Web Development
Processes & Guidelines

TABLE OF CONTENTS

NOTE: The model document files for the individual sections will be placed on the Staff volume server and will be accessed via AppleShare. The individual file names, as listed below the name of each section, will be found in the following folder on the Staff volume:

Education Alliance/Technology/Documentation-tech/Web_Development/

Web Development Processes and Guidelines
Introduction and Use

Developing sites and products for the World Wide Web is not unlike constructing a home or commercial building. Infrastructures must be in place to support systems. The foundation and shell must be well designed to support the activities of the users. Plans must be created that allow the various construction teams to guide and coordinate their activities to present the desired finished product in a timely fashion. The eventual users must be continuously considered to ensure that their needs and requirements are met.

The documents, which follow this introduction, are intended to be models that can be modified for the specific requirements of a project. These documents are first, and foremost, communication tools, that allow program, design and development team members to share common understandings of the scope, breadth and details of the project. The documents also provide means to "plan the work and work the plan", and should be utilized as management tools.

Many of the ideas presented here were adapted from the Education Alliance Product Development Process and involve the use of definite steps. Though the process is sequential, it is not necessarily linear. One may view the development process as a spiral or even a double helix, where project teams and individuals are continually "circling back" to conduct reviews of the work by connecting with each other to ensure that the project remains on track and is progressing forward and upward.

A brief description and explanation of each document is provided here to present suggestions for use and how they may be adapted for individual project work.

Process Chart: This chart provides a visual representation of the major steps involved in web development. Each section contains 'sub-steps', which may or may not be relevant to a particular job, and should be modified accordingly. The chart can be used to communicate to the development team, client and users that each major set of steps should be completed before moving to subsequent sections and how these subsequent sections are dependent upon the planning that took place before them.

Initial Project Proposal: This model document could be used for projects that did not go through the Alliance Product Development review. Though not intended as a substitute for full product review, the Initial Project Proposal might be used for projects on a 'fast track' that have obtained approval from the Leadership team. The document has a section in which the program team can briefly explain the project, its rationale, and any review-type activities conducted thus far. The document also provides a section in which the web development team can respond to the proposal by asking clarifying questions, as necessary, and explaining their recommendations.

Plan Questionnaire: This model document can be used to help refine and clarify project goals, objectives, work scope and features. The questionnaire should be tailored to individual projects, since many of the questions may not apply. Answers to many of the questions may have been addressed in the Initial Project Proposal or during the Alliance product Review process. In such cases, a response of "See Initial Proposal and/or Product Review document" may be most appropriate.

Project Plan Overview: Given information from the Initial Proposal and Plan Questionnaire, the development team can produce the Plan Overview. This document allows the development and program area teams a means of confirming that they share a common understanding of the goals, objectives, and scope of the project. Both parties should sign off on the Plan Overview before proceeding.

Project Plan Specifications: This model document will provide a detailed description of the technical design specifications, content outline, development timeline and resource planning for the overall project. This document allows the development and program area teams a means of confirming that they share a common understanding of the detailed work scope and resource commitment necessary to complete the project. Both parties should sign off on the Plan Specifications before proceeding.

Tasks, Deliverables, Roles and Decision Makers: This model chart provides means to list and identify specific project tasks and deliverables, and also, to whom the task is assigned and who should review and approve the work. The sets of tasks listed here may be presented in a more detailed and specific manner than in the Project Plan Specifications document.

Implementation Schedule of Project Plan: This model chart can be developed in conjunction with the Tasks, Deliverables, Roles and Decision Makers document. The purpose of this implementation chart is to visually depict a sequence in which tasks should be completed, who is responsible for completing the task, as well as a timeline of expected 'due dates' for task completion.

Final Testing Checklist: This model chart provides a way to document systematic checking of all site pages and features as viewed with various platforms and browsers.

