

Web Site Design Principles

When you complete this chapter, you will be able to:

- ⦿ Understand the Web design environment
- ⦿ Design for multiple screen resolutions
- ⦿ Craft the look and feel of the site
- ⦿ Create a unified site design
- ⦿ Design for the user
- ⦿ Design for accessibility

This chapter covers the design principles that you will apply to your Web page design as you work through this book. By examining current Web design theories and viewing a variety of Web sites, you learn to focus on both the user's needs and the requirements of the content you want to deliver.

The sample Web pages in this chapter come from a wide range of sites. The Web is so far-reaching in content and design that no collection of pages can represent what is typical. Most of the samples illustrate good design principles, although some contain design defects as well. In truth, almost every site has one flaw or another, whether it is a confusing interface, overambitious design, or poor accessibility. Judge the samples with a critical eye. Look for elements of design that you can transfer to your own work. As you progress through the book, you will practice and apply these principles to your own Web design efforts.

Understanding the Web Design Environment

In this section, you will learn about the external factors that affect your Web design efforts. Even though Web coding and design standards have progressed significantly in recent years, many variables still affect how your Web page designs appear to users. As browsers have become more standardized, other more recent factors continue to change and pose challenges for Web designers. These challenges include new screen resolutions based on popular wide-screen monitor formats and new devices such as the iPhone and other handheld devices and e-readers. At the same time, not all users have the latest technology or fastest Internet access. You do not want to leave these users behind.

To be successful, your Web site design must be portable and accessible by users who have a variety of browsers, operating systems, device platforms, and physical abilities. Many designers make the mistake of testing in only one environment, assuming that their pages look the same to all of their users. No matter how much Web design experience you gain, always remember to test in different environments and with different users, even when you feel confident of your results.

You can avoid portability problems by coding to standards as described in Chapter 1 and testing for compatibility. Viewing your pages in multiple browsers, testing on the available operating

systems, viewing on all possible devices, and using different input devices ensure that your site is accessible to the greatest number of users. Consider analyzing your audience and building a profile of your average user. You will read more about analyzing your audience in Chapter 3.

Browser Compatibility Issues

One of the greatest challenges facing HTML authors is designing pages that multiple browsers can display properly. As discussed in Chapter 1, every browser contains a program called a rendering engine that interprets the markup tags in an HTML file and displays the results in the browser. The logic for interpreting the HTML tags varies from browser to browser, resulting in potentially conflicting interpretations of the way the HTML file is displayed. As a Web page designer, you must test your work in as many browsers as possible to ensure that the work you create appears as you designed it. You might be surprised to see that the results of your HTML code can look different when viewed with various browsers.

Often, HTML authors do not have the luxury of knowing the user's operating system or the age and type of browser that will be used to view their Web pages. Browser and version choices can vary widely based on a number of variables. Many people and organizations are reluctant to upgrade software simply because a new version has been released. Although it is a good idea to test with the latest browsers, it also is prudent to test your work in older browsers when possible to maximize the number of people your Web pages can reach.



You can find complete browser compatibility charts at

www.quirksmode.org/compatibility.html.

You may never be able to achieve the exact same look across all the browsers that are available, but you should try to minimize differences as much as possible so that the greatest number of users experiences your design as you intended. The more you work with HTML and CSS, the more you will realize that slight differences inevitably occur from browser to browser that may not matter to the user. The advances in browser technologies and their adherence to standards, combined with the greater acceptance of standards-based design, now make it easier to build well-designed sites that are displayed consistently from one browser to another.



To download a particular browser, or find out which browser is currently the most popular, visit one of these Web sites:

- BrowserNews at www.upsdell.com/BrowserNews
- CNET Browser Info at www.browsers.com
- Internet Browser Review at <http://internet-browser-review.toptenreviews.com>
- Netmarketshare has the latest browser market share statistics at <http://marketshare.hitslink.com>

As discussed earlier, not only are new browsers released frequently, but older browsers are still used by many Web users. Including newly supported features in your page design may significantly affect the way your page is viewed if the older browsers cannot interpret the latest enhancements. Browsers exhibit subtle differences across computing platforms as well.

The newer browsers offer much better support for the standards released by the W3C. Browser software companies have found that, as part of the Web development community, they can benefit from the increased support of the standards. Standards-compliant browsers allow better visual design and a more consistent experience for all users.

To ensure the greatest compatibilities of your Web pages across multiple browsers, follow these guidelines:

- *Follow W3C standards*—Use HTML and CSS correctly and consistently.
- *Validate your code*—Test for syntactical correctness and coding errors.
- *Know your audience*—Create designs that are accessible, readable, and legible.
- *Test your work in multiple browsers and devices*—Test and retest as you develop to mitigate problems as they occur.

Connection Speed Differences

The user's Internet connection speed has traditionally been a variable that Web designers could not ignore. If pages download slowly because they contain large, detailed graphics or complicated Flash animations, users may click to go to another site before they see even a portion of content. In the United States, the number of people who can use broadband access to the Web is increasing, which makes connection

speeds less of an issue. According to Websiteoptimization.com (www.Websiteoptimization.com/bw/1002), U.S. broadband penetration grew to 95.11 percent among active Internet users in January 2010. Dial-up users connecting at 56 Kbps or less now make up 4.89 percent of active Internet users.

If you are building Web sites for a worldwide audience, you still must plan your pages so they are accessible at a variety of connection speeds. Figure 2-1 shows that in many countries, broadband access is not universal. iPhones and other cellular handsets that display Web pages often have lower bandwidth than home or business computers. You want to consider all possible users when you design the look and feel of your site. Many designers make the mistake of not testing their pages at different connection speeds. If you do not test, you cannot appreciate what it is like for users to connect at different speeds to your site, and you may lose valuable visitors.

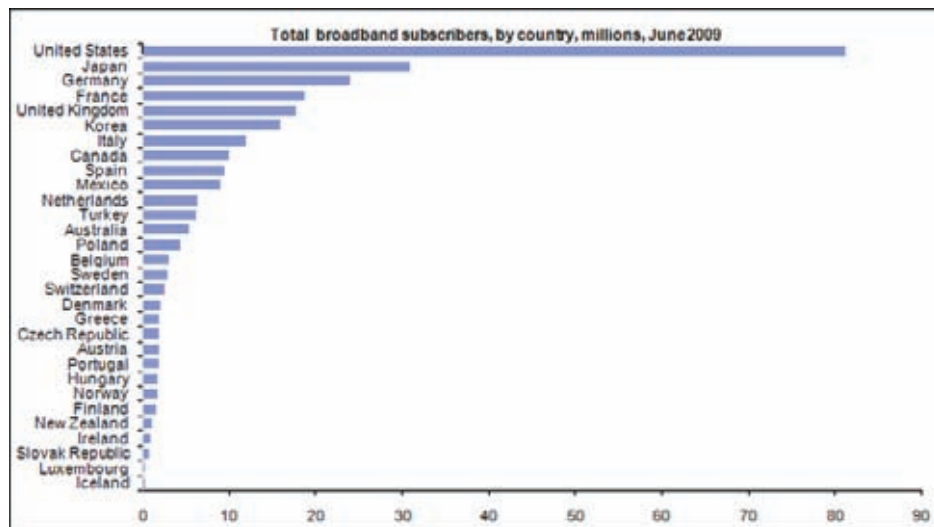


Figure 2-1 Total number of broadband subscribers, by country, millions, June 2009

Browser Cache and Download Time

All Web pages are stored on computers called Web servers. When you type a Uniform Resource Locator (URL) address in your browser, it connects to the appropriate Web server and requests the file you specified. The server serves up the file so your browser can download it. The first time you visit a site, the entire contents of the HTML file (which is plain text), every image referenced in the HTML code, and any CSS style sheets are downloaded to your hard drive. The next time you visit the Web site, your

browser downloads and parses the HTML file from the site. The browser checks to see if it has any of the specified images stored locally on the computer's hard drive in the cache. The **cache** is the browser's temporary storage area for Web pages and images. The browser always tries to load images from the cache rather than downloading them again from the Web.

You can take advantage of the browser's caching capabilities by reusing graphics as much as possible throughout your site. Once an image is downloaded, it remains in your user's cache for the number of days specified in the user's preference settings. Most users do not change the settings, so there is a good chance your graphics will remain on the user's hard drive for as long as a month. Every time the user revisits your site, the cached graphics load locally rather than from the Web server. The browser's caching capability is a great argument for standardizing the look of your site by using the same navigation, branding, and background graphics throughout. Not only does the graphic consistency increase the usability of your site, but your pages also load faster.



As a Web designer, you will be testing and retesting your site. As you do, the browser's caching behavior can work against you. Because the browser stores and reloads files from the cache, your latest changes may not be loaded, especially if filenames match on graphics or style sheets. If you make changes to a Web page, but don't see the results in the browser, it is probably because your browser is reading from the cache rather than loading the changes you made. To clear the cache in most browsers, press the Ctrl+Shift+Del key combination on the PC or hold down the Shift key and click the Reload button in the browser. In Firefox, press Ctrl+F5. Most browsers also let you clear the cache using their menu system. Firefox has an add-on that you can download and install in your browser that adds a Clear Cache button to the toolbar. You can find this add-on at <https://addons.mozilla.org/en-US/firefox/addon/1801>.

Device and Operating System Issues

The user's computer system is the variable over which you have the least control. People use endless combinations of monitors, computers, and operating systems on desktops and mobile devices around the world. The best method for dealing with this variety is to test your content on as many systems as possible, although this may not be realistic for the student or beginning Web designer. Remember the following points about different computer systems:

- *Monitors and display software*—Because of many technical and physical reasons, the colors you choose and images you prepare for your site can look significantly different on different machines. Screen resolutions and sizes, color depth, and video hardware and software all affect the look of your Web pages.

- *Browser versions*—Not all browsers are the same on all operating systems. Often, software companies release new versions of their browsers based on the popularity of the operating system or competition between vendors. For example, Microsoft Internet Explorer is only available on the PC, while Apple makes both a PC and Apple version of its browser, Safari. Other popular browsers such as Firefox and Opera are available for all operating systems. Always test your work in as many browsers as possible.
- *Font choices*—Installed fonts vary widely from one computer to another. Choose fonts that are commonly used; otherwise, if a font you choose is not installed on the user's machine, it will appear in a default typeface. Chapter 5 provides more information on Web typography.

Designing for Multiple Screen Resolutions

No matter how carefully you design pages, you can never know how users view your work because you do not know the screen resolution of their monitors. A computer monitor's **screen resolution** is the width and height of the computer screen in pixels. Most monitors can be set to at least two resolutions, whereas larger monitors have a broader range from which to choose. User screen resolution is a factor over which you have no control.

Screen resolution is a function of the monitor's capabilities and the computer's video card. The current most common base screen resolution (traditionally expressed as width \times height in pixels) is 1024×768 , but this is rapidly being replaced by larger monitors that display at 1280×1024 , and the popular wide-screen format monitors that display in resolutions of 1200×800 , 1366×768 , 1440×900 , and others. The wide-screen computer displays, both on desktops and laptops, have increased in popularity because they match the wide-screen format of DVD movies. The difference in screen shape between traditional and wide-screen formats affects Web design.

Table 2-1 shows common screen resolutions and the percentage of people using that resolution according to NetMarketShareStats (<http://marketshare.hitslink.com>) as of February 2010.

Resolution (pixels)	Percentage of Users (%)
1024 × 768	26.76
1280 × 800	19.98
1280 × 1024	10.46
1440 × 900	8.81
1680 × 1050	5.53
1366 × 768	4.69
Other	22.36

Table 2-1 Popularity of Screen Resolutions

As shown in Table 2-1, wide-screen formats are gaining a significant share of users. These monitors are now common as new computers are sold with multimedia capabilities and the ability to display movies in a wide-screen format.

Wide-Screen Displays

The new wider screen real estate has changed the way designers are building their page layouts, moving away from flexible layouts that can adapt to different screen resolutions to fixed layouts that display pages consistently no matter the user's resolution. Designers are moving to fixed layouts because of the extended landscape shape of the newer monitors. If a Web browser is maximized in a wide landscape screen, you must account for a tremendous amount of horizontal layout space in your Web design. Figure 2-2 shows the Amazon.com Web site (www.amazon.com) in a 1024 × 768 resolution, and Figure 2-3 shows the same page in 1366 × 768, a typical wide-screen format. This page is designed to be flexible and fill the screen at different screen resolutions. In Figure 2-3, you can see that additional white space fills areas in the layout that are flexible to accommodate the wider screen resolution. On very wide displays, this additional space can become so noticeable that it can detract from the layout of the page.



