

Concepts of Interface Design for Web-Based Delivery

Instructor

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Overview and Objectives

Workshop Overview

This one-hour session includes an introduction to the key concepts of interface design for web-based delivery. It covers design considerations, web-specific limitations and capabilities, storyboarding, mockup creation and simple pre-production testing methods. Participants will create a storyboard and/or a paper prototype for a sample web site.

Workshop Objectives

After completing this workshop, you will be able to:

1. Plan an effective educational web site; and
2. Identify and eliminate problem areas of your web site.

In addition, this handout contains information about:

1. Evaluating an educational web site based on a set of criteria including content, navigation, appearance, and reliability; and
2. Evaluating your own web site based on the above criteria.

Please see the following web page for links related to the workshop:

<http://www.pixeldust.com/rachel/bestweb.html>

Concepts of Interface Design for the Web

You'd like to build your own website - but where should you start? Follow the guidelines below to plan your site carefully, select the best materials, and present your pages as professionally as you can. When you have finished, your site will be a polished set of pages that obviously work together, rather than a random collection.

Planning the Site

Taking a little time to plan your website even before you create any of the pages will help make the site easy to navigate.

1. Decide what the site is about and divide the content into pages.

When creating web sites, just as with almost every new thing you try, you should start with what you know. And what you know is your subject area - the *content* of your web site. What would you like to present on the web? One course? All your courses? Specialized information about your favorite hobby? Whatever it is, collect the information in a way that makes sense to you. Perhaps you have all your documents printed out, or perhaps you have scraps of paper with document titles on them. You may have placeholders for information you have not yet written.

Once the information is before you, begin dividing it into categories. A website with more than one page usually has an entry page, which often has a menu of sub-page choices. The entry page may also contain information about new additions to the site, or information

that is frequently requested (a professor's office hours, basic facts about or an overview of the subject of the web site, or location and phone numbers of a department, for example).

Divide the rest of the content into sections. Chances are, your site will not consist of one entry page and one long page containing everything else. Come up with categories and divide your information into them: friends, family, pets, work (for a personal site); syllabus, course assignments, links to web resources, student work (for a course web site); services, required forms, staff, events (for a departmental site). Your categories may differ from these, and you may have more or fewer than those listed.

Once you have your content divided into sections, you're ready for the next step.

2. Map out the site.

There are several ways you can make a map of your site. One method is to use a large sheet of paper, and represent each page with a rectangle or oval. Write the category/section title in the rectangle. Work in levels -- the entry page is on the top level, the sub-pages are on the second level, and any pages that relate specifically to the sub-pages are on a third level. For instance, "Friends" might have a sub-level with a page for each friend.

Another way is simply to write the names of the categories on different lines of notebook paper. List sub-pages under each category. A third way is to use a pad of small sticky notes, writing the title of each page on one note, and stick them to a wall, door, or large sheet of paper. These can be repositioned as you work through your ideas. Use any method that makes sense to you.

Occasionally you may have information that could either be split into many little pages, or left on one long page with links to the various parts of the page (descriptions of courses, for example). When deciding which method to use, consider the length of each section. If most of the sections would fill one screen or more, you may wish to split them into independent pages. If each section is only a few lines long, perhaps one long page would be less work for you and less clicking for your viewers. If the content is a set of instructions that viewers may wish to print out, perhaps leaving them on one page would be better, since one page is easier to print than many.

Once you have mapped out each page in your site, you are ready for the next step.

3. Decide how to get around the site (navigation).

Use the map you have drawn, or the arrangement of sticky notes, or whatever diagram you have. Consider which pages should link to which other pages. Don't stack your information too deeply -- be kind to your viewers, and don't make them click too many times.

It's a good idea to offer lateral movement as well as up and down -- that is, your sub-pages should link back to the home page, but they should also link to each other, so that viewers don't have to go back to the home page to view another sub-page. If it is not appropriate for sub-pages to link together, you may certainly omit this. For instance, if you have two courses linked from your home page, and one is for undergraduates only and the other is for graduate students only, your students will probably not need to move from one to the other very often. In this case it is acceptable to link only back to the home page - from which point your students can link to the other course if they wish to see it.

On your map or diagram, add arrows to indicate which pages link to which other pages. You may wish to use a red pen to make the links stand out. Once you have drawn in the links, you will have an idea of how many links there are per page. If you have only a few pages in your site, you could consider adding a button for each link. However, if you have many links on each page, buttons could quickly clutter up the screen.

Consider how you want your viewers to navigate your site. A banner across the top of the page? A strip down one side? Simple text-based links at the bottom? A neat row of buttons? Choose a format that will fit on your page, and that you are capable of creating. If you hate graphics programs, perhaps text buttons will suit your pages best.