Appendix - Design and Construction: This appendix provides an outline of parameters and conventions under which the Technology staff of the Web Development team will construct the web pages. The overall purpose of adhering to these specifications is to provide an Alliance-wide consistency for web site construction. There may be justifiable reasons to deviate from these guidelines, which should be explained in the Project Plan and included with web site documentation.

WEB SITE DEVELOPMENT PROCESSES & GUIDELINES
Process Chart
WebDevP&G_procchart.doc

DEVELOP PROJECT PROPOSAL

Review Product Work Options
Propose Product Work
Solicit Feedback to Proposed Product Work

↓

DETERMINE PROJECT REQUIREMENTS

Organization's Nature and Goals   Domain Name
Web Site Purpose   Site Structure (general)
Web Site Goals and Objectives   Site Content (general)
Audience Profile and Requirements   Site Features and Functionality
Competitors   Time Frame (general)

↓

DEVELOP PROJECT PLAN OVERVIEW

Describe Organization and Site's Purpose, Goals, and Objectives
Describe Audience Requirements and Uses for Site
Analyze Competitors' Sites
Identify General Project Timeline and Milestone Dates
Identify General Resource Planning Needs

↓

DEVELOP PROJECT PLAN SPECIFICATIONS

Describe Site Identity, Navigation, and Functionality
Describe Ideas for Site Structure and Page Layout
Outline Content Inventory Categories and Levels
Identify Specific Resource Planning Needs and Timeframe
Identify 'Checkpoints' for Completing, Reviewing, Revising, Approving Work

↓

IMPLEMENT PROJECT PLAN

Construct Specific Project Timeline (e.g., Gant Chart)
Assign Roles and Responsibilities
Complete Content Inventory Item Specifications
Construct Page Sketches and Shells
Produce Content
Conduct Content and Format Review, and Revisions
Place Content in Web Pages
Conduct Testing, Internal and External Review

↓

Web Development Processes and Guidelines
Initial Project Proposal
WebDevP&G_proposal.doc

I. <u>Request for Program Web Development Work:</u>

Project: (title or extremely brief description of project)

Program Area: (Name or brief description of program area of work)

Goals, Needs and Objectives: (Explanation of how this proposed project will meet specific goals of the program area and constituent needs. Description of the objectives of the program area this project will advance. Description of measurable activities that will be used to assess the site's effectiveness.)

Scope, Format and Use: (Clarify the scope of the project. Describe scenario(s) how target audience(s) would use the site to meet stated needs.)

Time Frame: (Listing of anticipated milestone dates, e.g., prototype complete, ready for internal and external review, launch date, etc.)

Resource Requirements: (Description of anticipated resource needs to develop and maintain the project in terms of time, infra-structure and budgetary items that will come from the program area(s) and functional area(s).)

Review of Existing Products: (Description of activities conducted to identify internal and external projects and products that currently exist or are under development within this or other program areas that may be utilized or leveraged to meet stated goals, needs and objectives. Description of respective findings resulting from such activities.)

Submitted by: _____   Date_____

II. <u>Response to Request for Program Web Development Work:</u>

Questions or Issues Requiring Further Clarification: (Listing of specific questions about items presented above. Identification of issues, either listed above or not, that may need to be addressed.)

Recommendations: (Brief analysis and evaluation of project proposal as described above. Explanation of decision of whether or not to proceed with project proposal. Description of suggestions for next steps, if any.)

Reviewed by:_____   Date_____

Web Development Processes and Guidelines
Plan Questionnaire
WebDevP&G_questionnaire.doc

This questionnaire is intended to facilitate the collaboration of technology and program staff in the planning and development of web-based projects. The questions are seen as prompts for conversations and do not imply a linear process for articulating site mission, goals, objectives, and audience profile – key components of a sound strategic plan. This document is a broad model that may be adapted to fit a variety of products and situations.

SITE GOALS and OBJECTIVES

In one sentence, what is the main message of this site? What is the point? (This information is intended to guide the look and feel of the site.)