Figure 2-2 The Amazon Web site at 1024 × 768 resolution

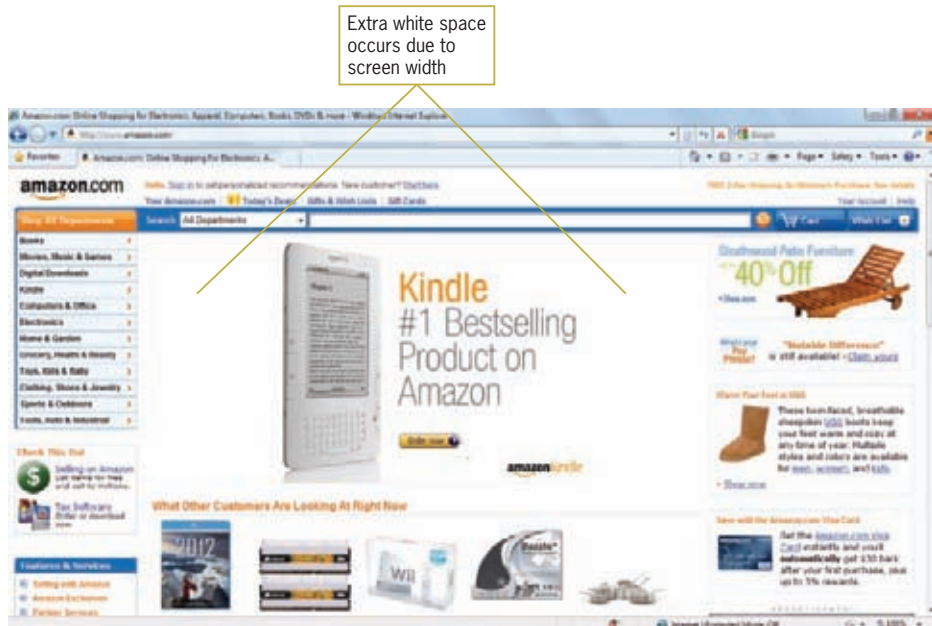


Figure 2-3 The Amazon Web site at 1366 × 768 resolution

Handheld Devices

In addition to wide-screen and standard monitors, many users now have handheld devices such as the iPhone and iPod that they use for browsing the Web. You should test your Web site designs on these devices as well as desktop and laptop computer monitors. Designing for handheld devices presents a variety of challenges for Web designers including an endless list of protocols and standards, miniscule screen sizes, and inconsistent support for JavaScript applications or Flash animations.

Because people increasingly use handheld devices to access the Web, many Web sites now offer content designed expressly for them. Figure 2-4 shows the main page that Amazon presents for the iPhone, which uses the Apple Safari browser. This page is designed so users can quickly search for an item or check their shopping cart. Amazon.com is serving pages that are appropriate for the user's device type. When an iPhone user enters the Amazon Web address, the Amazon server can detect the iPhone request and respond with the appropriate page.

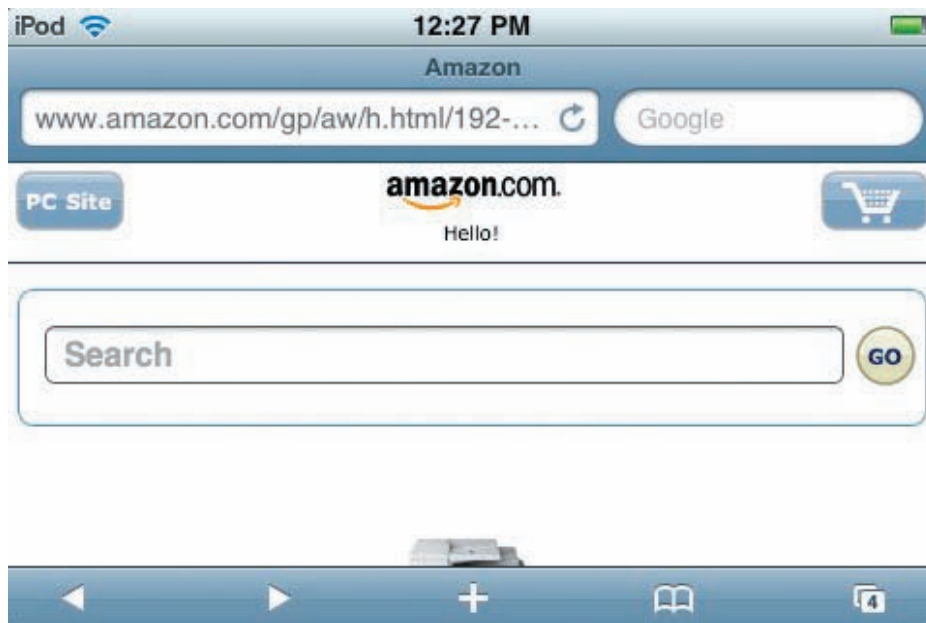


Figure 2-4 Amazon.com home page designed for the iPhone

If iPhone users choose to view the Amazon page designed for personal computers, they see the result shown in Figure 2-5, which, although small, is an exact replica of the Amazon page shown in Figures 2-2 and 2-3. iPhone users spend a lot of time

zooming to view pages that were not intended for their device. Not all Web sites have separate pages designed for the iPhone, but the increasing popularity of the iPhone platform, as well as devices made by other manufacturers, means that this trend will continue.



Figure 2-5 Standard Amazon.com home page viewed on the iPhone

Another method for handling display settings on handheld devices is the CSS handheld media type, which you will learn about in the CSS Media Queries appendix. CSS **Media Queries** (previously called Media Types in CSS2) let you specify style rules for each media destination. The handheld media type lets you provide rules for how your Web page should be displayed on handheld devices.

By specifying a style sheet specifically for handheld devices, you can customize the page layout such as by designing the content to appear in a single column or providing navigation customized for smaller screens. You can also hide elements that will not be displayed properly, such as animated or overly large graphics and JavaScript elements.



You can test your Web site for the iPhone with online emulators such as <http://iphonetester.com> and www.testiphone.com, which let you see what your pages look like in the iPhone interface. Better yet, use your own or a friend's iPhone to test your Web pages whenever possible. While emulators are adequate for a quick look at your Web page design, they are not the same as actually trying to navigate through a site using a handheld device.

Flexible Page Layouts

Flexible page layouts, also called fluid layouts, are designed to adapt to different screen resolutions, as demonstrated by the Amazon Web site discussed earlier. Flexible layouts can work especially well and are simpler to design for text-based content. They can pose a variety of design challenges, based on the type of content and complexity of the page layout.

Figures 2-6 and 2-7 show the Wikipedia main page at two different resolutions. Because the Wikipedia content is mainly text, there is minimal visual difference between the two views of the page. The text wraps to fill each column as necessary. A drawback of this design style is that the line of text can be excessively long at wider screen resolutions, decreasing legibility.



Figure 2-6 Using flexible design, content fills window at 1024 × 768 resolution



Figure 2-7 Using flexible design, columns expand to fit at 1366 × 768 resolution

In more complex designs, fluid layout design can be challenging. Your design must account for the movement of elements on the screen as the layout adapts to different browser sizes. For example, the Broads Authority Web site (www.broads-authority.gov.uk) has a fluid design that fills the screen at multiple resolutions. Figure 2-8 shows the site at the 1024 × 768 resolution. As the screen expands to accommodate higher resolution, white space is added within the design elements, as shown in Figure 2-9. This technique works well except at extremely high screen resolutions where too much white space could start to break apart the content.

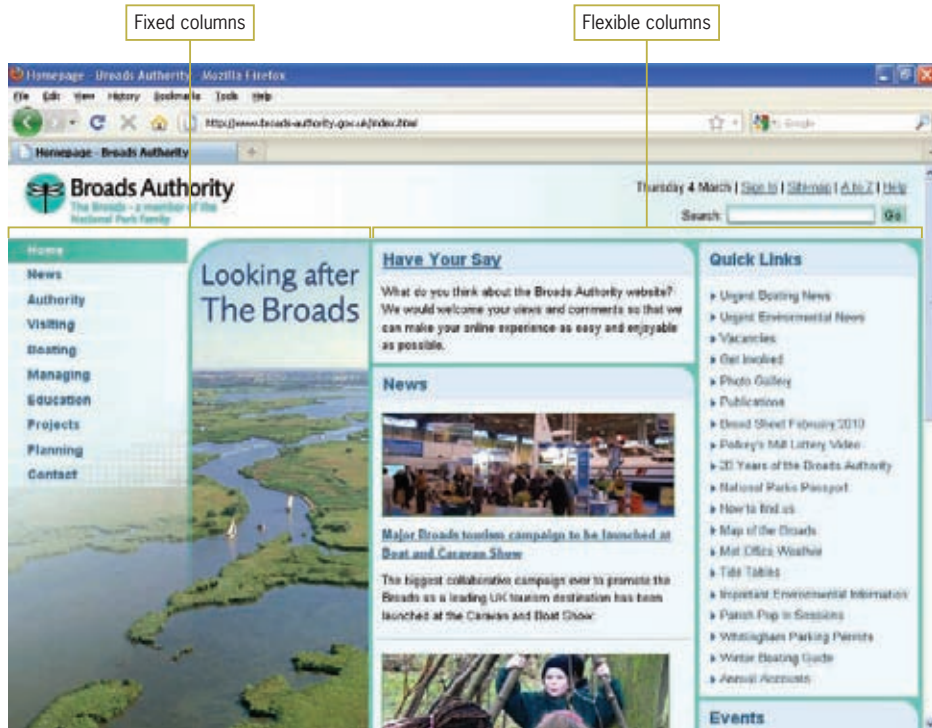


Figure 2-8 Broads Authority Web site at 1024 × 768 resolution

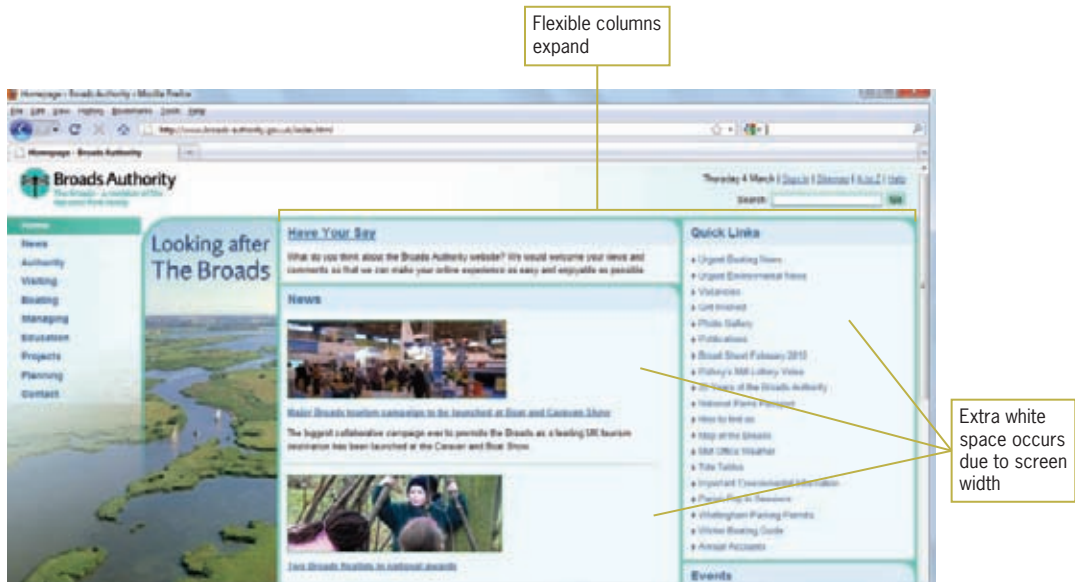


Figure 2-9 Broads Authority Web site at 1366 × 768 resolution

The Broads Authority site is an example of mixed fixed-width and flexible elements. The two left columns that contain the photo and links are fixed, while the right content columns resize to fit the browser window.

Another advantage of flexible design is the ability to adapt to lower screen resolutions. Although users who have their screen resolution set to lower than 1024×768 are becoming increasingly scarce, the ability to adapt to lower resolutions and smaller browser windows or device displays means users have ultimate control over how they interact with your content. Figure 2-10 shows the Broads Authority Web site at 800×600 resolution. Notice that even at this smaller browser window size, the page content wraps to fit the window, is displayed properly, and does not require the user to scroll horizontally to read the content. Finally, even on the iPhone, the Web site adapts to fit the smaller screen dimensions, as shown in Figure 2-11.

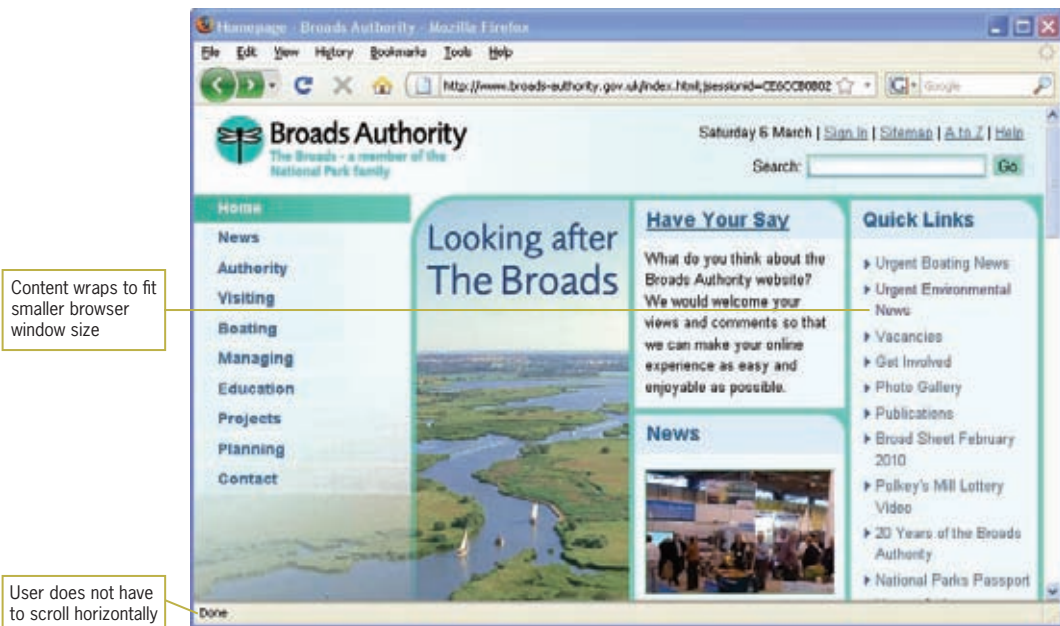


Figure 2-10 Broads Authority Web site at 800×600 resolution



Figure 2-11 Broads Authority Web site on the iPhone

Fixed-Width Page Layouts

Fixed-width page layouts allow the designer to control the look of the Web pages as if it were a printed page, with consistent width and height. Most current fixed-width layouts are designed to stay centered in the browser window, regardless of the user's screen resolution. Fixed-width page layouts have become a popular choice because of the increasing variety of screen sizes and resolutions and the relative ease of constructing fixed-width designs compared to flexible designs. Figures 2-12 and 2-13 show examples of fixed-width designs at different resolutions.