4. Plan your page layouts carefully.

At this point, focus on the layout of individual pages in your site. Generally, pages that work as a set should have similar layouts. The easiest layout to use is to align everything to the left side of the screen and work from top to bottom. However, this layout can also be exceptionally boring. You may find that a layout like this also wastes space on the right side of the screen which could otherwise be filled with information.

A good way to get interesting layouts when you are first starting out is to copy them from other people's pages. Simply use the "View -- Document Source" menu item in Netscape to download a copy of the HTML file for any page you like, and substitute your own graphics and text.

Almost the only way to get interesting layouts that use both the left and the right sides of the screen is to use tables. Keep in mind that not all browsers can display tables -- if your audience is primarily users of such a browser, consider staying away from tables. However, if most of your audience will be using a browser that can display tables, you can use tables and add tags that make your display readable to those who can't see the tables. For more information on using tables in your layouts, please visit this web page and download the appropriate handout(s):

<http://www.pixeldust.com/rachel/handouts.html>

Selecting Materials

One of the best things you can do for the quality of your web site is to select appropriate materials at the very beginning.

Consider your intended audience. Who are your primary users? Students? Colleagues? What kind of computers are they likely to have? What web browsers are they likely to use? Sometimes, it is not possible to know the answers to these questions, and you must make your best guess. Try to plan for the lowest common denominator. If you are not sure, plan for a small screen (640 x 480 resolution), 256 colors, and a version 2.0 - 3.0 web browser. This means you should include materials that can be viewed on small screens, that don't need millions of colors to look good, and that don't require the latest browser capabilities.

Decide what to include on-line. There are some materials that do not work well online. Long text documents, for instance, are notoriously difficult to read on-screen. If you wish to include a very long (15+ pages) document, consider making it available as a downloadable file, perhaps as a PDF file, as well as in web page format. If you have a collection of images, try to present them in a way that is user-friendly. Consider providing

an index with text descriptions and perhaps small thumbnails that link to the originals, rather than one long page with many large graphics on it.

Find out if there are copyright restrictions on your materials. If you are using materials that are not your creations, you will need to obtain written permission to publish them on your site from the copyright holder(s), unless the materials are in the public domain. Your site is not covered under fair use unless you password-protect it and give the password(s) only to students registered in your class. Even that should not be taken as allowing you free rein with materials belonging to other people – you may never reproduce entire copyrighted texts, images, video or audio works, or any other materials that are copyrighted. Be aware of copyright law and how it affects you and your web site.

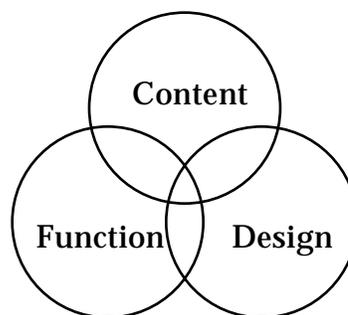
Presentation Tips

A balanced web site will have a mixture of three elements: content, function, and design. An explanation of each of these elements follows, along with guidelines to keep in mind as you design your pages.

Content, Function and Design

Content, function and design should work together in a web site. In some cases, one or another of these pieces may be emphasized, but the best sites blend elements of each.

It's possible to have a site that is well-designed with very little content; a site which has wonderful content and beautiful design but is not functional; or a site that is very functional and beautifully designed, with no content whatsoever. Aim for a balance of all three if you can.



Content, Function & Design

Content: What's the page about?

Do you have something interesting to say? Do you have special knowledge of a subject area? What is your web page about? It's possible for different pages of a site to be about different topics, but all should relate in some way -- even if it's just that you're the author and all the topics are of interest to you.

Ask yourself these questions when you review a web page for content -- whether it's your page or someone else's: Is the content accurate? Is the content readable? Is it presented in a logical way -- does the flow make sense? Does the author seem knowledgeable and interested?

Function: How easy is it to use?

Even if your pages are filled with the most interesting, best-worded, most accurate content in the world, if viewers can't find what they're looking for, they won't read your pages. When considering the functionality of any web site, ask yourself these questions: How easy is it to navigate around the site? Are the page headers clear? Do they indicate the content that will be found on the page? If there are buttons on the page, is it clear what they do? Are there obvious tools for navigating the site? Does everything do what you think it will?

While some surprises are fun and can spice up your page, the basic elements must be clear or people will become confused and frustrated.

When considering navigation, remember that people do not generally like to sift through endless layers of menus to find information. Keep your pages organized, and keep the important information as close to the top level as possible. See below for more tips on organizing your pages.