What are the major goals of the web site?

What will this web site be about? Clarify the scope of its content.

What objectives of the project or program area will this web site advance?

What user needs will this web site address?

How will the Alliance use this web site to stimulate knowledge development among the intended users? Be specific.

What influence will its use be likely to have?

How does/would the web site fit with other project work?

How will we evaluate its influence?

What are the measurable activities that will be used to assess the site's effectiveness in achieving the project goals and objectives?

AUDIENCE PROFILE

Who will be the Primary audience? Secondary? Tertiary? Others?

For each of the targeted audiences…

      What are their demographics?

      What are their web usage habits?

      What are their attitudes and current mindset concerning the scope of the content of the project?

      What are their short-term needs?

What are their long-term needs?

TECHNICAL REQUIREMENTS

Do you have an insight into the kinds of technology your audiences are using?
(Describe the range of technology that the design of the site needs to accommodate.)

Computer Platform

Operating System

Browser version

Monitor size

Internet access

Modem Speed

COMPETETIVE ANALYSIS

Describe the content, format and features of existing web sites that provide the same
scope of services to your targeted audiences.

What content, format and features do you like that should be incorporated into this web site?

What content, format and features do you not like that should be avoided in this web site?

SITE FUNCTIONALITY

Identify the expectations and constraints that will impact content, functionality, design,
and/or overall development of this site. For example, who else (other stakeholders, such
as advisory committees) must be consulted for approval/sign-off of concepts?

Describe how the targeted audience might approach and use the web site.

What information might they be looking for?

What questions might they want to have answered?

What might they want to accomplish in visiting the site?

What information do they need to accomplish these goals?

Once they are at your site, what else might they like to see?

Is there specific information you would like to collect about the people visiting your site?

Have you considered the types of interactions you would like to accomplish using the web site?
For example…
Sign-ups for newsletters, listservs

Requests for information, "contact us"
Other? (List and describe)

SITE IDENTITY

What organizational requirements or standards (such as logos, graphical representations, branding, disclaimers, contractual text, colors or other style requirements) MUST be incorporated into the site?

Will the Web site design concept be coordinated with existing or planned print materials?

What are some additional graphical or style items that you would like to be developed for use in the site? Where?

Are there any particular color schemes that should be used? Avoided?

Are there any web sites that you really like or really don't like? Why?

What should be the desirable traits of the web site in terms of personality, tone, and manner?

MARKETING

What are the particular tactics or methods you will use to build web site traffic (such as staff networking and dissemination, professional organizations, national conferences, electronic databases, search engines, etc.)?

What feedback will you be collecting from site visitors?

What are some other web sites that contain information that you would want to reference or link to?

What other web sites should contain links to your web site?

Will there be a plan for a coordinated print product (bookmark, flyer, brochure)?

Web Development Processes and Guidelines
Project Plan Overview
WebDevP&G_planoverview.doc

Date:

Project Plan: (title of project web site)

Presented to: (Program Area Team)

Presented by: (Tech Division Project Team/Lead)

Project Description: (Brief summary to provide an overview of the scope of the project)

Final Delivery Date:

Site Goals: (Description and explanation of the primary, secondary and subsidiary purposes of the web site and how the goals relate to program work.)

Site Objectives: (Specific description and explanation of how the content and features of the site will address and attain the site goals. Objectives should be stated in measurable terms that can be used to assess and evaluate the site's effectiveness.)

Site Assessment: (Specific description of the methods that will be used to evaluate the site's effectiveness in meeting the stated objectives. The methods should describe activities in which measurable and/or observable behaviors or responses of the site's users are recorded, analyzed and evaluated.)

Site Uses: (Brief description of scenarios that illustrate how the audience/s will use the site.)

Audience Profile: (Identify the primary, secondary and subsidiary audiences. Include information about audience demographics, needs, attitudes, mind set, etc. Briefly describe how the site will meet their needs.)