The Boston Vegetarian Society Web site (www.bostonveg.org) shown in Figure 2-12 fills the browser window at 1024×768 resolution. As the screen resolution changes, the Web page stays centered in the browser window, splitting the remaining space into equal amounts on the left and right side of the browser window. Figure 2-13 shows the same page at 1366×768 . The benefit of centering a fixed-width page is that the layout of the content remains unchanged no matter what the user's screen resolution.



Figure 2-12 Fixed-width design at 1024 × 768 resolution

Leftover screen space is equally distributed on both sides of the browser window



Figure 2-13 Fixed-width design at 1366 × 768 resolution

Fixed-width layouts increasingly are aligned in the center of the browser window to consistently present the same page format at multiple screen resolutions. Some Web sites still use fixed-width designs that are aligned to the left side of the browser window, as demonstrated by the Washington Post Web site (www.washingtonpost.com) in Figure 2-14. This type of design works best for a 1024 × 768 resolution. At higher resolutions, and especially on wide-screen monitors, the browser window displays an abundance of unused space. This figure shows a maximized browser window. Of course, users may choose to resize their browser window so it adapts to the size of the Web site.



Figure 2-14 Left-aligned fixed-width design at 1366 × 768 screen resolution

Suggestions for Solving the Screen Resolution Dilemma

Which of the two layout types—fixed or flexible—is right for your design? Fixed designs are often chosen for use with Web sites that have more complex page designs, including fixed-size blocks of content, such as video or flash animations. Currently, many more mainstream sites are choosing fixed designs. Flexible designs are more adaptable for the user, but they can have more complicated design requirements. Consider the following advantages of each type of design when you determine which approach is right for you.

Flexible designs:

- User controls the view of the content
- Less chance of horizontal scrolling
- More flexibility for multiple devices
- Better suited to text-based layouts and simpler designs

Fixed-width designs:

- Designer controls the view of the content
- Allows more complex page layouts
- More control over text length

Crafting the Look and Feel of the Site

The interface that the user must navigate is often called the **look and feel** of a Web site. Users look and feel when they explore the information design of your site. They read text, make associations with links, view multimedia, and, depending on the freedom of your design, create their own path through your information. The look and feel is both the way your Web site works and the personality it conveys to the user. Not only should you plan for a deliberate and consistent look and feel, but as mentioned earlier in this chapter, you must test your designs against the variable nature of the Web. You want to ensure that the greatest number of users can navigate your site successfully.

Balance Design and Content

When planning the design of a Web site, access to your content and the needs of your users should always guide your design decisions. As you will read in Chapter 3, Web development teams often comprise many people, each with their own idea of what is important in the current Web site project. Within your company or design team, various stakeholders contribute to the design of the site. The customer has their vision of the finished Web site they are paying your company to design. The designers want to build a site that showcases their design skills. The development team wants to include the latest technologies. The publishing and editorial teams want to highlight their content. Advertising revenues may determine placement and design of ad space on the page.

These varied stakeholders vie for positioning and exposure to their content and content depth, and the larger the site project, the more interests are involved. Everyone wants to contribute their own ideas to the design process. The emphasis on the look of the site can overwhelm the needs of the user, for example, when sites have unnecessary entry pages, too many images, layers that add extra clicks to uncover content, and overdone technology—scrolls, news banners, cycling images, and overdesigned navigation. All of these factors can distract the user from their search for information.

A Web site's design should complement the content and support the reader. The information design should be logically divided and structured to expose similar groupings of content, and then provide access to the content through designed navigation. When in doubt, always choose simple and direct designs that showcase content and allow easy access, and set aside unneeded technology and complex visual designs that can frustrate and misdirect your user.

Plan for Easy Access to Your Information

Your information design is the single most important factor in determining the success of your site. It determines how easily users can access your Web content. The goal is to organize your content and present it as a meaningful, navigable set of information. Your navigation options should present a variety of choices to users without detracting from their quests for information.

A visitor to your site may choose to browse randomly or look for specific information. Often users arrive at a page looking for data that is low in the hierarchy of information. Sometimes users arrive at your site seeking a specific piece of information, such as contact information, product support, or files they want to download. Anticipate and plan for the actions and paths that users are likely to choose when they traverse your site. Provide direct links to the areas of your site that you find or expect to be most in demand. Ask your server administrator for Web server reports to determine which pages are in highest demand, and feature those pages in your design and navigation to allow users easy access. Remember that users want to get to your site, retrieve their desired information, and move on.

Plan for Clear Presentation of Your Information

Even with the current move to higher resolutions and crystal-clear displays, the computer monitor can be a poor reading medium. Environmental factors such as glare or physical distance from the screen can make reading difficult. To counter these problems, design your information so it is easier to read and legible on the screen. Many Web sites fail these criteria by using too many fonts, colors, and lengthy passages of text. Break text into reasonable segments that make for easier on-screen reading. Think about providing contrasting colors that are easy on the eye, such as dark colors against a light or white background. Use plenty of white space to accent specific areas of content and provide separation and structure to your information.

Keep in mind that readers have different habits when reading online. Compared to how they read printed text, online visitors scan more and read less, skimming long pages quickly as they scroll through the text. Include plenty of headings so users can find content quickly. Control the width of your text to provide complete, easy-to-read columns. Keep the “seven (plus or minus two)” rule of information design in mind; that is, users cannot comprehend more than seven (plus or minus two) steps or segments of information at one time. For example, a well-written procedure would contain no more than nine steps. Rather than presenting long scrolling pages, break information into smaller chunks and link them with hypertext.

The Let’s Go Web site (www.letsgo.com) offers both clear presentation and easy access to information, as shown in Figure 2-15. The navigation links on the left side of the page are hierarchically organized and offer clear descriptions of their destinations. A search text box is located at the top of the page for quick and easy access. The text used throughout the site is legible and easy to read online. Plenty of active white space between the page elements adds to the readability of the page. (You’ll learn more about white space later in this chapter.)



Figure 2-15 Clear presentation and easy access

Creating a Unified Site Design

When designing your site, plan the unifying themes and structure that will hold the pages together. Your choices of colors, fonts, graphics, and page layout should communicate a visual theme to users that orients them to your site's content. The theme should reflect the impression that you or your organization want to convey.

When you design a site, you must consider more than each page. For a well-integrated, unified site, plan smooth transitions, use a grid to provide visual structure, and include active white space. Each of these techniques is explained in the following sections.

Plan Smooth Transitions

Plan to create a unified look among the sections and pages of your site. Reinforce the identifying elements of the site and create smooth transitions from one page to another by repeating colors and fonts and by using a page layout that allows you to organize information in a hierarchy. Avoid random, jarring changes in your format, unless this is the effect you want to achieve. Consistency and repetition create smooth transitions from one page to the next, reassuring viewers that they are traveling within the boundaries of your site, and helping them find information.

Provide grounding for the user by placing navigation elements in the same position on each page. Users orient themselves quickly to your navigation structure. Use the same navigation graphics throughout the site to provide consistency and avoid the need to download many graphics.

Think of users turning the pages of a periodical when they browse from Web page to Web page. Although each page should be a complete entity, it also is a part of the whole site. The overall design of a page at any information level should reflect the identity of the site as a whole. For example, Figure 2-16 and Figure 2-17 show the main page and a secondary-level page from the Los Angeles Zoo Web site (www.lazoo.org).

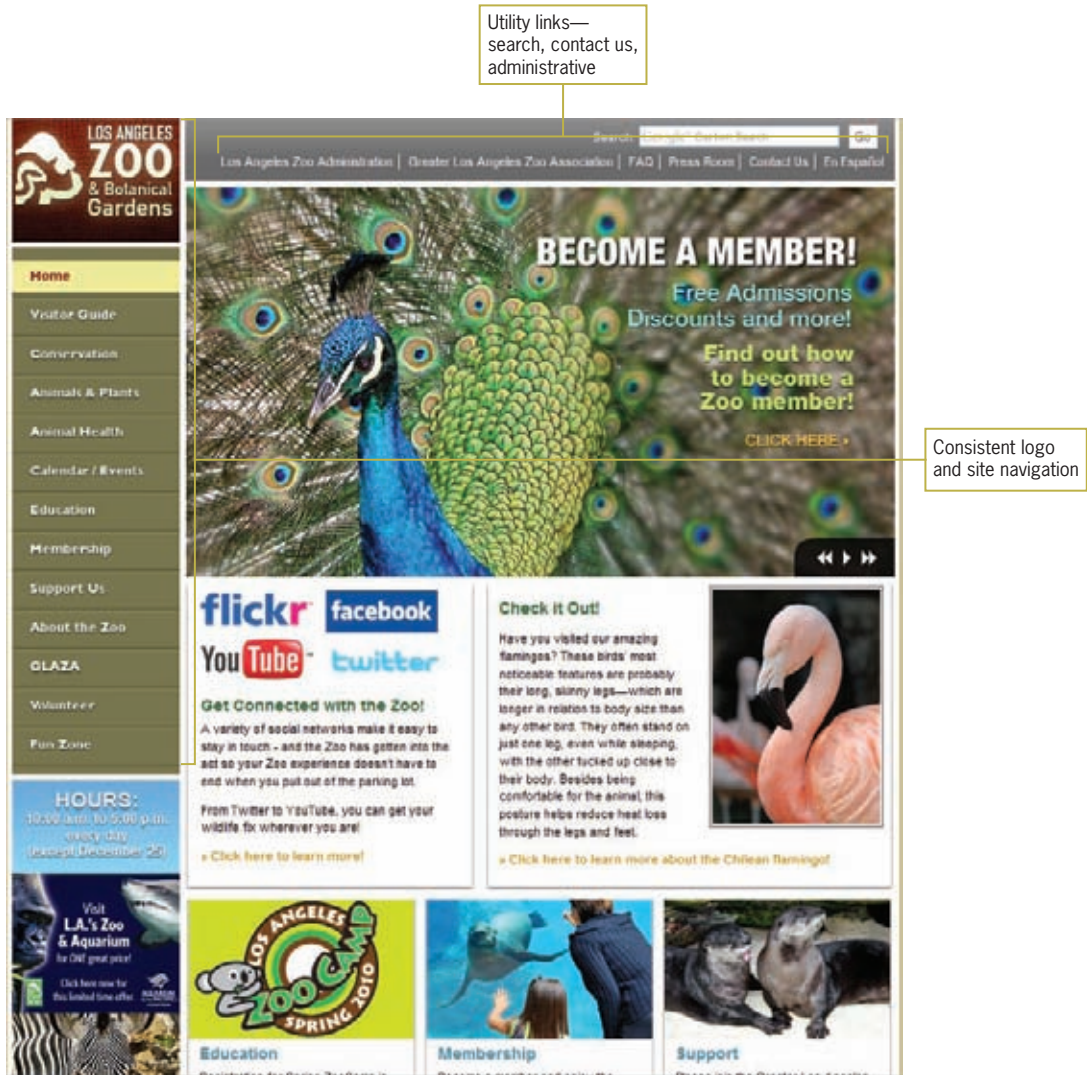


Figure 2-16 Los Angeles Zoo Web site main page

Because these pages share the same color scheme, logo, structure, and navigation, the Web site offers a smooth transition from the main page to the secondary page and presents a unified look and feel.