Design: How does it look?

To some people, design is the most important part of a web page. To others, however, it is the least. While you do not have to be an artist or designer to have a good web site, clever use of graphics and careful layout can be an asset to your site.

Even if your site has no graphics, pay attention to the layout of your pages. The easiest -- and most boring -- page to create is simply text, perhaps with a header or two, on a gray background, all lined up on the left margin. However, with very little effort, you can make your pages more interesting, more individual, and more attractive.

Guidelines

There are a few guidelines you can follow to help your page look interesting and well-planned. Even if you aren't a designer, you can make choices that lead to good design on your page. Remember, there's a lot of stuff out there on the web. Make your pages stand out for their attractiveness and ease of use.

Here are some *general guidelines* to follow:

- Always give viewers a path back to your home page.
- Keep your images under 500 pixels wide. For a header or banner, 500 should be a maximum. For buttons and bullets, think 64 pixels to a side for square buttons maximum, and 20 pixels to a side for bullets, maximum.
- Use ALT, HEIGHT, and WIDTH attributes in your image tags. Use the LOW attribute when you have large images.
- If you are creating your own graphics, choose a palette of five to seven colors, and stick to it. It's amazing how much better a design looks when the palette is limited.
- Always give viewers a path back to your home page.
- Label your buttons with text and/or with icons that clearly indicate what the button should do. Users do not like to have to guess what a button will do.
- Use all parts of the screen -- not just the left side. Since HTML is set up in such a way as to make this difficult to do, you may need to be sneaky with your graphics or layout. Check the section *Design and Layout Tips*, below, for help on sneaky layouts.
- Blend graphics and text where you can, instead of filling a page with one or the other.
- Vary your layouts from level to level. This variation keeps your site from looking all the same all the time, and can also serve as a visual cue to let people know which level they are on. Keep the look consistent within sections -- if you have several assignments pages, for instance, they should look similar.
- Always give viewers a path back to your home page.

- Be careful not to bury important information under layers of pages with little or no content. Think about how your viewers will use your site, and make it easy for them to find the information they require or desire.
- Do not depend only on graphics to convey your meaning. Some people browse the web with graphics turned off, and others use browsers that cannot display graphics. Be sure to include alternate text with graphical headers, buttons, and instructions.

Design and Layout Tips

Although HTML was not designed for page layout, there are a few things you can do to force the layout you want. One way is to use tables, as mentioned above. Three other ways are to use creative backgrounds, invisible images, and/or nonbreaking spaces to force white space.

Creative Backgrounds

If you would like a certain image to appear on all of your pages, and always in the same place, consider making a special background that includes this image. For instance, on most of the pages in my website (see URL in footer), There is an image, usually a word, along the left margin of the screen. This image is part of the background.

To create such an image, simply make a large white (or background color of your choice) graphic. Add the image that you want along the left, or top if you prefer. Keep in mind that your background must be very large, or it will tile and your design will appear twice or more. (To view the background of a web page, choose “View -- Document Info” and click on the name of the background image. A miniature picture of it will appear in the lower window.)

Once you have created this image, simply specify that it is your background image, and then make sure the text of your page doesn’t overlap the image. One way to prevent this is to align all your text to the right, and place your image on the left. If that is not an option, perhaps you can use an “invisible image” to force white space in your page.

Invisible Images

One way to force white space in HTML is by using invisible images. An invisible image is simply a rectangle or square that is completely white, and set so that white is the transparent color in the image.

It is possible with some browsers to stretch an image to any width and height. Therefore, you could have one single transparent image that was 30 pixels by 30 pixels (for example), and stretch it to be any width and height you need to force other page elements over or down. The workaround for browsers that do not support stretching images is to create several transparent images, each in the exact size you require.

Simply place the image in a table cell or in your HTML as you would any other image. It will appear as empty space -- if you have an image in the background, it will show through. Your layouts can be made more complex by using this trick.

Nonbreaking Spaces

Another way to force white space is to use nonbreaking spaces. If you want to stack several paragraph tags in a row, you can use nonbreaking spaces to add something which is invisible but which will keep the browser from “collapsing” the paragraph tags, which is the default behavior for many browsers.

To use a nonbreaking space, just insert its ASCII code: ` `;

`<P><P><P>` = one blank line

`<P> <P> <P> ` = three blank lines

`<TD></TD>` = collapsed table cell

`<TD> </TD>` = a cell which will not collapse

Nonbreaking spaces can be used to force horizontal white space, too, although they aren’t as good at that as invisible images are. If you want to keep a table cell from collapsing (default behavior for empty cells in some versions of Netscape), simply put a nonbreaking space in the cell.