Audience Technical Requirements: (Describe the minimum requirements regarding connectivity, computer platforms, web browsers, video monitors on which the web pages should render and function satisfactorily.)

Competitive Analysis: (Identify several existing web sites with similar target audiences, and goals. Describe the content, format, and features of these web sites that should and should not be incorporated into the design of this project site.)

Project Timeline (expressed in hours, weeks, months -- or name specific dates by which task sets will be completed):

- Technology Development (see document below)
- Content development
- Review processes (internal, external, OERI)
- Edit, revisions
- Review of final product
- Marketing strategies
- Final delivery

Resource Planning:
- Tech development (including testing and analyses)
- Content development
- Editing
- Review processes
- Marketing

Agreement of Stakeholders: Sign-off of key technology and program staff, advisory committees, etc.

Project Plan Overview Submitted by:_____

                                           Date:_____

Project Plan Approved by:_____

                                           Date:_____

Web Development Processes and Guidelines
Project Plan Specifications
WebDevP&G_planspecs.doc

Date:

Project Plan: (title of project web site)

Presented to: (Program Area Team)

Presented by: (Tech Division Project Team/Lead)

Project Description: (Brief summary to provide an overview of the scope of the project)

Final Delivery Date:

Technology Development Timeline:
- Design concept
- Architecture
- Page Sketches
- HTML Page shells
- Prototype (vertical path), user reaction, analysis, revisions
- Draft/pilot, usability, analysis, revisions

Design:
- **Site Identity:** (List site domain name. Identify the desired 'personality', 'tone', and 'manner' of the site. Describe the overall look and feel of the site in terms of graphical elements, color schemes, structure, etc. and explain how these will convey the desired affect.)
- **Site Functionality:** (Describe features of the site, especially regarding user interactivity, e.g., navigation, searches, forms, e-mail links, multi-media, etc.)
- **Site Design Considerations:** (Describe design requirements which may deviate from current Education Alliance web site design and construction guidelines.)

Architecture:

- **Site Structure:** (Provide detailed description and sketches of project site map, first, second, third and subsequent levels of web pages)**.** Example:

Site Map

HOME

```
          ┌─────────────────────┬─────────────────────┐
          │                     │                     │
       Page 1                Page 2                Page 3
    ┌─────┴─────┐         ┌─────┴─────┐         ┌─────┴─────┐
 Page 1A    Page 1B    Page 2A    Page 2B    Page 3A
       Page 3B
```
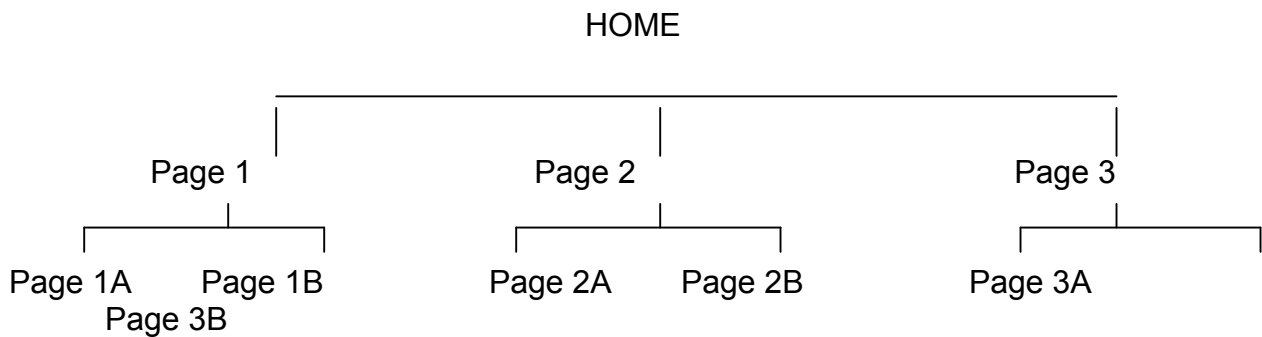
Development:

- **Page Description:** Describe layout, navigation, textual content, graphical content, multimedia content, features, interactivity, forms, …

Page Layout

Masthead Banner with navigation links		
Search Form	Introduction	Other Resources
Footer		
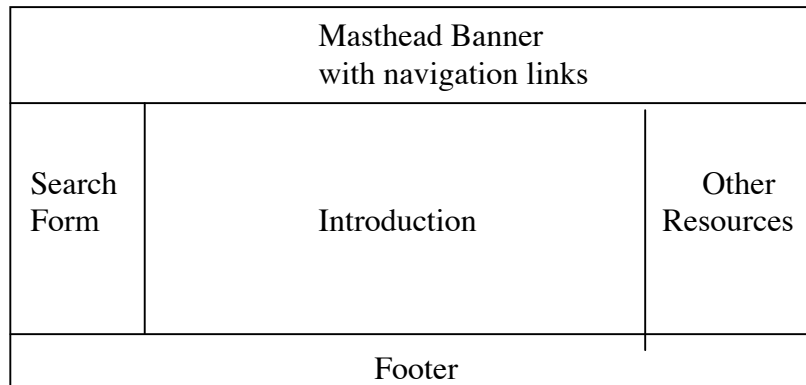
- **Content Outline:** (Provide detailed lists of all content needed for each page. Identify who will provide specific items.) Example:

I.   Page Name
   A.   Masthead with navigation links and footer.(*Web Designer*)
   B.   HTML 'head' information (*Program Area Project Lead*)
          Title
          Meta Tag Description
          Meta Tag Key Words II.
   C. Left Column-Search Form (*Program Area Project Lead* provides option   values)
       1. Select Option – Subject Area

        2. Select Option – School Setting
        3. Submit Button
        4. Clear or Reset Button
    D. Center Column - Page Body Content (*Program Area Writer*)
        1. Site Introduction text
    E. Right Column (*Program Area Project Lead*)
        1.List of other Resources (KLoom, NEASC,
    F. Footer (*Web Production Assistant*)
        1. Ed Alliance graphic and text.
        2. Link to Ed Alliance web site
        3. Link to Brown web site
        4. Text link to "web admin @ Ed Alliance"

- **Development Stages and Testing**
  - Prototype
  - Draft
  - Final

Resource Planning: (Identify all major task item groups and subgroups. Identify resources needed and available to complete tasks. Determine time needed to complete tasks.) Example:

Masthead and Page Sketches: N hours (*Web Designer and Program Area*)
Includes production of all proposed sketches review of sketches and modifications to those sketches.

Writing: N hours   (*Lead writer and Program Area*)
Includes creation of first draft of text, review by content editor and creation of final draft of text that is web ready.

Page Shell Construction: N hours (*Web Production Assistant and Program Area*)
Includes modifications to approved masthead graphics to make suitable for web page rendering, creation of individual page shells (without page body content), navigation links and mouseovers, and testing. Conduct review and final approval of modifications.

Graphics: N hours   (*Web Designer and Program Area*)
Locate, modify, create, process and optimize all graphical content to be web ready. Conduct review and final approval of modifications.

Media: N hours   (*Web Production Assistant and Program Area*)
Locate, edit, process and compress all versions of audio and video files to be web ready. Conduct review and final approval of modifications.

Place Content in Web Pages: N hours (*Web Production Assistant and Program Area*)
Insert text, graphics , media, forms and remaining content within HTML code of web pages. Conduct review and final approval of modifications.

Test Prototype with User: N hours (*Program Area and Web Designer)*
Allow selected member of audience(s) to use site to complete specific tasks (based upon site objectives). Incorporate test results into design modifications. Conduct review and final approval of modifications.

