

## Developing a Web Site

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### OBJECTIVES/RATIONALE

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The World Wide Web has become a phenomenon -- creating an explosion of information on the Internet. The student will design and develop a web site.

TEKS 121.3 1D, 2A, 2G, 14A, 14C

TAKS ELA 1, 3, 4, 6  
Mathematics 1,2

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### KEY POINTS

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- I. The following questions need to be answered when developing a Web site.
  - A. **"Who"**
    1. the Webmaster - the person/team/ committee who actually do the work on the site, before, during, and after its creation
    2. the "target audience" of the site.
  - B. **"What"**
    1. the content of the site-- **the** most important aspect of a site.
    2. If there is little or no content, even if a visitor accesses the site, there will be no return visits.
    3. Whatever is presented should be very current and very accurate--no dead links or outdated calendars!
    4. Including something unique would be a plus.
  - C. **"Where"** - the location of the host for the completed Web page--the local ISP, the school, the local college/university.
  - D. **"When"**
    1. the project "timeline". Most sites usually take months--and, occasionally, a couple of years--to get on-line. If a timeline is proposed, keep to it as closely as possible--set a definite target date.
    2. the "maintenance" part of the site setup--how often the site should be updated, especially links and calendars, for instance.
  - E. **"Why"** - the reason to establish the site
  - F. **"How"**
    1. the actual construction of the site--the planning, designing, coding, testing, promoting and, subsequently, maintaining the site--indefinitely.
    2. marketing plans and evaluations.
- II. Stages in Creating a Web Site
  - A. **Plan**
    1. Research; learn from what others have done from books, magazines, online tutorials, etc.
    2. Decide on a **purpose** for the site that everyone involved can agree on and write it up in a Mission Statement.
    3. Determine who will be working on the project--an individual or a group/team

4. Establish a hierarchy of authority--who has the final approval?
5. Develop a budget--cost limits can affect what can be done on a site.
6. Set up a time frame or time line with a final deadline--in weeks and/or months
7. Arrange a schedule of development meetings
8. Visit other Web sites on-line to get ideas and find out what you like or dislike
9. Brainstorm with other team members for content suggestions
10. Develop a content "wish list"
11. Start a project notebook and keep it up throughout the project

**B. Design**

1. Determine the underlying structure of the site
2. Use a storyboard or flow-chart to diagram the page links
3. Determine just what and how much will be included on the Home Page.
4. Consider the physical appearances of the pages, i.e., the use of graphics, navigational tools, colors, backgrounds, templates; strive for consistency, a unifying "look".
5. Decide if a "text only" version of the site will be needed.
6. Determine the final selection of information to be presented and how it will be presented.

**C. Gather Content**

1. Collect the information to be place on the site--URL's, calendar events, etc.
2. Organize the data in an accessible manner.
3. Customize and critically select appropriate data

**D. Create the Pages**

1. Look at the underlying code for sites that have elements that could be emulated by using the "View/Page source" option from the toolbar.
2. Keep in mind any criteria you have discovered for effective sites
3. Start coding the material as a Web document utilizing HTML from scratch or employing commercial HTML editors or Web building software.
4. Verify the HTML code.
5. Have someone outside the creation process proofread and test-run the site before activating it.
6. Test the site with a variety of browsers and operating systems--don't forget Macs.

**E. Market/Promote**

1. Publicize the site locally through newspaper feature articles, newsletters, handouts (brochures, bookmarks, magnets), posters, etc.

**F. Maintain**

1. Periodically--on a schedule--check all external links to see if they still work and if they are still appropriate.
2. Post the latest dates of verification and up dating on the site pages.
3. Keep the site content fresh, changing and renewing selections, especially in seasonal or topical sections.

4. Evaluate the site's success in fulfilling the original purpose through e-mail feedback, logs, counters, and other forms of evaluation.
5. Keep up-to-date with new Web developments via workshops, classes, articles and books.