Streamlining Your Pages

If you are creating images for your pages, there are some things you can do to make your pages load faster (or seem to load faster).

- Use tiny graphics (tiny as far as file size, not necessarily actual dimensions). If your images are mostly one color or only a few colors, save as GIF. If you’re using photographs, crop out anything you don’t need and save as JPEG (JPG).
- Try the PhotoGIF and ProJPEG plug-ins for Adobe Photoshop. These plug-ins are made by Boxtop Software. They can dramatically lower your file sizes without compromising quality. You can obtain the plug-ins over the web. There is a low shareware fee for these plug-ins.
- Use attributes of the **IMG** tag which help your page to draw faster. The **WIDTH** and **HEIGHT** attributes of the **IMG** tag will let the browser know how much space to leave for your images, allowing the text on your page to show up right away. Your viewers can read the text while waiting for the images to load. The width and height values are given in pixels.

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- Use image tables instead of imagemaps. Imagemaps (server-side) require an extra round of communication from the server to the client, which slows down response time. Tables can work just like links, allowing for instant response. If you must use imagemaps, try using client-side imagemaps, which download information to the client ahead of time so it is available more quickly.
- If you must use an imagemap or other large graphic, use the **LOW** attribute of the **IMG** tag to specify a low-resolution image which can load first, giving your viewers an idea of what will appear when the real image finally loads.

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- Reuse elements from one page to another whenever possible. If you use tablemaps instead of imagemaps, you can often reuse images in each table, swapping out only the one that changes depending on the page being viewed (the button for the current page can be “grayed-out” or otherwise made to look inactive).
- Think about overall design issues. Don’t use graphics where text will work just as well. Try a mono- or duotone image instead of a full color one for a simple yet elegant look and a small file size. Your graphics will load faster.
Remember, the web is not a magazine! Don’t expect people to wait while your full-screen graphic loads, no matter how great it looks. Warn viewers when a link will take them to a large file that may be slow-loading, and give them an in-line thumbnail of the image beforehand.

Site Reviews

The following section contains definitions of three categories of web sites, as well as a set of criteria for evaluating educational websites. A list of websites is also provided, with a review of each site included.

Please see the following web page for a linked list of the reviewed sites:

<http://www.pixeldust.com/rachel/bestweb.html>

Types of Sites

The reviewed sites are divided into three types: compilations/collections, single-subject sites, and simulations/tools/resources. Some sites overlap categories, or fall into more than one, so some of the categorizing is arbitrary.

Compilations/Collections

Instead of presenting detailed information, this type of site usually contains many links to other resources. Some compilations link only to resources housed on-site (on the same machine or set of machines that the index resides on; under the control of the same person or persons). Others link to resources off-site, all over the web, maintained by many different people.

Good compilations that include on-site resources are usually well-maintained, since the same people who make the index also create, add, and/or update the resources themselves. Collections that link to off-site resources can also be well-maintained, but there is a greater chance that links will be out of date or unavailable, since lists like these are often made without the explicit cooperation of the resource owners. If a resource is moved or changed, it is up to the person who maintains the index to find out about it and update the index. This does not always occur in a timely fashion.

Ratings below are for the indexing site only unless otherwise noted. If a collection links to outside sources, it is very likely that the quality of the sources will vary widely. If a collection links only to internal resources, it is possible that the quality of the resources will match the quality of the collection.

Single-Subject Sites

A single-subject site is more likely to cover a topic in depth. Links to other sites may also be provided, but the site itself will contain information. A good site will have accurate, detailed information and be easy to navigate. Some of the sites we will look at are purely informative; others contain interactive learning exercises.

Simulations/Tools/Resources

Simulations are software applications that allow the user to experiment, control or otherwise act in a situation that is *simulated* by a computer program. Tools and resources,

in this instance, are sites that give access to specialized information or web-ready materials that may be of use to an educator.

The Examples

Let's review some of the better educational websites available. I have chosen a few to look at - by no means a comprehensive selection. Each site will be reviewed in the following format:

Educational Web Site Review Form

Site Name:

Location:

Type:

Content	Navigation	Appearance	Reliability	Total
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Notes:

The examples are awarded points for each category, up to a total of five points per category, or a possible 20 points total for the site. The categories are defined as follows:

Content Content refers to the material presented in the site. Is the information accurate? Is it reasonably complete?

Navigation Navigation refers to the way a viewer gets around a web site. Can one find information easily? Are the links, buttons, etc clearly marked? Does the interface make sense? Do the controls perform in the way you would expect?