Performance Testing: N hours (*Tech Tester/Program Area and Web Designer)*
Check web page rendering, and features across browsers and platforms. Proof read content. Identify and correct problems.

Obtain Final Approval: N hours   (*Program Area Director)*

Transfer Site to Server and Conduct Final Test: N hours (*Production Assistant)*
FTP all site file to 'live' server'.   Check all links, and site interactive features. Identify and resolve problems.

Announce Delivery: N hours   (*Program Area Director)*

Agreement of Stakeholders: Sign-off of key technology and program staff, advisory committees, etc.

**Project Plan Specifications Submitted
by**:_____

Date:_____

**Project Plan Specifications Approved
by**:_____

Date:_____

Web Development Processes and Guidelines
Tasks, Deliverables, Roles and Decision-maker(s)
WebDevP&G_tasks.doc

Indicate alignment with print and other related projects – how?"

PA = Program Area project lead or liaison   WE = writer/editors

TASKS & DELIVERABLES	WHO	
	DEVELOPS/PRODUCES	APPROVES
PRE-PRODUCTION		
Discover/Define Requirements		
Project Goals		
Primary objectives		
Organizational needs		
Business needs		
Eval. Criteria		
Measurable Goals		
Client Wish list		
Project Plan		
Requirements		
Features/ Functionality		
Creative requirements		
Creative Brief		PA
Specify Deliverables: what & when		
Project Schedule		
Resource allocation: staff/ "budget"		
QA plans *?content, tech, peer & external review*		
Scope & Schedule		PA
Housekeeping: setup documentation, asset mgnment & dev work environ		

TASKS & DELIVERABLES	WHO	
	DEVELOPS/PRODUCES	**APPROVES**
PRE-PRODUCTION (con't)		
Analysis and Design		
Archictecture		
Content		
Audit		
Outline & categorize		
Identify needed content		
User experience		
scenarios		
Site Structure		
Page Structure		
Wireframes		
Navigation		
Functionality		
Map/Story Board/Narratives		PA
Content delivery plan	WE & X for non-text	PA & WE & X
Visual Design		
Review goals		
Develop concepts		
Look & feel		
Tone & voice		
Initial comps		PA
Page templates		
Design Style Guide		
Technical Design (database, client and server-side scripting, etc.)		
Prototype *What does this consist of? Do we need content?*		
Prototype		PA and ?

TASKS & DELIVERABLES	WHO	
	DEVELOPS/PRODUCES	APPROVES
CONTENT DEVELOPMENT		
Drafts should be completed before web production		
PRODUCTION *what are the check-points/ sign-offs here?*		
Preliminaries:		
Review scope, staffing, timeline, & technical requirements		
File Structure & versioning control – define & implement		
Build		
Graphics		
Create		
Optimize		
HTML Templates		
[integrate with back-end]		
[usability testing]		
Content finalized (passes review)		
Create document instances (merge content & templates)		
QA:		
Internal		
Peer Review		
External Review		
LAUNCH		
EVALUATE		
MAINTAIN		

Web Development Processes and Guidelines
DRAFT version 2
Implementation of Project Plan

Notes: 1. see Project Plan for specifications 2. **'x'** indicates time period to complete task, use exact dates as necessary