### III. HTML – Hypertext Mark-up Language

- A. Uses codes called tags which are letters, words, numbers, or phrases that tell your web browser how to display a web page
- B. The tags are placed inside of the text of a document to mark where pictures, graphics, and other links should be placed on a browser's screen.
- C. Primarily a bookend code – a tag is needed at the beginning and the end of every string of code
  1. Angled brackets < > at the beginning, say “Code starts here.”
  2. Angles brackets with a forward slash </ > says, “Code ends here.”
  3. For example, the tag <U> causes the text to be presented underlined

### IV. HTML Basics

- A. The web page has four sections
  1. Document Type
    - a. This is <HTML> and is placed at the beginning of the file
    - b. At the end of the file, place HTML>
  2. Header
    - a. The area in the document where the title is placed
    - b. This is <HEAD> followed by </HEAD>
  3. Title
    - a. The name of the document as it is going to show up on the top center of the browser window
    - b. It is written <TITLE> and at the end of the text </TITLE>
  4. Body
    - a. The bulk of the document or file
    - b. <BODY> at the end of the information </BODY>

Example:

```
<HTML>
<HEAD> Header
<TITLE> Title of the Page</TITLE>
</HEAD>
```

```
<BODY>
Body of the document
</BODY>
</HTML>
```

- B. HTML is not case sensitive
- C. The brackets are the important aspect – a < or a > or a / cannot be left off or the document will not appear as designed

- D. URL's, however are case sensitive – a capital letter instead of a lowercase letter can break a link
- V. How to Publish Web Sites
  - A. Upload the pages to a Web server computer using FTP software
  - B. A school may have web page space available
  - C. Free web space is available
    - <http://www.classroom.net/>
    - <http://www.teacherweb.com>
- VI. HTML Editors
  - A. Microsoft Front Page
  - B. Netscape Composer
  - C. Claris Home Page
  - D. Adobe Pagemill
  - E. Dreamweaver
- VII. Graphics
  - A. Software Programs
    - 1. Adobe Photo Shop
    - 2. Microsoft Image Composer
    - 3. Paint Shop Pro
  - B. Keep graphics small, 35Kb or less per page; pages will load faster and look better.
  - C. Use the appropriate format--GIF for graphics and JPEG for photos.
  - D. State height and width parameters as part of the image tag so the browser will save the allotted space and go on loading.
  - E. Design for the lowest screen resolution--640 x 480 dpi--and for small screens (14").
  - F. Be sure background tiles are discreet and seamless.
  - G. Be aware of the importance of colors and how they appear on the screen.
  - H. Reuse graphical images from page to page so they will load faster.

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## ACTIVITIES

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- I. Develop a web site for classroom or HOSA Chapter.

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## MATERIALS NEEDED

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### HTML Tags

### Sample HTML

### Web Construction Do's and Don'ts

### Graphics Do's and Don'ts

### **Find a Web Tutorial at:**

<http://www.cnet.com/content/Builder/authoring>

### **A Beginner's Guide to HTML:**

<http://archive.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimer.html>

**HTML Reference Cheat Sheet:**

<http://www.hotwired.com/webmonkey/reference/index.html>

**A list of HTML tags:**

<http://www.cosy.sbg.ac.at/~lendl/tags.html>

**Create course web page**

<http://www.teacherweb.com>

**Guide to Color Codes**

<http://library.morrisville.edu/reference/colorcode.html>

Castro, Elizabeth. HTML For the World Wide Web. Peachpit Press. Berkeley: 1998.

(ISBN: 0-201-69696-7)

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**ASSESSMENT**

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**Creating a Web Page Rubric**

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**ACCOMMODATIONS**

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For reinforcement, the student will outline the steps to develop a website.

For enrichment, the student will update and maintain the website.

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**REFLECTIONS**

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### **Web Construction Do's and Don'ts**

<b>Do's</b>	<b>Don'ts</b>
Design your site so it can be viewed by text based browsers or by users who turn off their graphics capabilities.	Overuse--or use at all--fancy "tricks" such as unending animated graphics. They distract from the content.
Use HTML code that most browsers can read; avoid code specific to a particular browser such as Netscape.	Use clichés such as "under construction", "click here", "hot list", "cool site"
Keep the "look of the site consistent throughout, including navigational tools; use a template.	Just copy a brochure for content; what works in print may not work on a screen.
Keep the site current--and note it by including "Updated on dd/mm/yy" or "Links verified on dd/mm/yy" on those pages.	Make pages too long; two to three screens should be maximum--no one wants to scroll forever.
Respond to feedback and comments quickly, within 24 hours, if possible.	Stop publicizing your site once when it is launched; there is a need to reach new users and to let regular users know of new information or features.
Proofread and test everything <b>before</b> going on-line--links, information, calendars.	Ignore security aspects of this connection to the Web; be prepared to repel hackers and crackers.