Appearance Appearance includes the graphics used in the site, the overall site layout and individual page layouts, and general aesthetic impressions. Is the text easy to read? Is the site free of distracting elements that have no practical purpose?

Reliability Reliability refers to the upkeep of the site. Is the information current? Do the links work, both internal (to other pages on this site) and external (to other sites)?

Thus, each site can receive a score from 0 to 20, depending on the strength or weakness of each category. The sites below have been ordered from highest rating to lowest; duplicate ratings are not in any particular order.

Site Name: Berkeley SUNSite

Location: <http://sunsite.berkeley.edu>

Type: Compilation/collection

Content	Navigation	Appearance	Reliability	Total
5	5	5	5	20

Notes:

This site, hosted at University of California, Berkeley, includes digital collections (text and image collections such as Aerial Photography, California Heritage, Jack London Collection, Literature@SUNSite, and the Online Medieval and Classical Library). The information here is reliable and presented in depth for use as a teaching resource. Navigation is simple: there are three primary ways to get around the site (search, fast access, and exploration). The graphics are minimal and polished, and they always complement the text. The site is updated regularly and the collections are well-maintained.

Site Name: The History of Education Site

Location: <http://www.socsci.kun.nl/ped/whp/histeduc/>

Type: Compilation/collection

Content	Navigation	Appearance	Reliability	Total
5	5	5	5	20

Notes:

This beautiful site links to other resources about the history of education. Primary source material in the form of texts, photos, and illustrations are included. The layout and graphics are simple and stunning and the pages are easy to read and well-organized. A number of icons are employed to convey additional information about each link, such as the amount of information on the linked page, or the type of resource it is. The site is updated and maintained on a regular basis and has won several internet awards.

Site Name: Kite Aerial Photography

Location: http://www.ced.berkeley.edu/arch_faculty_cris/kap/kaptoc.html

Type: Single-subject

Content	Navigation	Appearance	Reliability	Total
5	5	5	5	20

Notes:

This site is devoted to a specific topic: kite aerial photography. It was created by an instructor at UC Berkeley whose hobby is kite aerial photography. He includes information on his kites and cameras, instructions and tips for this kind of photography, and an image gallery of his work. The graphics on the site are beautiful and understated, and the pages are easy to read. A navigation bar makes it easy to get around the site. He adds more information regularly.

Site Name: Argus Clearinghouse

Location: <http://www.clearinghouse.net/>

Type: Compilation/collection

Content	Navigation	Appearance	Reliability	Total
5	5	4	5	19

Notes:

The Argus Clearinghouse is a site devoted to reviewing and linking to other sites. The site is well-organized and very easy to navigate by searching for a topic of interest or by browsing topics from general (Arts & Humanities) to specific (Architecture, Dance, Cosutmes, etc). Resources are grouped into categories that make sense. Links to sites are checked periodically and the "last checked by Argus" date is clearly displayed. Each site is rated; criteria are listed on the site. There is a monthly "Librarian's Choice" award - the past picks section is an excellent source for top-notch web sites. Note that the Clearinghouse places more emphasis on content and navigation than on graphics or web site interface.

Site Name: Biomolecular Structures

Location: <http://www.bcbp.gu.se/~orjan/bmstruct/>

Type: Single-subject

Content	Navigation	Appearance	Reliability	Total
5	5	4	5	19

Notes:

This site is a series of interactive lessons on biomolecular structures. The site includes 3-D molecule viewing, which requires the Chime plug-in (help on finding this plug-in is provided). The site is well-organized, broken into lectures (the main part of the site), questions (an online quiz), and help (about the course and how to use the website). The site requires a version 3 or better browser with JavaScript enabled. While the pages are not breathtakingly attractive, they are functional, and the site uses frames effectively. The learner is guided gently through a series of well-ordered pages for each lesson. The lessons are updated periodically.

Site Name: Apple Educational Object Economy

Location: <http://trp.research.apple.com>

Type: Compilation/collection

Content	Navigation	Appearance	Reliability	Total
5	5	4	4	18

Notes:

Apple's EOE provides an online database of people, papers, resources, and educational Java applets. Resources are organized into topic areas and the site is searchable. The pages are attractive in layout and usually easy to read, although the text is small in places. Resources can be submitted by anyone, and links may not be checked regularly, so some links may be outdated. The collection is extensive and there is something available in every subject category. This site is a great source for finding applets to integrate into your courses.