Task	Person(s) Responsible	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
Create page sketches	Sleepy	x										
Review page sketches	Grumpy		x									
Finalize page sketches	Sleepy			x								
Create first draft writing	Bashful	x	x	x	x	x						
Review first draft writing	Doc		x	x	x	x	x					
Finalize writing	Bashful				x	x	x	x	x			
NOTE: Delivery of written content is required before project can progress further.												
Create HTML page shells	Sneezy				x	x						
Review HTML page shells	Grumpy					x	x					
Finalize HTML page shells	Sneezy						x	x				
Create visual elements	Sleepy				x	x						
Review visual elements	Grumpy					x	x					
Finalize visual elements	Sleepy						x	x				
Create media elements	Dopey				x	x	x					
Review media elements	Doc, Grumpy					x	x	x				
Finalize media elements	Dopey						x	x	x			
Place content in page shells	Sneezy									x	x	
Performance testing (browser, platform, accessibility)	Stepmother											x
QA review of content	Doc											x
Test prototype with users	Happy											
Conduct internal review	Doc											
Conduct review by OERI (or equiv)	Funder											
Conduct external review	Grumpy											
Modify per test/review results	Sneezy											
Final Approval	Snow White											
Transfer site to server	Sneezy											
Conduct final test on all links and features	Sneezy											
Announce delivery	Walt											

Task	Person(s) Responsible	Week 12	Week 13	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20	Week 21	Week 22
Create page sketches	Sleepy											
Review page sketches	Grumpy											
Finalize page sketches	Sleepy											
Create first draft writing	Bashful											
Review first draft writing	Doc											
Finalize writing	Bashful											
NOTE: Delivery of written content is required before project can progress further.												
Create HTML page shells	Sneezy											
Review HTML page shells	Grumpy											
Finalize HTML page shells	Sneezy											
Create visual elements	Sleepy											
Review visual elements	Grumpy											
Finalize visual elements	Sleepy											
Create media elements	Dopey											
Review media elements	Doc, Grumpy											
Finalize media elements	Dopey											
Place content in page shells	Sneezy											
Performance testing (browser, platform, accessibility)	Stepmother	x										
QA review of content	Doc	x										
Test prototype with users	Happy		x	x								
Conduct internal review	Doc		x	x								
Conduct review by OERI (or equiv)	Funder				x	x						
Conduct external review	Grumpy						x	x	x	x		
Modify per test/review results	Sneezy									x		
Final Approval	Snow White										x	
Transfer site to server	Sneezy											x
Conduct final test on all links and features	Sneezy											x
Announce delivery	Walt											x

WebDevP&G_testchecklist.xls

Web Development Processes and Guidelines
Final Testing - Checklist

1. Check listed items to see that elements render and function properly.
2. Place a checkmark in respective box if page is "OK".
3. Otherwise, describe problem in respective box. Use additional sheets if necessary.

Project _____

Tester   _____

Date _____

| | | Platform --> | Macintosh | Macintosh | Macintosh | Windows PC |
| | | Browser --> | Safari | Internet Explorer - 5 | Mozilla | Internet Explorer -6 |

Title	File Name				
(Top Page Navigation)	ssi/header.html				
(Bottom Page Info and Links)	ssi/footer.html				
(Left Margin Navigation and Links)	ssi/leftmarg.html				
Site Name - Home Page	index.shtml				
Site Name - About Page	about.shtml				
Site Name - Content Page 1	content1.shtml				
Site Name - Content Page 2	content2.shtml				
Site Name - Content Page 3	content3.shtml				
Site Name - Content Page 4	content4.shtml				

Note: The working version of this model document includes columns for AOL and additional browsers for each platform.

WebDevP&G_testchecklist.xls

Web Development Processes and Guidelines
Appendix - Design and Construction
WebDevP&G_designconstruct.doc

Note: These parameters, and conventions are guidelines. Specific site purposes may warrant modifications and exceptions to these guidelines. A 'Read Me' text file should be included within site directory to document the rationale and justification for use of exceptional design components. We might want to consider using specific guidelines listed in
http://usability.gov/guidelines/