Logo appears in the same place on each page, providing consistency

Navigation shows current section and choices

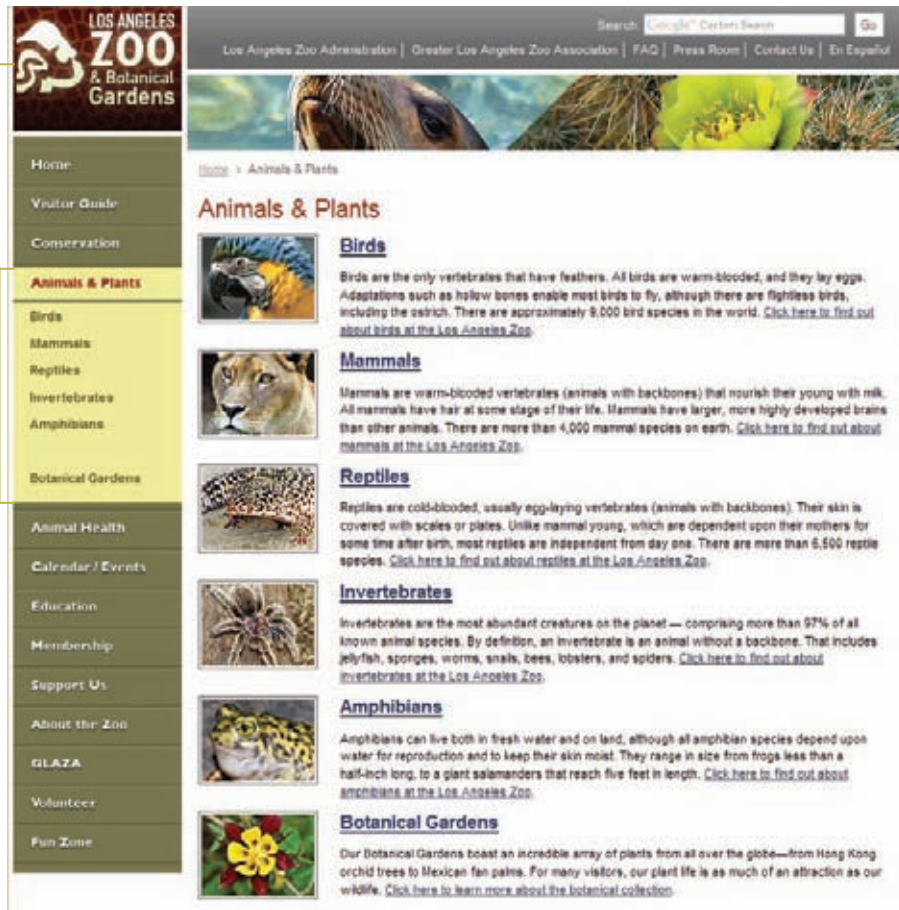


Figure 2-17 Los Angeles Zoo Web site secondary page

Use a Grid to Provide Visual Structure

The structure of a Web page is imposed by the grid or page template you choose for your page design. The **grid** is a conceptual layout device that aligns your page content into columns and rows. You can impose a grid to provide visual consistency throughout your site. You can use the grid to enforce structure,

but you also can break out of the grid to provide variety and highlight important information. Figure 2-18 shows a Web page divided into four columns and eight rows. These grid sections provide placement guidelines for page elements, each of which can cover multiple rows and columns of the grid as needed, as shown in Figure 2-19.

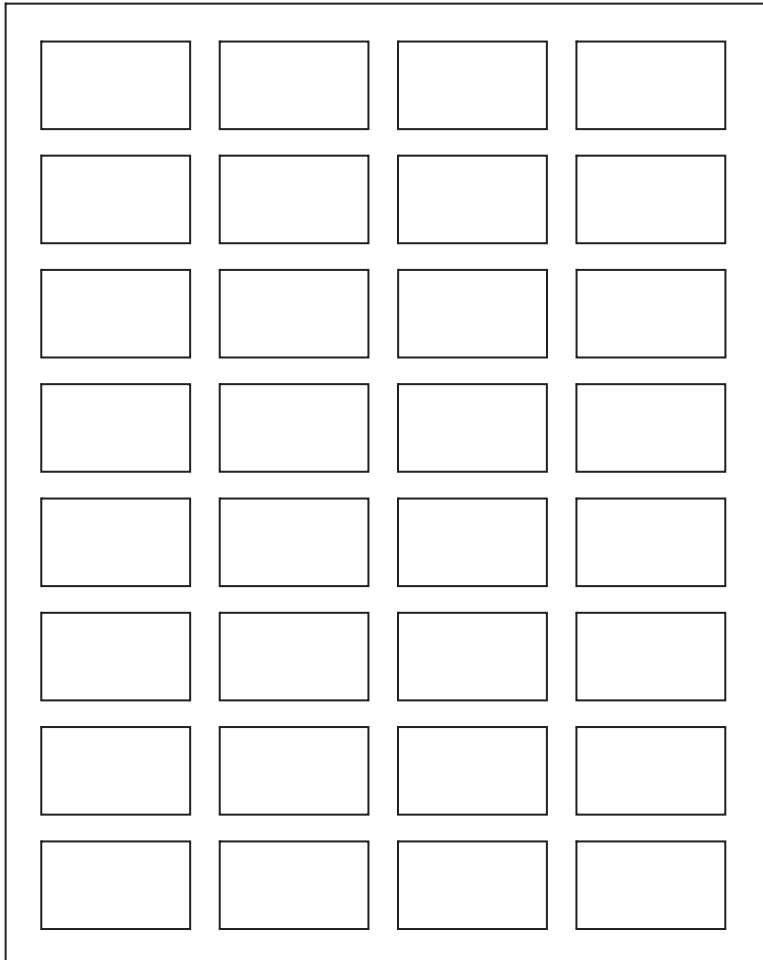


Figure 2-18 Four-column grid

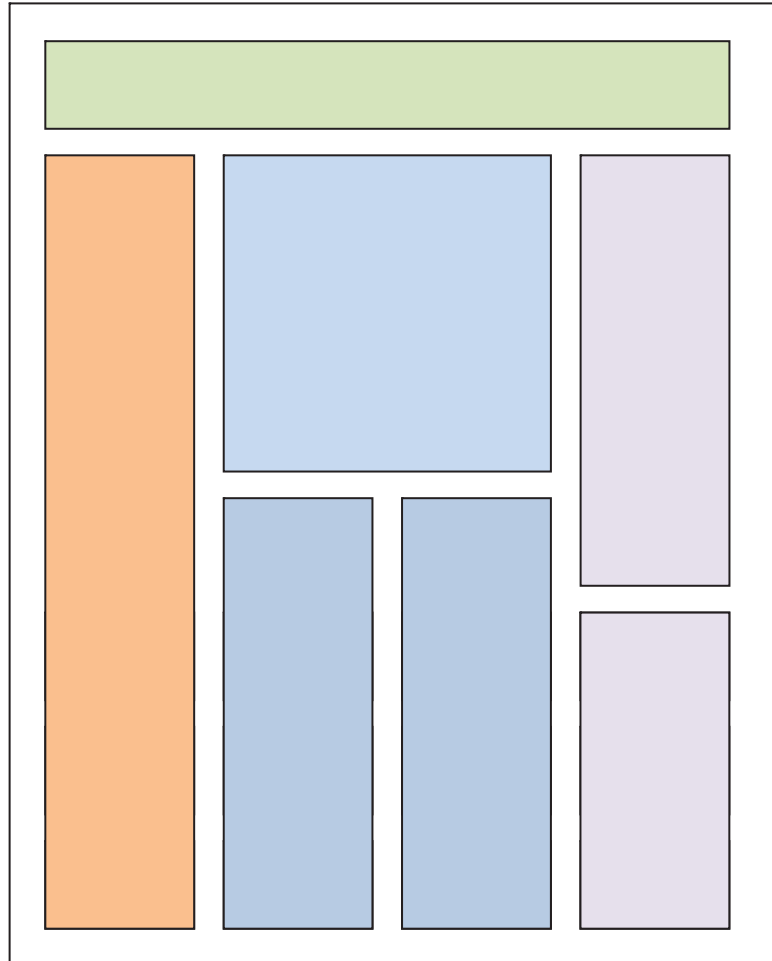


Figure 2-19 Four-column grid with layout elements

Notice that the grid also provides a page margin around the content and gutters of white space between elements on the page. This white space actively separates the content and provides structure for the users' eye to follow. Web pages that respect the grid and consistently align text and graphic elements have a more polished look than pages that have scattered alignments.

The *Guardian* site's main page (guardian.co.uk) in Figure 2-20 has a six-column grid. All of the text and graphic elements on the page align within the grid to create an orderly layout.



Figure 2-20 Grid provides visual structure

Use Active White Space

White spaces are the blank areas of a page, regardless of the color you choose to give them. Use white space deliberately in your design, rather than as an afterthought. Good use of white space guides the reader and defines the areas of your page. White space that is used deliberately is called **active white space** and is an integral part of your design because it structures and separates content. Sometimes the strongest part of a design is the active white space. White space is any area of the screen that does not include content, regardless of your background color. **Passive white space** includes the blank areas that border the screen or are the result of mismatched shapes. Figure 2-21 illustrates active versus passive white space.



The 960 grid system (www.960.gs) has become a commonly accepted standard for many Web designers. The “960” refers to the width in pixels of the page design, which can easily be divided into multiple columns and fits screen resolutions from 1024 pixels wide and up. The Web site has CSS files that let you build grid page designs that can become the basis for your own page designs.

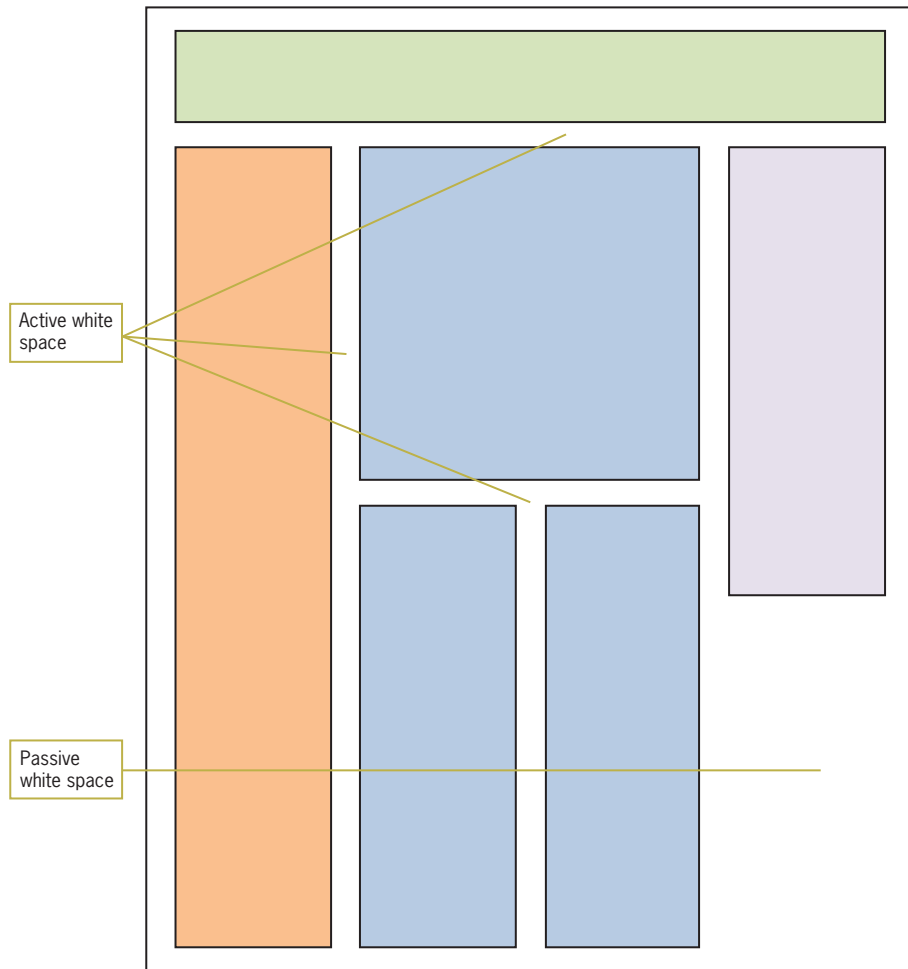


Figure 2-21 Areas of active and passive white space

Content presentation can become confused when designers do not use enough active white space to separate and define content. A lack of active white space creates the impression that a page contains too much information and that it will be difficult to find the piece of information you want. The NASA home page (www.nasa.gov) in Figure 2-22 shows effective use of active white space, making the content easy to read. Plenty of active white space reduces clutter and clarifies the organization of your ideas.



Figure 2-22 Active white space enhances legibility

Designing for the User

Keep your design efforts centered solely on your user. Knowledge of your audience can help you answer almost all design questions—if it serves the audience, keep it; if it is potentially distracting or annoying, eliminate it. Find out what users expect from your site. If you can, survey them with an online form. Create a profile of your average user by compiling responses to basic questions. What do users want when they get to your site? Are they trying to find customer support and troubleshooting help, or do they want to buy something? Do they want to

read articles or search for information? Once you know what your users want from your site, you can evaluate how the design reflects the audience's profile and needs. Consider the main page for Google (www.google.com), currently the Web's most popular search engine. The site's main page, shown in Figure 2-23, has no ads, very few links, and is designed for only one purpose—letting users quickly enter a search term.