Site Name: Virtual FlyLab

Location: <http://www.cdl.edu/FlyLab/>

Type: Simulation/tool/resource

Content	Navigation	Appearance	Reliability	Total
5	4	3	5	17

Notes:

This site is not very attractive, but its power is in the simulation: students can design and cross two fruit flies, then analyze the cross based on the offspring produced. The graphics within the simulation (the fruit flies) are excellent for the purpose. The site graphics (header, buttons, etc) are large and unwieldy. The simulation uses real data from actual crosses to report results, and a built-in "checker" helps students with their hypotheses. (This site is being redesigned into an applet, rather than several long pages.)

Site Name: Science and Technology in the Making

Location: <http://sloan.stanford.edu>

Type: Compilation/collection

Content	Navigation	Appearance	Reliability	Total
4	4	5	4	17

Notes:

This site links to five sites investigating and documenting recent/contemporary events in science and technology. The five sites were funded by a single grant, and the main site contains overview information about the project and links to those sites. Each of the five subsites contains information about a recent or contemporary event or invention in the form of primary source material, and each site invites visitors who have experience with the topic to add to an archive of history in the making.

The information on the main itself is incomplete, and many pages are under construction. The layout and graphics are very attractive without being overwhelming, and it is easy to find your way around. The ratings above apply to the main site and the five sites below as if they were a single site.

MouseSite: This site presents text, video, and images related to the development of the computer mouse and asks for viewer response to each piece of source material. The site is incomplete at this time.

Electric Vehicle Archive: This site presents an opportunity for electric car owners, drivers, and enthusiasts to add to an online archive. It has a "history in the making" feel. The graphics, created to resemble highway signs, are amusing and appropriate to the theme.

Making PCR (Polymerase Chain Reaction): This site deals with creating PCR. Its main feature is an archive of visitor discussions which is still quite small. Navigation is not difficult but some of the links are outdated. Graphics and layout are interesting. The Foundational Papers section is substantial.

Blackout History Project: Devoted to the history of two major power failures in the New York metropolitan area (1965/1977), this site includes photographs, timelines, essays and debates, and other material regarding the blackouts. The site is easy to navigate and even includes a page describing how to make use of the navigational elements provided. Page layout and graphics are appealing and appropriate; the home

page is black, bringing home the point of the site effectively. Some pages are clearly still under construction and have been left blank with no explanation.

Boston Central Artery/Tunnel History: This site deals with the original plan, known as Scheme Z, to carry the new Central Artery Highway over the Charles River and connect it with existing roadways. On the site is a chapter detailing the history of Scheme Z, which was opposed by the public and eventually discarded. There is a forum for visitors to contribute opinions, memories, and other information relating to the event.

Site Name: Math Archives

Location: <http://archives.math.utk.edu/>

Type: Compilation/collection

Content	Navigation	Appearance	Reliability	Total
5	4	3	5	17

Notes:

The Math Archives is a collection of resources for mathematics, including links to online teaching materials, software vendors, and other information about teaching mathematics. Resources are divided into topic groups (Algebra, geometry, etc) and each resource is identified with keywords and symbols to indicate educational level and resource type (interactive web page, Java applet, images, links, etc). There is a search capability to help find specific topics. The pages are not very attractive, especially the symbols, but the site's usefulness is not impaired by its appearance.

Site Name: EvolveIT!

Location: <http://www.cdl.edu/EvolveIT/>

Type: Simulation/tool/resource

Content	Navigation	Appearance	Reliability	Total
5	4	4	4	17

Notes:

This applet allows students to experiment with two populations of finches on two imaginary islands in order to discover the effect of various parameters (both environmental and finch-related) on the species' evolution over time. The simulation itself is well done and has won several internet awards. The site uses frames badly, creating an unattractive and not altogether helpful setting for the applet. The buttons in the interface are occasionally confusing. (This simulation is being redesigned to remove the frames and to update the applet's interface.)

Site Name: Volcanoes

Location: <http://www.geo.mtu.edu/volcanoes/>

Type: Single-subject

Content	Navigation	Appearance	Reliability	Total
5	3	3	5	16

Notes:

Volcanoes includes current information about active volcanoes as well as information on the study of volcanology and historical information about volcanoes. There is even a section devoted to volcano humor. Source material includes photographs (satellite and ground-based), links to other sites (not all functional), maps, textual information, online journals, and java applets. Main categories are linked from the home page in a long list with no apparent ordering, but each category includes a brief description, which makes it easier to decide which category to investigate. The layout is not attractive - merely a long list of links and text with an occasional photo. Information is added/updated periodically.