I.   Parameters – *Consider these as boundaries. The goal is to have pages render acceptably in terms of being able to view all content and navigate successfully.*
   a. Browser compatibility – *This list is based upon a semi-annual review of web 'hit' statistics. We should strive to have pages render acceptably in the equipment used by 95% or more of our web site users.*
      i.   Netscape 4.0 or better
      ii. Internet Explorer 5 or better
      iii. AOL 8.0 or better
      iv. Opera 3.5 or better
   b. Platform compatibility
      i. Macintosh running OS9 or better
      ii. PC's running Windows 98 or better
   c. Accessibility
      i.   Follow W3C guidelines
      ii. Total page file size maximum 50kb to 70 kb, otherwise provide user with an alternate version.
      iii. Entire page can be easily interpreted by a text reader
      iv. Conforms to The Architectural and Transportation Barriers Compliance Board accessibility standards for electronic and information technology covered by section 508 of the Rehabilitation Act Amendments of 1998. (36 CFR Part 1194)
      v.   Check "Bobby" compliance to level 1

II. Conventions – *Consider these as recommended practices.*
   a. Fonts
      i.   Face/Family – text presented in paragraph form should utilize verdana, arial, helvetica, times, sans-serif.
      ii. Color – text should be presented with adequate contrast to background (i.e., very dark behind very light or vice-versa). Avoid colors that conflict with current color harmony guidelines.
      iii. Size – minimum font size should be 10 pixels or equivalent
   b. Graphics

        i. Quality – select format for optimal quality and file size. As a rule, photographs should be saved as jpegs , while drawings and illustrations should be saved as gifs. All graphics should be optimized.

        ii. HTML attributes – all IMG tags should contain width, height, border, alt, and align values. (Use alt=" " for 'spacer' images.)

c. Page widths should be set to render fully on a 640 pixel width monitor. It is desirable to have the page width adjust to fill the width of the monitor screen or browser window.

d. CSS – *Use the Ed Alliance standard template and customize accordingly*

        i. Style sheets should be used for font face, size, color, style and weight.

        ii. Style sheets should be used for text margin, height, spacing, indentation, alignment, and decoration.

        iii. Style sheets should be uniform and placed in a root level directory.

e. Layout

        i. Tables - Use of multiple tables should be limited to "stacking" (nesting tables should be avoided). All table tags should contain width, height, border, cellpadding, cellspacing and align values.

        ii. Table Cells – All table cell tags should contain width, height, border, and align values.

f. Printable versions of the pages should be provided if the principle version does not print properly (i.e. is easily readable) across the printed page that is 8 1/2 inches wide.

        i. Do not open a 'child' or 'target' window to display printable version.

        ii. Include a "Return to Web Version" link from printable version.

        iii. Remove 'A HREF' tags since visited links don't print well.

        iv. Display absolute URL for external resources or if content within current site is not included in print version.

g. JavaScript

        i. Uses – java script should be used for mouseovers, form validation, customizing dimensions and position of opening a new window, browser 'sniffers' to identify browser types and versions for CSS compatibility.

        ii. JavaScript codes should be uniform and placed in a root level directory.

h. Server Side Includes should be used for repetitive sets of elements that occur on many pages such as headers, footers, navigation menus, and site search forms.

i. Robots.txt files should be placed within the site directory that disallow web crawler access to designated directories including but not limited to footers, headers, graphics and other folders that are not directly relevant to the 'live' site or that contain private or proprietary information.

j. Head section of the HTML document should contain title information and meta tag information including http-equiv, description, author and keywords

k. Keywords should be developed by the project planning team and content specialists.

l. Titles should contain the site name and page name

m. Footers should use standardized language, graphics and links to the Education Alliance site and other 'umbrella' sites as appropriate.

n. Disclaimers should use standardized language and references.

o. "Date Last Modified" should appear on every web page.

p. Opening of new/additional browser windows should be confined to links which open a web page from an external site.

III. Testing - *Individual web pages should be checked across browsers and platforms continuously by the web developer during the implementation phase of development.*

a. Pages should render acceptably in terms of being able to view all content and navigate successfully. Layout and graphics should not alter significantly in terms of being distracting to most users.

b. Color rendering should be checked by viewing pages in grayscale.

c. All links should be functional.

d. All 'rollovers' and scripts should function properly.