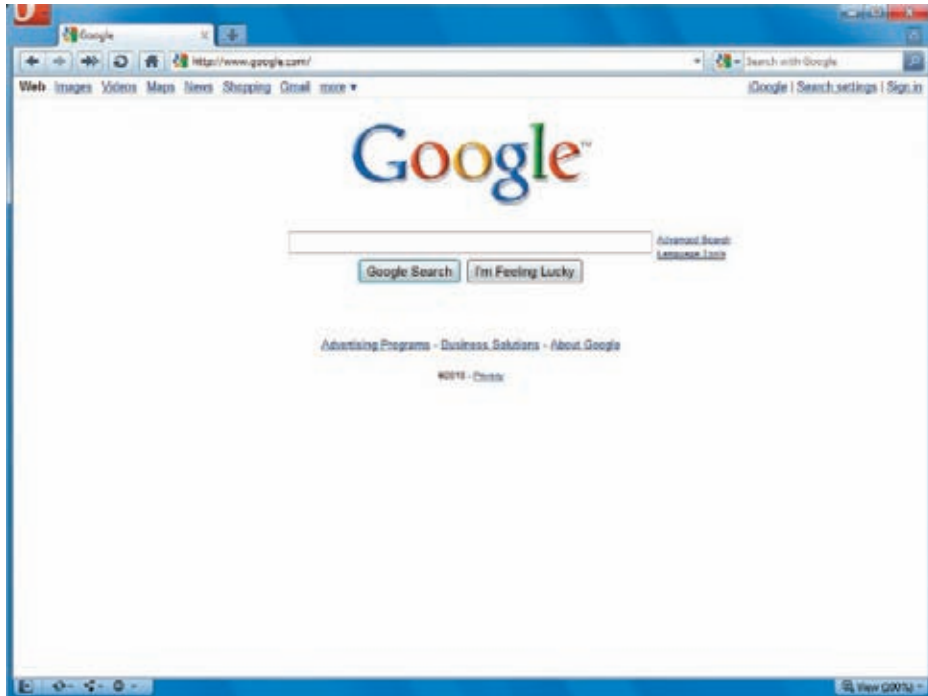


Figure 2-23 Google's simple, task-oriented design

Compare the main pages from the following sites and consider their target audiences. The Cartoon Network Web site (www.cartoonnetwork.com) shown in Figure 2-24 contains competing content that draws the user's eye, such as Flash animations, a scrolling navigation bar, bright colors, and familiar shapes. The overall effect is decidedly similar to television cartoons—familiar territory for the site's audience.

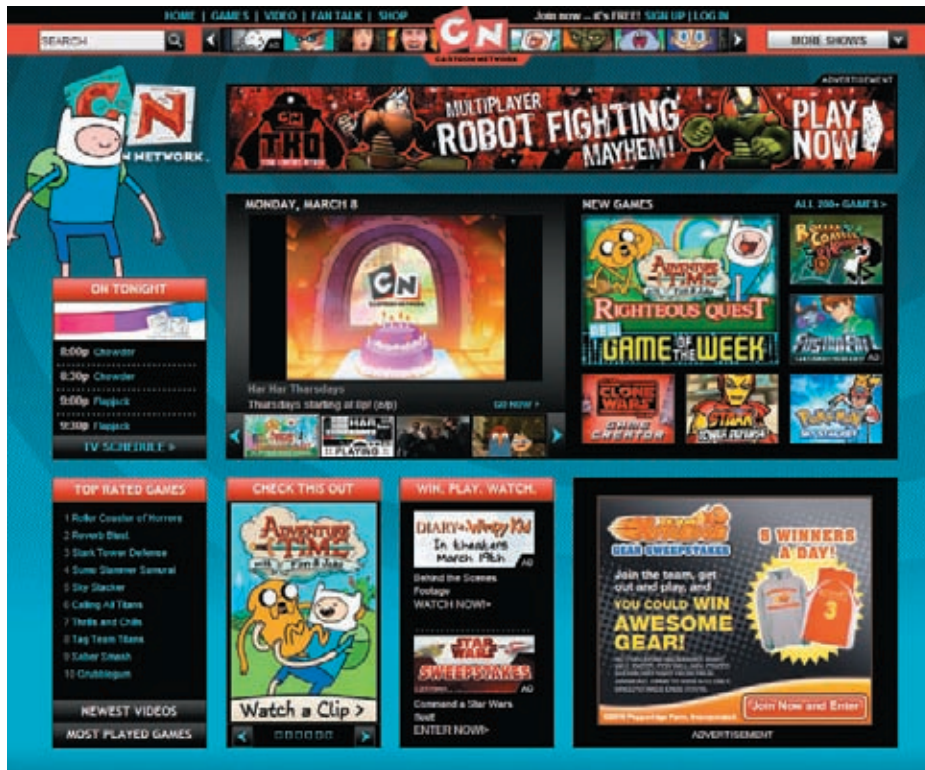


Figure 2-24 Hectic, but appropriate design for Cartoon Network's online audience

In contrast, the Web site for the *The New Yorker* (www.newyorker.com) in Figure 2-25 projects a strong periodical-like image. The main page components are textual. Even though the page has a lot of content, it is well organized with clear headings and readable text in well-defined columns. The design uses just enough active white space to clearly separate each element on the page. The overall effect evokes the look of a printed page while using the color, linking, and design flexibility that the Web offers.



Figure 2-25 Paper-based design for *The New Yorker's* audience

These two examples demonstrate how the design suits the audience's visual expectations—the look of the site. However, you also should consider the ways in which users interact with the content—the feel of the site.

Design for Interaction

Think about how the user wants to interact with the information on your Web page. Design for your content type, and decide whether the user is likely to read or scan your pages.

For example, suppose your page is a collection of links, such as a main page or section page. Users want to interact with these types of pages by scanning the content, scrolling if necessary, pointing to graphics to see if they are hyperlinked, and clicking linked text. Design for this type of user interaction by using meaningful column headings, linked text, and short descriptions. Organize links into related topic groups and separate groupings with white space, graphics, or background color.

Suppose the page is an article that contains large blocks of text. Your user is accustomed to interacting with pages of text by scrolling and possibly clicking hyperlinked words of interest. The links may be in the body of the article or contained in a sidebar. Design your pages for this text-oriented content by keeping paragraphs short for online consumption. Make reading easier by using a text column that is narrower than the width of the screen. Keep your text legible by providing enough contrast between foreground and background colors. Provide links that allow the user to jump quickly to related content.

Two screens from the National Public Radio (NPR) News Web site (www.npr.org) illustrate the difference between designing for reading and designing for scanning. For example, Figure 2-26 shows the site's main page. This mainly text-filled page has an open, informational feel. Three columns of content present a variety of information. Users can scan links to find a topic of interest, read article abstracts, or choose one of the featured main sections.

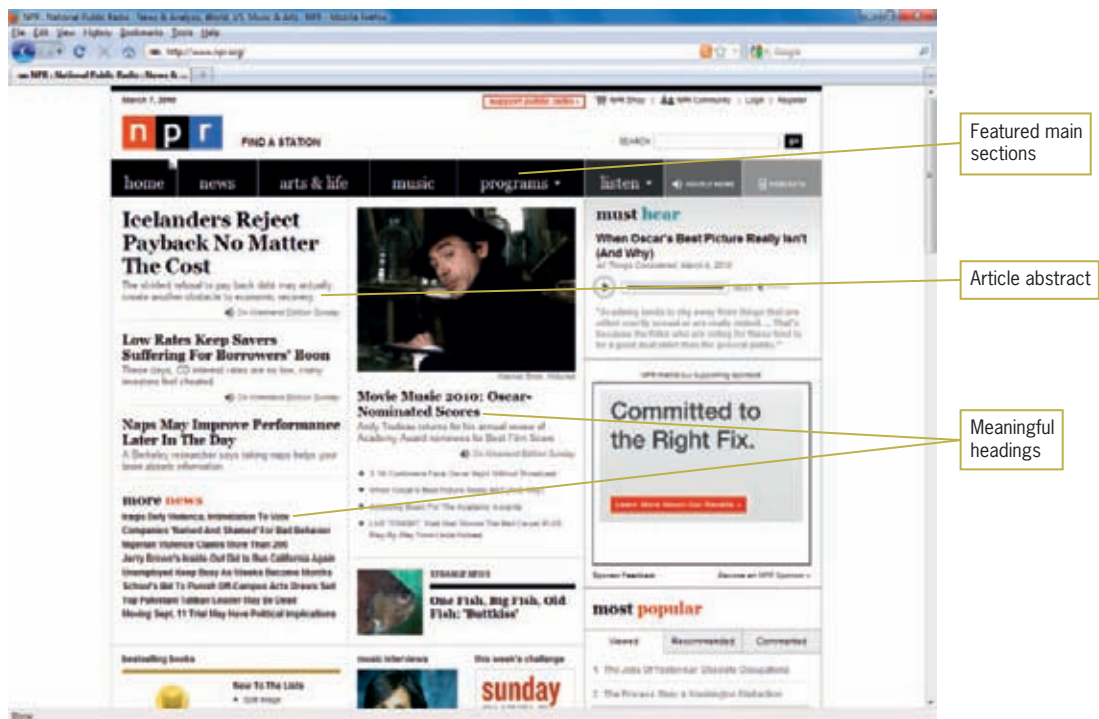


Figure 2-26 Page designed for scanning

When users choose a link, they jump to a page designed for reading, as illustrated in Figure 2-27, which shows a secondary page from the NPR Web site. This page has a two-column layout, with a more generous left column that contains the main article text. Featured main sections are provided in the banner at the top of the page. An article sidebar provides links to related content.

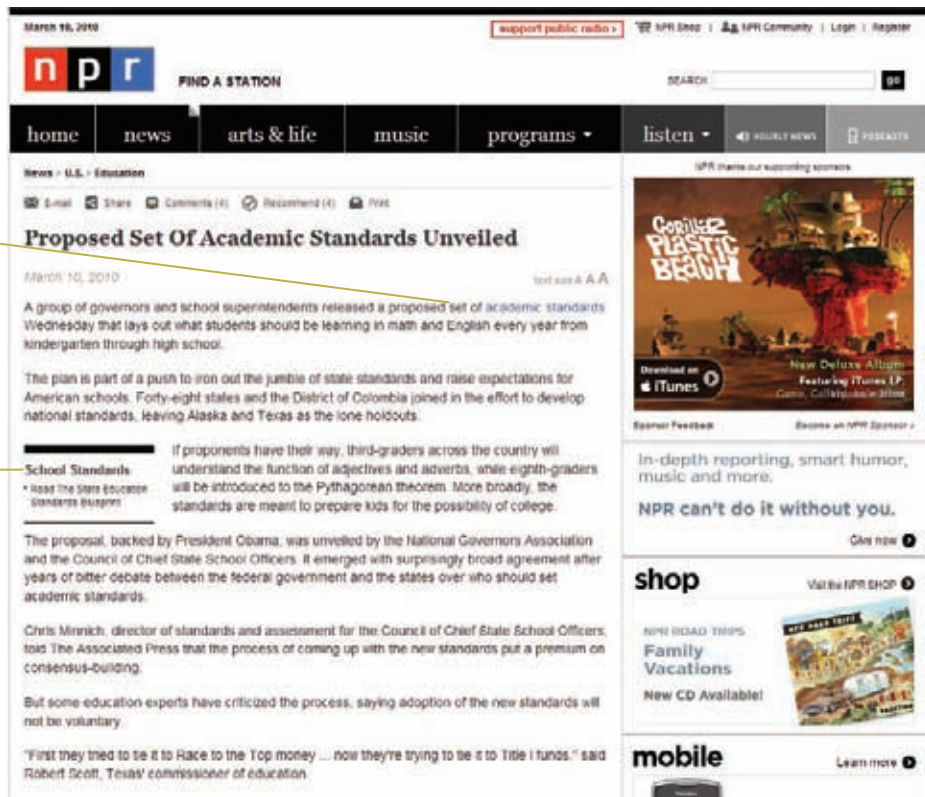


Figure 2-27 Page designed for reading

Design for Location

The user can traverse a page in a variety of ways. Human engineering studies show a wide range of results when tracking a user's eye movements. As you plan your design to guide the user through your content, consider the different ways your user could be viewing your Web pages.

Fixed-width designs tend to have the same proportions as the printed page, which enforces scanning the page using paper-based reading habits. In this reading pattern, the user's eye moves from left to right and back again, as shown in Figure 2-28.

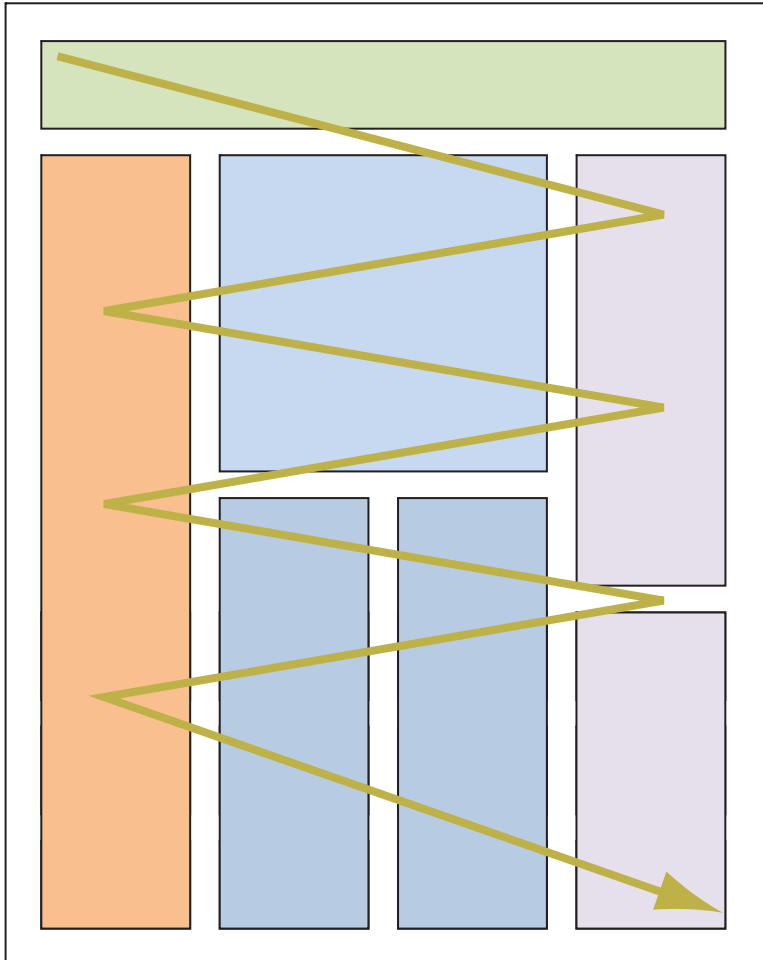


Figure 2-28 Paper-based reading pattern

In contrast, when viewing flexible layouts that fill the screen, users may scan information following a clockwise pattern, as shown in Figure 2-29.