Site Name: Surfing with the Bard

Location: <http://www.ulen.com/shakespeare/>

Type: Single-subject

Content	Navigation	Appearance	Reliability	Total
4	4	4	4	16

Notes:

This site is an online study guide for Shakespeare's works. It offers a student section, a teacher section, and a fun section with Shakespeare-related links. Some of the pages are blank and under construction, but the information that is available is detailed. It is prepared and maintained by a teacher. The graphics are lovely; at first glance they seem overwhelming, but considering the intended audience (students), they are not out of place. The whole site has a very friendly feel, and it is easy to find your way around the different sections. Updates are made when the teacher has time.

Site Name: Teaching with Electronic Technology

Location: <http://www.wam.umd.edu/~mlhall/teaching.html>

Content	Navigation	Appearance	Reliability	Total
5	4	1	5	15

Notes:

This site is a collection of links to resources for integrating technology into the classroom at many educational levels. Many of the links are outstanding resources, but the page is unattractive and even difficult to read in places due to poor color choice and extensive use of italics. Navigation is easy because all links are on one long page; they are separated by general topic, and each section contains links to jump to the other topics. Note that while this technique makes navigation easy, it contributes to the unattractiveness of the page. The page contains a link, hidden at the bottom, to More Teaching and Technology, a sister page maintained by the same person. This sister page is slightly better formatted but still has the color problems of the original. Both pages are updated regularly and kept current.

Site Name: Electronic Library

Location: <http://www.elibrary.com/>

Type: Simulation/tool/resource

Content	Navigation	Appearance	Reliability	Total
4	4	3	4	15

Notes:

The Electronic Library is a for-pay service providing electronic access to newspapers, magazines, books, etc. You can search for free on the home page, but you'll need a membership or a temporary login to access the results. If you do a lot of research, this tool might save you time. It is covered with advertising graphics, which are somewhat distracting.

Site Name: Global Campus

Location: <http://www.csulb.edu/gc/>

Type: Compilation/collection

Content	Navigation	Appearance	Reliability	Total
3	3	3	3	12

Notes:

The Global Campus is a collection of multimedia-based learning aids, including images, sounds, text, video, and interactive web pages. The site is divided into broad subject categories, each of which contains sub-categories which in turn contain links to the resources and to related informational web sites. A wide variety of sites are included, and there is a place for authors to contribute original material. The site includes a detailed index of resources, but there is no searching mechanism. Browsing through the subject areas is easy. The graphics are minimal and appealing, although the page layouts are uninteresting. There is no indication as to how often the site is updated or links are checked.

Add Your Reviews

Site Name:

Location:

Type:

Content	Navigation	Appearance	Reliability	Total
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Notes:

Site Name:

Location:

Type:

Content	Navigation	Appearance	Reliability	Total
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Content	Navigation	Appearance	Reliability	Total
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Notes:

Resources

Online Resources

Copyright Information

Fair Use of Copyrighted Works (CETUS)

<http://www.cetus.org/fairindex.html>

Copyright & Fair Use (Stanford)

<http://fairuse.stanford.edu/>

Copyright Law, Fair Use, and How to Obtain Copying Permission (Rensselaer Libraries)

<http://www.rpi.edu/dept/library/html/Policies/fairuse.html>

Copyright Law Materials (Cornell)

<http://www.law.cornell.edu/topics/copyright.html>

Copyright and Intellectual Property (SSU)

<http://libweb.sonoma.edu/Resources/copyright/>

Fair Use (Penn State Libraries)

<http://www.libraries.psu.edu/avs/fairuse/default.html>

The Copyright Website

<http://www.benedict.com>

Searching the Web

Collection of Specialized Search Engines

<http://www.search.com>

Strategies for Searching the Web

<http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/Strategies.html>

Choosing the Search Tools You Need

<http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/ToolsTables.html>

Instructional/Tutorial Sites for Educators

Teaching Critical Evaluation Skills for Web Resources

<http://www.science.widener.edu/~withers/webeval.htm>

Guide to MOOing for Educators

<http://www.pixeldust.com/rachel/moo.html>

Instructional Uses of the World Wide Web

<http://ltc.cit.cornell.edu/workshops/courseMaterials/WebIntro.html>

Global Campus

<http://www.csulb.edu/gc/index.html>

Sites with Links to Other Resources

Links to Resources for Using the Web in Teaching

<http://www.pixeldust.com/rachel/uwt.html>

Instructional Technology Connections

<http://www.cudenver.edu/~mryder/itcon.html>

Free Resources for Your Pages

Free Graphics Wonderland

<http://www.geocities.com/SiliconValley/Heights/1272/index.html>

Sample Lessons for Using the Internet in Your Classes

<http://dewey.esc1.tenet.edu/internet/guide.txt>

Online Books Site (digitized books you can link to under fair use)

<http://www.cs.cmu.edu/books.html>

Help with HTML, Web Style, and Site Development

Links to HTML Resources

http://www.pitt.edu/~hbjst/eng_html.htm

Links to HTML Support Pages

http://www.pitt.edu/~hbjst/eng_toc.htm

Guide to Web Style

<http://www.sun.com/styleguide/>

Yale Web Style Manual

<http://info.med.yale.edu/caim/manual/index.html>

Doctor HTML: How Sound is Your HTML?