### **Graphics Do's and Don'ts**

<b>Do's</b>	<b>Don'ts</b>
Keep graphics small, c.35Kb or less per page; pages will load faster and look better.	Use backgrounds that are too dark (particularly black) or busy; they make overlying text very difficult to read.
Describe dimensions of graphics--height and width--in pixels, not inches or centimeters; they will load faster.	Change link default colors, if possible.
Use the appropriate format--GIF for graphics and JPEG for photos, usually.	Use excessive animated GIFs; if you do, put them on a limited number of loops.
Provide optional text descriptions and links for all graphics, image maps and navigational tools using the parameter.	Use Java or DHTML since they are not supported by many kinds of user hardware; Java also may pose security risks.
State height and width parameters as part of the image tag so the browser will save the allotted space and go on loading.	Use shadows unless consistent as to the pre-determined light source.
Design for the lowest screen resolution--c.640 x 480 dpi--and for small screens (14").	Mix text attributes, such as size and color; avoid glowing and blinking text.
Be sure background tiles are unobtrusive and seamless.	Use free Internet clip art to excess; avoid cutesy images.
Be aware of the importance of color contrast, especially as it affects legibility.	"Borrow" from other sites without permission.
Reuse graphical images from page to page so they will load faster.	Get carried away with too many graphics; users don't like to wait for loading.

# Sample HTML

```
<HTML>
<HEAD>HEADER
<TITLE>My Sample Web Page</TITLE>
</HEAD>
<BODY>

<P>
<CENTER>Health Science Technology</CENTER>
</P>

<P>
<I>Courses</I>
</P>

<OL>
<LI>Introduction to <U>Health Science Technology</U>
<LI>Health Science Technology I
<LI>Health Science Technology II
<LI>Health Science Technology III
</OL>

<BR>

<P>
<B>Visit</B> us on the web at <A HREF="http://www.texashste.com">http://www.texashste.com</A>
</P>

</BODY>
</HTML>
```

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Here is what it looks like:

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Health Science Technology

*Courses*

1. Introduction to Health Science Technology
2. Health Science Technology I
3. Health Science Technology II
4. Health Science Technology III

Visit us on the web at <http://www.texashste.com>

## Creating a Web Page Rubric

Assessment Area	Exceptional	Good	Fair	Needs Improvement
Layout/ Design Well organized Uses special features – like table				
Art/ Graphics Photos, icons, and clip art are used creatively and follow a theme				
Information Creatively written and cleverly presented				
Navigation/Links Links are created with graphics and icons All links consistently work				
Working Together Teammates work together on all aspects of the project				
Following Guidelines Teammates are always on task				

# HTML Tags

## Basic Tags

`<html></html>`

Creates an HTML document

`<head></head>`

Sets off the title and other information that isn't displayed on the Web page itself

`<body></body>`

Sets off the visible portion of the document

## Header Tags

`<title></title>`

Puts the name of the document in the title bar

## Body Attributes

`<body bgcolor=?>`

Sets the background color, using name or hex value

`<body text=?>`

Sets the text color, using name or hex value

## Text Tags

`<h1></h1>`

Creates the largest headline

`<h6></h6>`

Creates the smallest headline

`<b></b>`

Creates bold text

`<i></i>`

Creates italic text

`<font size=?></font>`

Sets size of font, from 1 to 7)

`<font color=?></font>`

Sets font color, using name or hex value

## **Links**

**<a href="URL"></a>**

Creates a hyperlink

**<a href="mailto:EMAIL"></a>**

Creates a mailto link

**<a href="#NAME"></a>**

Links to that target location from elsewhere in the document

## **Formatting**

**<p></p>**

Creates a new paragraph

**<p align=?>**

Aligns a paragraph to the left, right, or center

**<br>**

Inserts a line break

**<blockquote> </blockquote>**

Indents text from both sides

**<ol></ol>**

Creates a numbered list

**<li></li>**

Precedes each list item, and adds a number

**<ul></ul>**

Creates a bulleted list

## **Graphics**

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Adds an image

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Aligns an image: left, right, center; bottom, top, middle

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Sets size of border around an image

**<hr>**

Inserts a horizontal rule

**<hr size=?>**

Sets size (height) of rule

**<hr width=?>**

Sets width of rule, in percentage or absolute value

**<hr noshade>**

Creates a rule without a shadow

## **Tables**

**<table></table>**

Creates a table

**<tr></tr>**

Sets off each row in a table

**<td></td>**

Sets off each cell in a row

## **Frames**

**<frameset></frameset>**

Replaces the <body> tag in a frames document; can also be nested in other framesets

**<frameset rows="value,value">**

Defines the rows within a frameset, using number in pixels, or percentage of width

**<frameset cols="value,value">**

Defines the columns within a frameset, using number in pixels, or percentage of width

**<noframes></noframes>**

Defines what will appear on browsers that don't support frames