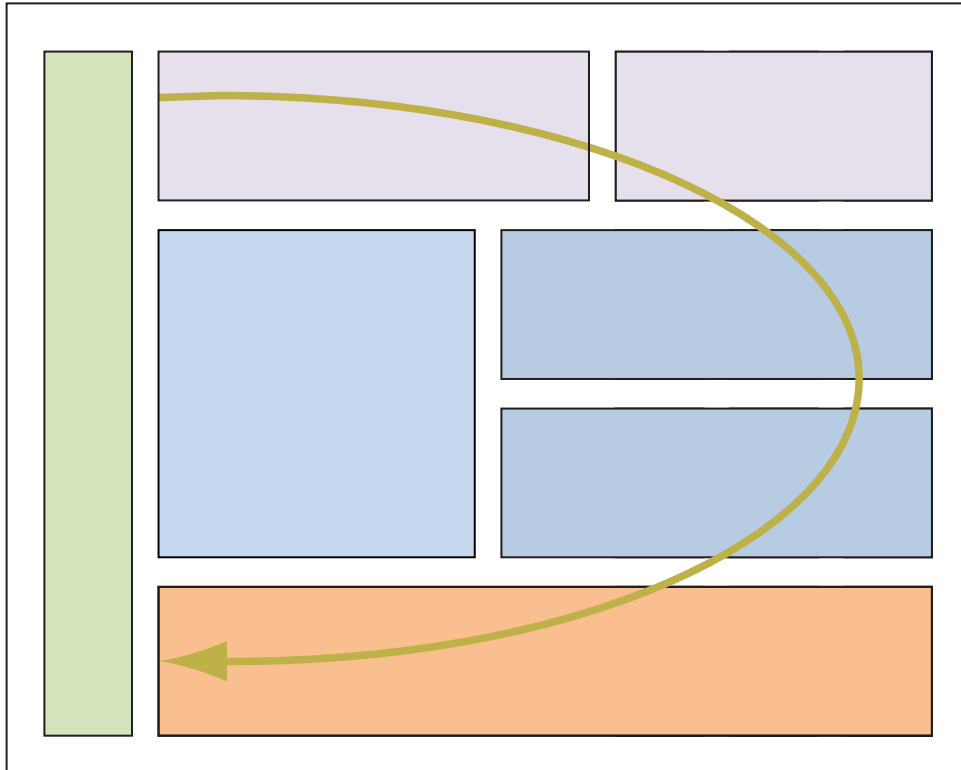


Figure 2-29 Landscape-based viewing pattern

A third pattern, found in eye-tracking studies performed by Jakob Nielsen, shows that “users often read Web pages in an F-shaped pattern: two horizontal scans followed by a vertical scan.” (www.useit.com/alertbox/reading_pattern.html) The F-shaped pattern, shown in Figure 2-30, is dominated by the upper-left of the page, where users look for the most important information and navigation on the page. According to Nielsen, users’ dominant reading patterns tend to follow this sequence:

- Users first read across the top of the page.
- Next, users move down the page a bit and scan across the page again. This scan is typically shorter than the first.
- Finally, users scan the content’s left side in a vertical movement. Sometimes this is a fairly slow and systematic scan of the content.

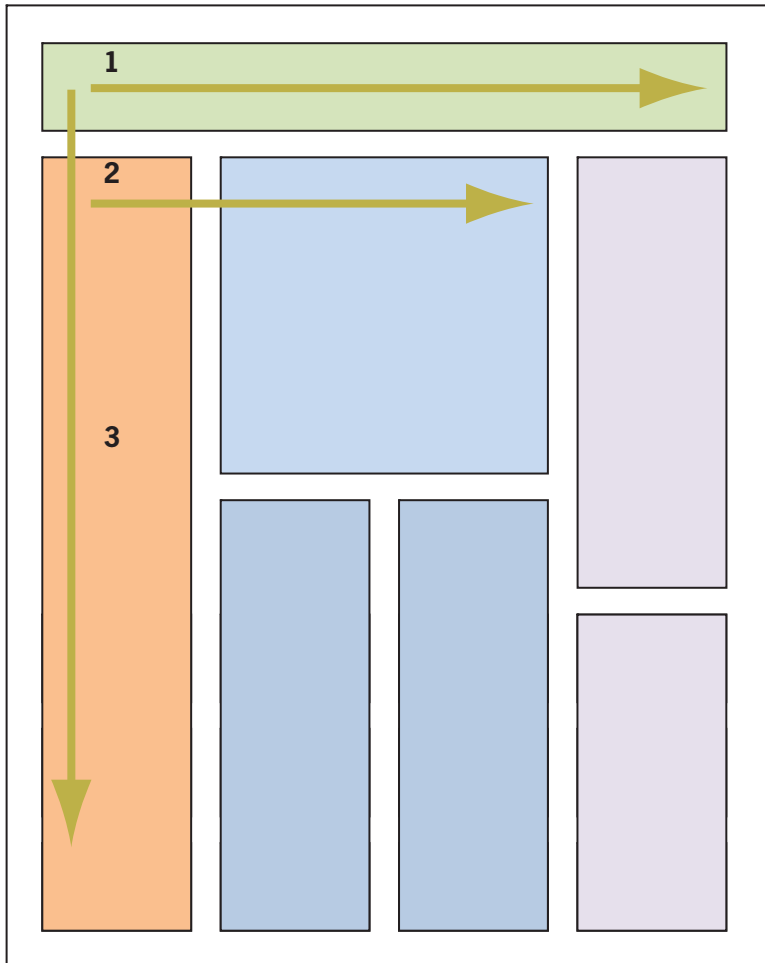


Figure 2-30 F-based viewing pattern

In addition to knowing how the user views your pages, you should also know what expectations he or she might have about your navigation and content. Users have come to expect common elements of a Web page in certain locations. These conventions have evolved because of usage by popular Web sites as well as basic page design criteria. Eye-tracking studies cited by Patrick J. Lynch and Sarah Horton in the *Web Style Guide, Third Edition* (<http://Webstyleguide.com/wsg3/3-information-architecture/4-presenting-information.html>) shows how users, when asked to identify where they expected to find certain elements, more or less agreed on the relative positioning on a Web page grid. In Figure 2-31, the top rows of grids show different element expectations, with the deeper colors indicating higher preference. The page

mockup below the grids shows the aggregate of the results positioned on a Web page design. These expectations reflect many Web sites and would look familiar to anyone who has browsed the Web for any length of time. For example, the Home link graphic shows that most users look to the upper-left corner of the Web page to find a link to the home page. The Shopping cart element shows that most users look to the upper-right or the middle-right to find a shopping cart link. Keep these expectations in mind to satisfy the needs of the user and help solve design problems.

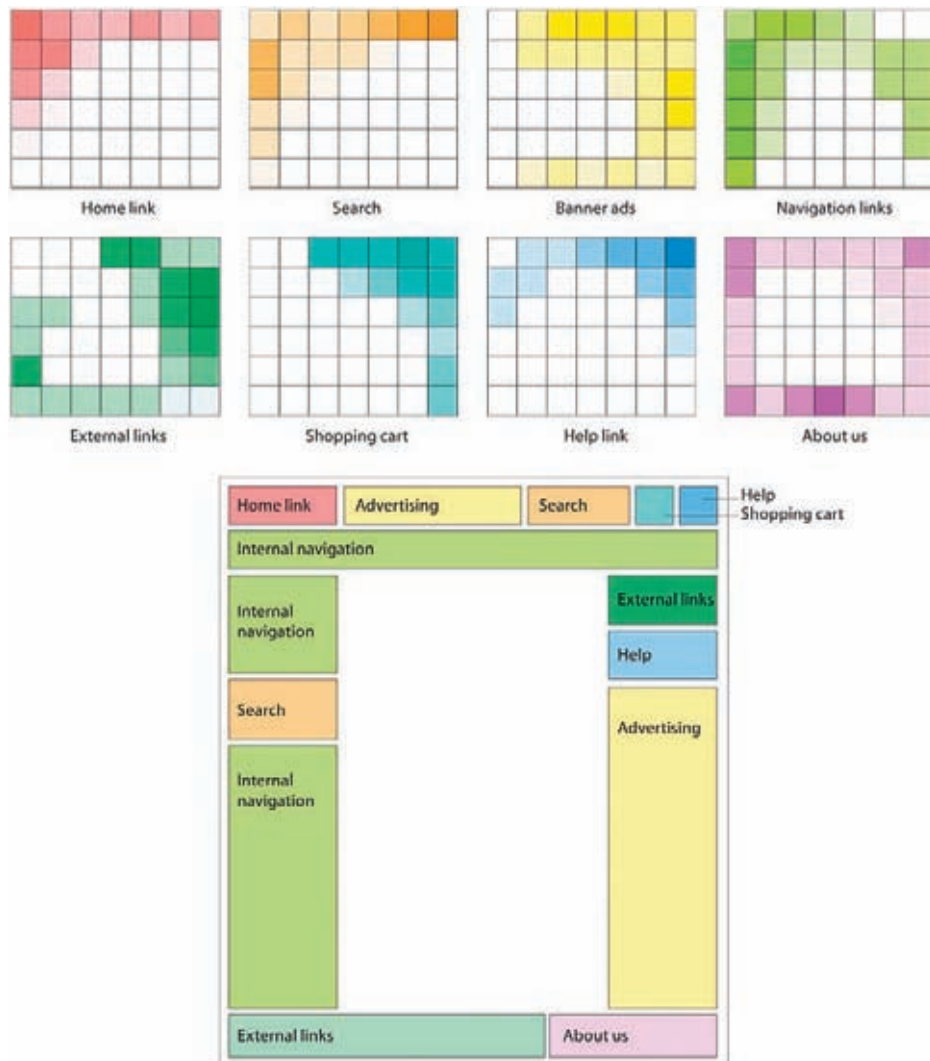


Figure 2-31 User expectations of Web page element locations
(Source: Courtesy of Patrick J. Lynch and Sarah Horton)

Remember that these studies and theories are guidelines for design, not hard and fast rules. They suggest general user tendencies rather than specific habits. Knowing these common user tendencies is one more way to help you decide where to focus the user's attention by object placement, text weight, and color use. As with any good type of information design, keep the following points in mind:

- Think about your grid structure and how you want to break out of it to attract attention.
- Use text weight and size to communicate relative importance of information.
- Use meaningful headings to help users navigate through your content.
- Divide content into sections with rules or active white space.
- Use shapes and color to reinforce location or topic.

Keep a Flat Hierarchy

Do not make users navigate through too many layers of your Web site to find the information they want. Structure your Web site to include section- or topic-level navigation pages that let users find their desired paths quickly. Create content sections organized logically by theme.

Try to follow the three clicks rule; that is, don't make your users click more than three times to get to the content they desire. Provide prominent navigation cues that enable quick access. For example, a standard navigation bar consistently placed on every page reassures users that they will not get lost, and it lets them move through the site with flexibility. Think about the primary tasks the user wants to accomplish at your Web site, and design accordingly to make it easy for the user to accomplish those tasks.

Consider providing a site map that graphically displays the organization of your Web site. Figure 2-32 shows a site map from Google (www.google.com). This graphical view of the Web site shows all the individual pages and the sections in which they reside. Clear headings organize the content. Users can click to go directly to a page or orient themselves to the site's structure.