<http://www2.imagiware.com/RxHTML/>

Usability Tests for Your Pages

<http://www.webreview.com/97/04/25/usability/index.html>

Web Tips

<http://www.caseyspm.com/needfulThings/wwwStuff/tips.html>

Style & Images on the Web

<http://ltc.cit.cornell.edu/workshops/courseMaterials/advstyle.html>

Help with Creating Your Pages

<http://www.ece.utexas.edu/lrc/lrc1/web/HTMLhelp.html>

Bibliography and Suggested Reading

Books Recommended by Workshop Leaders

Note: Some books are listed with two prices. The first is the price at <http://www.amazon.com>, an online bookstore. The second is the shelf price of the book at other bookstores, excluding promotions and discounts at those stores.

Blatner & Fraser. Real World Photoshop 4: Industrial Strength Production Techniques. Peachpit Press, 1997
...The Photoshop reference materials website gives the book a five star rating and states that this book is without peer for all users of *Photoshop* - \$39.95

Castro, Elizabeth. HTML for the World Wide Web, 2nd Edition. Peachpit Press, 1997
...a concise and comprehensive guidebook for creating webpages with HTML - \$17.95

Gilster, Paul. Digital Literacy. New York: John Wiley & Sons, 1997. (\$18.36/\$22.95)

Lai & Simsic. Photoshop 4 Type Magic 1. Hayden Books, 1997, 249 pages
... a book on creating beautiful typography effects with Photoshop for the Web. It includes a CD-ROM with stock images, Adobe plug-ins, and preset lighting effects - \$39.99

Langer, Maria. Claris Home Page Companion. Claris Press, 1997, 486 pages
... a complete manual for creating websites using Claris Home Page. Creating webpages with HTML code is not explained in this manual. It may be available for \$17.95 plus shipping (normally \$29.95) by calling Claris at 800-544-8554, extension 1450.

Lemay, Laura. Teach Yourself Web Publishing with HTML 3.2 in a Week. Sams.net Publishing, 1996, 582 pages
... a well written tutorial that carefully and fully explains how to develop both static and interactive websites with HTML - \$29.95

Monroy & Biedny. Adobe Photoshop: A Visual Guide for the Mac. Addison Wesley Publishing, 1996, 138 pages
...makes extensive use of color images and step-by-step instructions which makes understanding Photoshop effects easier than text-based books - \$34.95

Neiderst & Freedman. Designing for the Web: Getting Started in a New Medium. O'Reilly & Associates, 1996
...an outstanding beginners tutorial in using HTML and graphic design principles in the development of websites - \$24.95

Siegel, David. Creating Killer Web Sites. Hayden Books, 1996, 270 pages
...a book on designing more sophisticated webpages with HTML tricks and the use of excellent principles of design. This book is currently available on Amazon.com for \$24.95 (normally \$45.00).

Williams, Robin and Tollett, John. The Non-Designer's Web Book. Berkeley: Peachpit Press, 1997

...if you wish to purchase only one book that will provide any easy to read and understand guide to web publishing, this is it! Robin Williams is a well known author of well-written succinct books for beginning computer users. - \$29.95

Other Books on Web Design Available at amazon.com

The following books have not been reviewed by the workshop leaders.

Callihan, Steven E. Create Your First Web Page in a Weekend. Prima Publications, 1996. (\$26.99/\$29.99)

Dinucci, Darcy, et al. Elements of Web Design. Peachpit Press, 1996. (\$35.96/\$39.95)

Holzschlag, Molly E. Professional Web Design : Theory and Technique on the Cutting Edge. Prima Pub, 1996. (\$36/\$40)

McCanna, Laurie. Creating Great Web Graphics. Mis Press, 1996. (\$16.77/\$27.95)

Sachs, David and Henry H. Stair. Seven Keys to Effective Web Sites. Prentice Hall Books, 1996. (\$24.26/\$26.95)

Sagalyn, Raphael. The Great American Web Book: a Citizen's Guide to the Treasures of the US Government on the World Wide Web. Random House, 1996. (\$15.30/\$17)

Waters, Crystal. Web Concept & Design: a comprehensive guide to creating effective web sites. New Riders Publishing, 1996. (\$35.99/\$39.99)