not submit a separate document and be sure to proofread.

Mobile Design

The mobile user and the desktop user are not the same (despite the fact that the same user may use both devices). Here is one thing we know about the user who uses their mobile device with the Internet, they are searching for specific information. They are not simply surfing the World Wide Web as they might with a desktop computer.
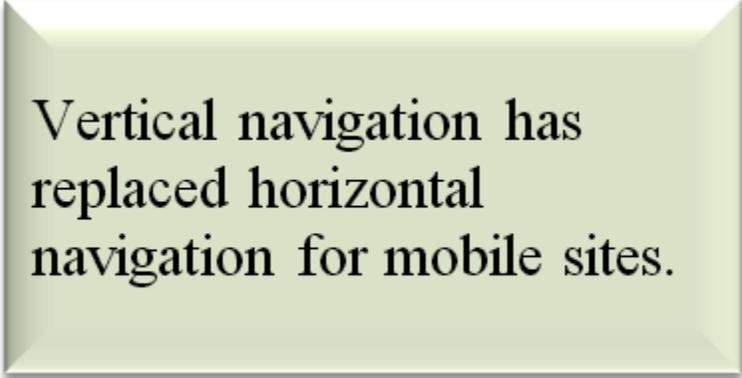
Vertical navigation has replaced horizontal navigation for mobile sites.

Design is really about solving problems. Design patterns for mobile are emerging as the platform matures. Design for mobile devices is different from design for desktop or laptop computers. Shanshan Ma's article [10 Ways Mobile Sites Are Different from Desktop Web Sites](#) offers great insight into the differences between the two. Written in 2011, the differences still hold true today.

A WEBSITE DESIGNED ONLY FOR A MOBILE USER ON A MOBILE DEVICE WILL SIMPLY BE MORE EFFECTIVE THAN ONE DESIGNED FOR ALL AUDIENCES ON ALL DEVICES.

Mobile browsers are a fixed size. This difference, plus the fact that mobile device screens are typically smaller than desktop screens, changes the way people view webpages on mobile devices. The area on your browser where content shows up is the viewport. Think of it as a window (or port) through which you view a webpage. Initially, most mobile browsers display webpages so that they fit in the viewport. On a site designed for desktop browsers, this is often far too small to be read. So users zoom in on the page. The size of the viewport stays the same, but the size of the webpage increases.

Websites designed with mobile devices in mind use responsive Web design. Responsive Web design uses CSS3 media queries to detect the device/screen size and respond with a layout to fit the screen. Such a site is designed from the beginning on a grid with "breakpoints" that tuck and fold content and elements as the page expands or contracts. Read Propeller Media Works, Inc. blog post *Responsible Website versus Desktop + Mobile Web Site* to learn more about responsive design.

Mobile Web sites usually only include the most crucial functions and features.

Assignment: Mobile Site Presentation

Directions: Create a presentation PowerPoint or Prezi for example) comparing and contrasting Desktop Web Sites and Mobile sites. Upload your presentation to itsLearning.

Resources

If you are having problems viewing this page, opening videos, or accessing the URLs, the direct links are posted below. All assignments are submitted in itsLearning. If you have having problems, contact Mrs. Rush through the itsLearning email client.

Phases of Web Development Cycle flashcards: https://www.examtime.com/p/1067383-Phases-of-Web-Development-Cycle-flash_card_decks

Web Development Life Cycle presentation: http://www.mrsrush.net/digitaldesign/design/cycle.pdf

Website Usability presentation: http://www.mrsrush.net/digitaldesign/design/usability.pdf

Website Management presentation: http://www.mrsrush.net/digitaldesign/design/testing.pdf

Sharing Information: A Day in Your Life video: http://youtu.be/O5OsQsB7Hg4

Design Infographic: http://designmodo.com/web-design-project

10 Principles of Effective Web Design: http://www.smashingmagazine.com/2008/01/31/10-principles-of-effective-web-design/

Web Design Tips: http://www.smartwebby.com/web_site_design/webdesign_tips.asp

How we really use the Web: http://www.sensible.com/chapter.html

10 Ways Mobile Sites Are Different from Desktop Web Sites: http://www.uxmatters.com/mt/archives/2011/03/10-ways-mobile-sites-are-different-from-desktop-web-sites.php

Responsible Website versus Desktop + Mobile Web Site: http://www.propellermediaworks.com/responsive-website-design-versus-desktop-mobile-web-sites/

The Importance of Aesthetics in Web Design: http://www.5stonesmedia.com/blog/the-importance-of-aesthetics-in-web-design

Web design aesthetics: http://www.webcredible.com/blog-reports/web-credibility/website-design.shtml

10 Web Typography Rules Every Designer Should Know: http://www.webdesignerdepot.com/2009/02/10-web-typography-rules-every-designer-should-know-2/

Transcript: http://mrsrush.net/digitalesign/design/index.pdf

Credits

Web Design Infographic: http://designmodo.com/web-design-project/

Dewey, Caitlin. 30 Ways the Web has Changed us: http://www.washingtonpost.com/blogs/style-blog/wp/2014/03/12/36-ways-the-web-has-changed-us/

Chalk Board: DryIcons.com

Transcript of this lesson