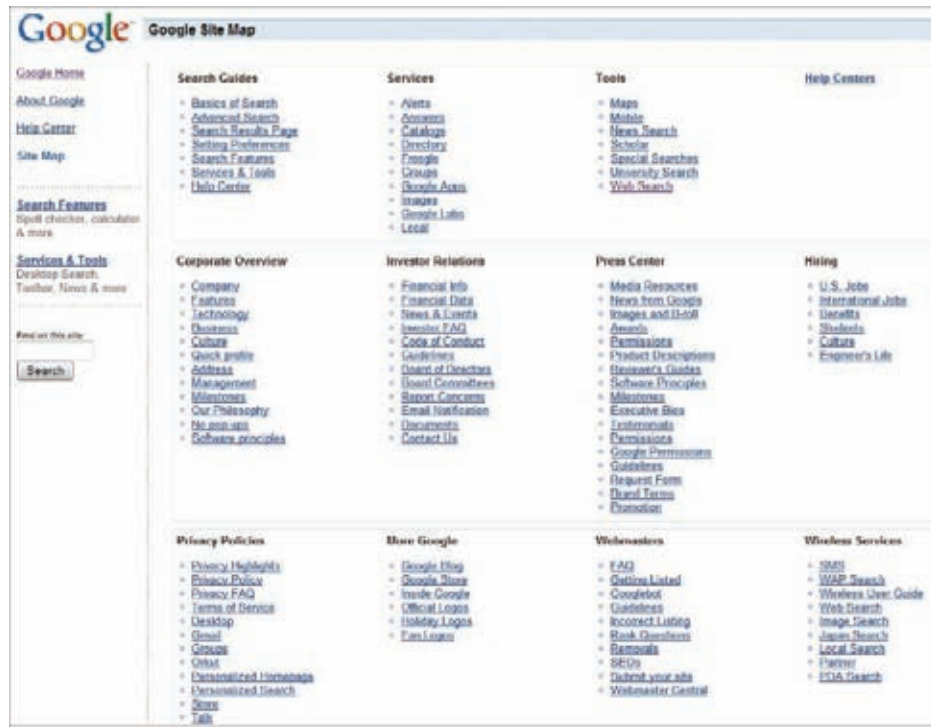


Figure 2-32 Google's site map

Use Hypertext Linking Effectively

Unlike paper-based authors, as an HTML author you have the luxury of adding clickable text and images where necessary to guide users through your information. This powerful ability comes with a measure of responsibility. You make the decisions that determine how users move through your site and process information. Readers browsing through magazines can flip to any page in any order they desire. You can replicate this nonlinear reading method on your Web site with links that let users move from page to page or section to section. With thoughtful hypertext writing, you can engage readers in a whole new way.

Many sites have separate columns of links and topics, but not enough sites provide links within the text. This is a powerful hypertext feature that is not used often enough. Weave links into your prose to offer a variety of paths. Avoid using the meaningless phrase "Click Here" as the hypertext link. Instead provide a helpful textual clue to the destination of the link.

Figure 2-33 shows a page from the Wikipedia Web site (www.wikipedia.org). Note how the hypertext links are worked directly into the text. When users click a link, they move to another page of information; from that page they can either go back or move to another page of information, and so on. The abundant hypertext links allow users to create a view of the site's information that is uniquely their own.

Provide plenty of links to let the user get around quickly. Use links to let the user return to the navigation section of your page, to a site map, or to the main page. Do not make the user scroll through lengthy columns. Provide links that let users jump down the page, return to the top of the page, or navigate a clear path back to higher levels of your content.

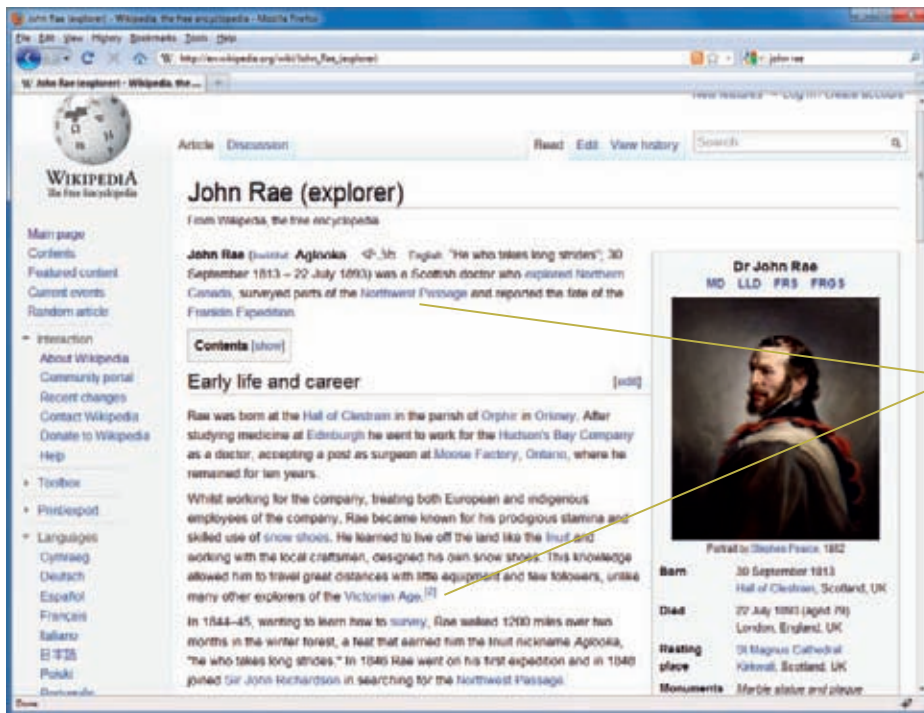


Figure 2-33 Abundant textual links

How Much Content Is Too Much?

You can crowd only so much information onto a Web page. Be conscious of the cognitive load of the user, who often thinks that Web pages hold too much information. CNBC's Web site (www.cnbc.com) in Figure 2-34 offers a dizzying array of content choices.



Figure 2-34 Vast array of choices

Resist the temptation to overload users with too much information. According to the *New York Times*, a study conducted by the University of California San Diego calculated that the average American consumes 34 gigabytes (GB) of content in a single day. That equals thousands of words, images, and multimedia cascading from a variety of sources, the most prominent being television and computers. Users quickly learn to screen out the “noise” of banner and animated ads, images, and blocks of undistinguishable text. To make your content stand out and have impact, carefully divide it into smaller sections and present it in a structured manner with lots of white space and meaningful navigation cues.

Reformat Content for Online Presentation

Although tempting, it often is a poor choice to take documents that are formatted for print and post them online without considering the destination medium. In most cases, a document that is perfectly legible on paper is hard to negotiate online. The text length, font, and content length do not transfer successfully to the computer screen. Figures 2-35 and 2-36 show the same section of text from Edgar Allen Poe's "The Tell-Tale Heart." Figure 2-35 is formatted as if it were a page from a book. The text is dense and fills the screen in large blocks, with no margins to relieve the reader's eye.

In contrast, Figure 2-36, from the Readprint Web site (www.readprint.com), shows text that has been designed for online display. The text width is short and easy to read without horizontal scrolling. The font is designed for online reading. The white space on the left creates a text column that enforces the vertical flow of the page. The differences between these two pages show that text must be prepared thoughtfully for online display.



Figure 2-35 Content formatted for print



Figure 2-36 Content formatted for the Web

Designing for Accessibility

Any large audience for a Web site includes users who want to access your content despite certain physical challenges. Designing for accessibility means developing Web pages that remain accessible despite any physical, sensory, and cognitive disabilities; work constraints; or technological barriers on the part of the user. As Tim Berners-Lee said, “The power of the Web is in its universality. Access by everyone, regardless of disability, is an essential aspect.” Most mainstream Web sites are so heavily image- and media-intensive that they are not suitable for adaptive devices such as screen readers, voice browsers, and Braille translators.

Many Web sites employ at least some accessibility features, while others are more aggressive about conforming to the standards set by the W3C, which maintains the Web Content Accessibility Guidelines (WCAG) recommendation. Many of these features can be helpful for any visitor to your site. For example, allowing the user to change the font size on a Web page (rather than using the

browser zoom tool) would possibly be used by people with a sight disability and people who have high-resolution monitors where the text appears much smaller. Offering more accessibility features makes your content available to a wider audience.

Building more accessible content does not mean that you have to forgo interesting Web designs. Many of the guidelines necessary for developing accessible content naturally lend themselves to creating good design. Common accessibility features can be unobtrusive additions to your site design. For example, the English in Chester site (Figures 2-37 and 2-38) includes the following among its accessibility features:

- *Optional navigation links*—Lets users with screen readers skip repetitive navigation links and jump directly to the page content
- *High-contrast version*—Lets users switch to a legible alternate page version to make text easier to read
- *User-controlled font size*—Lets users adjust the font size for optimal legibility
- *Access keys*—Let users access sections of the site with keystrokes, which are listed on the Accessibility page.

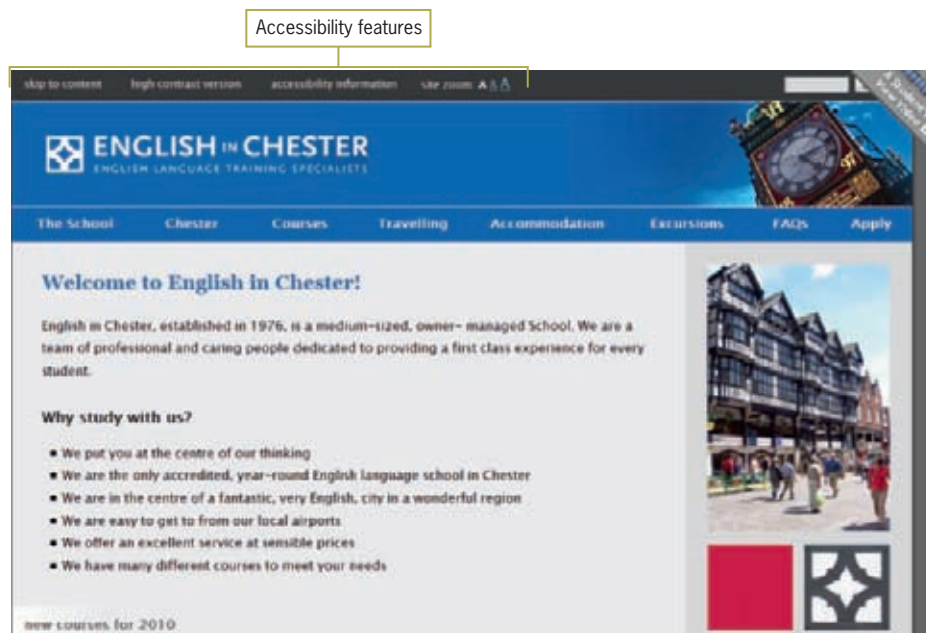


Figure 2-37 English in Chester Web site accessibility features

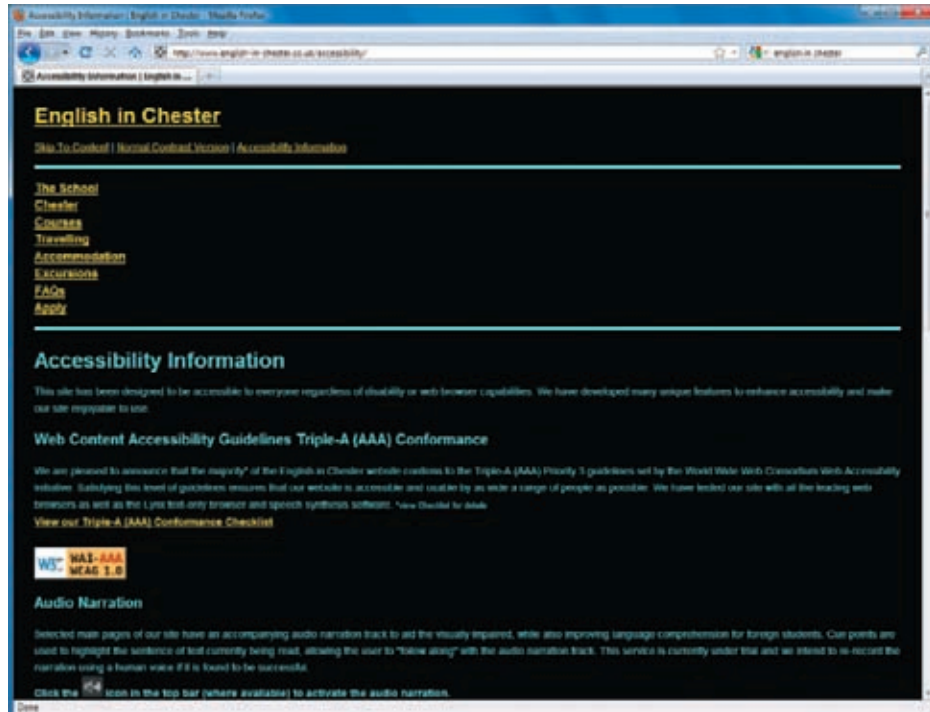


Figure 2-38 English in Chester Web site high-contrast version



To find out more about the W3C's Web Accessibility Initiative, go to www.w3.org/WAI/. The site includes

many guidelines and standards to build accessible Web content and explains the release of WCAG 2.0 in detail. You can learn more about the adaptive devices and assistive technologies for accessible browsing at www.w3.org/WAI/References/Browsing. Finally, you can read the Section 508 guidelines at www.section508.gov.

Two current sets of accessibility guidelines are available to Web designers. The W3C's Web Accessibility Initiative publishes the WCAG 2.0. The U.S. government has its own set of guidelines, which are part of the Rehabilitation Act Amendments of 1998 called Section 508. The law requires federal agencies to provide information technology that is accessible to federal employees and citizens who have disabilities. Both sets of guidelines help you create more accessible Web content, so which should you use? If you are designing a Web site for the federal government, you must follow the 508 guidelines, but for general public Web sites, the W3C guidelines will suffice. The next section examines the WCAG 2.0 guidelines.

WCAG 2.0 Guidelines

WCAG 2.0 consists of four main guidelines, which state that Web content must be:

- *Perceivable*—Information and user interface components must be perceivable by users.
- *Operable*—User interface components must be operable by users.

- *Understandable*—Information about the user interface and its operation must be understandable by users.
- *Robust*—Content must be robust enough to be interpreted reliably by a wide variety of user agents, including assistive technologies.

A number of tips, summarized in the following sections, help define the goal of each guideline.



To find a quick reference guide to the new WCAG 2.0, see www.w3.org/WAI/WCAG20/quickref.

Perceivable Content

WCAG 2.0 includes the following tips to help you provide perceivable content in your Web pages:

- Provide text alternatives for any nontext content so that it can be changed into other forms people need, such as large print, Braille, speech, symbols, or simpler language.

This guideline ensures that all nontext content is available as electronic text. For example, use the alt attribute to describe the function of each visual element. You will learn about using the alt attribute in Chapter 8.

- Provide synchronized alternatives for multimedia.

This guideline ensures that users can access multimedia content. For example, provide captioning and transcripts of audio and descriptions of video as alternatives to the multimedia content.

- Create content that can be presented in different ways (for example, spoken aloud, in a simpler layout, and so on) without losing information or structure.

This guideline ensures that information is available in a form that all users can perceive. For example, the best way to meet this guideline is to build well-structured content with separate presentation information (as you learned in Chapter 1). This practice ensures that the structure and relationship of the content does not change, no matter what assistive device or software the user chooses.

- Make it easier for people with disabilities to see and hear content, including separating foreground from background.

This guideline ensures that the default presentation is as usable as possible to people with disabilities, making it easier for users to separate foreground information from the background. This basic tenet of Web design, often ignored, is to make sure that

information presented on top of a background contrasts sufficiently with the background. You will learn more about this principle in Chapter 8. This guideline also applies to spoken text, so that background sounds do not interfere with understanding the spoken text.

Operable Content

WCAG 2.0 includes the following tips to help you provide operable content in your Web pages:

- Make all functionality available from a keyboard.

You should ensure that all actions that can be performed with a mouse or other input device can also be performed with a keyboard.

- Provide users who have disabilities enough time to read and use content.

Many users with disabilities take longer to complete tasks than the average user. For example, some text scrolls animate text across the page faster than users with disabilities can read the text. This guideline ensures that these users can complete tasks within their comfort zone.

- Do not create content that is known to cause seizures.

Some users with seizure disorders can have a seizure triggered by flashing visual content. The purpose of this guideline is to avoid content that flashes or blinks quickly enough to cause a seizure—for example, the deprecated `<blink>` element that causes text to flash on and off.

- Provide ways to help users with disabilities navigate, find content, and determine where they are.

This guideline ensures that users can find the content they need and keep track of their location, as you read previously in the “Plan for Clear Presentation of Your Information” section in this chapter. This is a sound and essential design principle when planning for the general public as well as for users who have disabilities.

Understandable Content

WCAG 2.0 includes the following tips to help you provide understandable content in your Web pages:

- Make text content readable and understandable.

This guideline ensures the greatest legibility and readability of text. Many characteristics of this guideline are simple, sound design techniques that you will read about in Chapter 7. These techniques include limiting the line length of text, providing appropriate white space, and avoiding large chunks of italic text.

- Make Web pages appear and operate in predictable ways.

The purpose of this guideline is to help users with disabilities by presenting content and navigation options in a predictable order from Web page to Web page, as you learned in the “Create a Unified Site Design” section earlier in this chapter. Users who employ screen magnifiers see only part of the screen at one time. A consistent page layout makes it easier for them to find navigation bars and other repeated components. Placing page elements in the same relative order within a Web site allows users with reading disabilities to focus on the desired area of the screen, rather than spending additional time looking for what they want.

- Help users avoid and correct mistakes that do occur.

This guideline ensures that users can detect when they have made an error—for example, when entering data into a form. Typical error indicators, such as color-coded text or an icon, may not be enough to alert the user. Additional indicators such as sound or highlighted text can aid the user in identifying incorrect entries.

Robust Content

WCAG 2.0 includes the following tips to help you provide robust content in your Web pages:

- Maximize compatibility with current and future user agents, including assistive technologies.

This guideline ensures compatibility with current and future browsers, especially assistive technology browsers. To meet this guideline, use standards-compliant markup and validated code, as described in Chapter 1. Present content in standard ways that assistive technology software can recognize and with which it can interact.



You can verify that physically challenged people can access your Web pages easily by using www.section508.info.

Chapter Summary

Web sites have a wide variety of looks. It is easy to see why so many Web designers get caught up in the medium and forget their message. The lure of technology makes it easy to overlook that you are still trying to communicate with words and pictures, just as humans have for centuries. Adapting those elements to online display for effective communication is the challenge.

Plan a site that stands out and delivers its message. If you stick with the principles you learned in this chapter, you can present information that is both accessible and engaging.

- Craft an appropriate look and feel, and stick with it throughout your site. Test and revise your interface by paying close attention to the demands of online display.
- Make your design portable by testing it in a variety of browsers, operating systems, computing platforms, and connection speeds.
- Plan for easy access to your information. Provide logical navigation tools, and do not make users click through more than two or three pages before they reach the information they are seeking.
- Design a unified look for your site. Strive for smooth transitions from one page to the next. Create templates for your grid structure, and apply them consistently.
- Use active white space as an integral part of your design. Use text, color, and object placement to guide the user's eye.
- Know your audience, and design pages that suit their needs, interests, and viewing preferences.
- Leverage the power of hypertext linking. Provide enough links for users to create their own paths through your information.
- Design your text for online display, considering the differences between formatting for the screen and formatting for the printed page.
- Choose the suite of browsers and operating systems you will use to test your site. Although you will include the latest versions of Firefox, Safari, Opera, Internet Explorer, and Google Chrome, consider testing in older versions of each browser as well.

- Decide how browser specific your site will be. In most cases, your goal is to create a site that is widely accessible to multiple browsers. However, if you have a narrow audience or specific requirements, you may want to specify one browser as the primary method for viewing your site.
- Resolve to test your work continually as you build your site. Test with multiple browsers at different screen resolutions and at different connection speeds. If you can, view your site on multiple platforms such as Windows, Macintosh, and UNIX.
- Remember to build in accessibility from the beginning of your design efforts to make sure your content is available to everyone.

Key Terms

active white space—White space used deliberately as an integral part of your design that provides structure and separates content.

cache—The browser's temporary storage area for Web pages and images.

fixed-width page layout—A Web page layout that allows the designer to control the look of the Web pages as if it were a printed page, with consistent width and height.

flexible page layout—A Web page layout designed to adapt to different screen resolutions. Also called fluid layout.

grid—A layout device that organizes the Web page, providing visual consistency.

look and feel—The interface that the user must navigate on a Web site.

Media Queries—CSS statements that let you specify different style rules for different media destinations. For example, an HTML document could be displayed with different fonts for print or screen.

passive white space—The blank area that borders the screen or is the result of mismatched shapes in a layout.

screen resolution—The width and height of the computer screen in pixels.

Review Questions

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1. Make a list of human factors to consider when building a Web site.
2. Make a list of technical factors to consider when building a Web site.
3. What design guidelines will you follow to ensure compatibility?
4. How does browser caching affect Web design?
5. How do multiple screen resolutions affect Web design?
6. Name three ways to create a unified look for your site.
7. Describe two methods of designing for multiple screen resolutions. Note the advantages and disadvantages of each method.
8. How does a grid layout enhance Web design?
9. Explain active versus passive white space.
10. List three ways to create a smooth transition between pages of a Web site.
11. List two benefits of consistently placing navigation tools.
12. Describe the difference between reading and scanning a page.
13. Describe three Web page viewing patterns
14. Name three ways to focus a user's attention.
15. Describe why using "Click Here" as link text is ineffective.
16. Describe the benefits of textual links.
17. Name three differences between paper-based and screen-based design.

18. Describe a good strategy to format text for online display.
19. Describe the four main guidelines in the WCAG 2.0 for designing accessible Web sites.

Hands-On Projects

101

1. Browse the Web for examples of Web sites that exhibit good Web design.
 - a. Using a screen-capture program, such as the snipping tool in Windows 7.0, capture Web pages from the Web site that show two levels of information. For example, capture the main page of a Web site and a secondary page. Describe how the layouts for the two pages suit their information types and the needs of their users.
 - b. Use the graphic tools in a word-processing program or presentation program to include screen callouts with the Web page images you capture. The callouts should indicate the unifying characteristics of the pages, such as shared colors, fonts, graphics, and page layout. (A callout is an arrow or line that connects to explanatory text. Many figures in this book have callouts, including Figure 2-2.) For example, Microsoft Word includes a callout tool in its collection of shapes.
 - c. Indicate the areas of active white space and passive white space.
 - d. Describe whether the design of the site is appropriate for the content.
2. Browse the Web for examples of poor Web design on mainstream Web sites.
 - a. Using a screen-capture program, capture Web pages from the Web site that show two levels of information. For example, capture the main page of a Web site and a secondary page.
 - b. Indicate with screen callouts the jarring or distracting inconsistencies of the site, such as abrupt changes in any design elements, including theme and layout.
 - c. List detailed recommendations for improving the site design.

3. Write a short essay critiquing a Web site's design. Describe the structural layout of the site and determine whether information is presented clearly and is easily accessible.
4. Browse the Web for sites that use unique navigation methods. Write a short essay describing why the method is or is not successful, or prepare a short slide presentation that you can present to your class.
5. Find a Web site that you think needs improvements in its design.
 - a. Print two pages from the site.
 - b. Make copies of the originals, and set the originals aside.
 - c. Using scissors, cut out the main elements of each page. Rearrange the elements and paste them in a design you believe improves the site.
 - d. Compare and contrast the original with your improved design.
6. Test cross-browser compatibility.
 - a. Make sure you have recent versions of at least two current browsers installed on your computer. (See "Hands-on Project 1" in Chapter 1 if you need to download and install a browser.)
 - b. Browse a variety of Web sites. Make sure to view various pages of the sites in the different browsers.
 - c. Write a detailed description of how the various sites appear in the browsers you have chosen. Look for text, layout, and graphic inconsistencies.
7. Test accessibility software. Download a trial version of one of the following screen-reading programs. Navigate to different Web sites, and use the tool to read the site. Close your eyes while listening. Write a short essay describing your experience.
 - Jaws at www.freedomscientific.com/downloads/jaws/jaws-downloads.asp
 - Window Eyes at www.gwmicro.com/Window-Eyes/Demo

Individual Case Project

Visualize the page design for your site by sketching a number of page layouts for different information levels of the site. Figure 2-39 shows a sample page sketch. For example, sketch the main page, a secondary page, and a content page. You do not have to be concerned with the exact look of the elements, but be prepared to indicate the main components of the pages, such as headings, navigation cues, link sets, text areas, and so on.

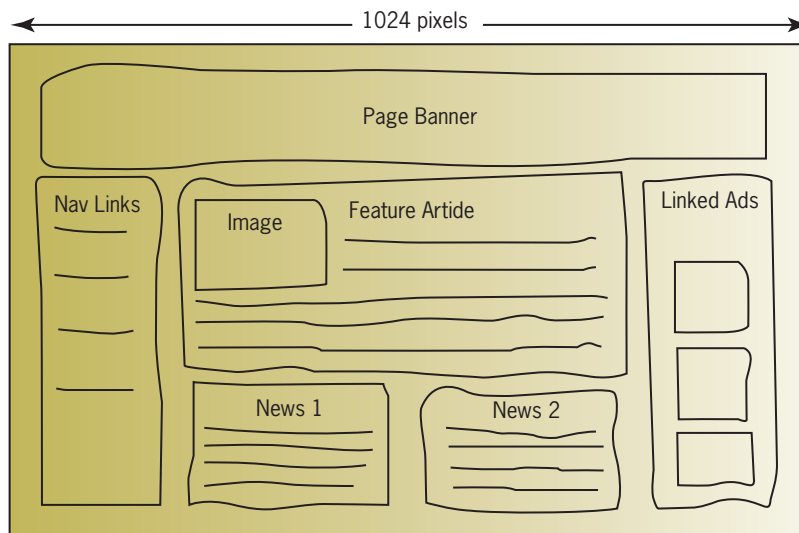


Figure 2-39 Sample page layout sketch

Start to organize your site. Create a visual diagram that indicates the main page, section pages, content pages, and so on. Indicate the links between the pages. Indicate whether you will provide alternate navigation choices such as a table of contents and site map.

Team Case Project

Work individually to create your view of the page designs for your site. Sketch a number of page layouts for different information levels of the site. For example, sketch the main page, a secondary page, and a content page, similar to the example shown in Figure 2-39. You do not have to be concerned with the exact look of the elements, but be prepared to indicate the main components

of the pages, such as headings, navigation cues, link sets, text areas, and so on.

Next, meet and work as a team to create the team's page layouts by combining the best ideas from the individual page designs. Organize your site. Create visual diagrams that indicate the main page, section pages, content pages, and so on. Indicate the links between the pages. Indicate whether you will provide alternate navigation choices such as a table of contents and site map.