



# Research-Based Web Design & Usability Guidelines

Forewords by:

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## Appendices

### Guidelines Ranked by Relative Importance

Chapter: Guideline #	Guideline Heading	Relative Importance
1:1	Provide Useful Content	5
1:2	Establish User Requirements	5
1:3	Understand and Meet User's Expectations	5
1:4	Involve Users in Establishing User Requirements	5
2:1	Do Not Display Unsolicited Windows or Graphics	5
3:1	Comply with Section 508	5
3:2	Design Forms for Users Using Assistive Technology	5
3:3	Do Not Use Color Alone to Convey Information	5
5:1	Enable Access to the Homepage	5
5:2	Show All Major Options on the Homepage	5
5:3	Create a Positive First Impression of Your Site	5
6:1	Avoid Cluttered Displays	5
6:2	Place Important Items Consistently	5
6:3	Place Important Items at Top Center	5
8:1	Eliminate Horizontal Scrolling	5
9:1	Use Clear Category Labels	5
10:1	Use Meaningful Link Labels	5
13:1	Distinguish Required and Optional Data Entry Fields	5
13:2	Label Pushbuttons Clearly	5
15:1	Make Action Sequences Clear	5
16:1	Organize Information Clearly	5
16:2	Facilitate Scanning	5
16:3	Ensure that Necessary Information is Displayed	5
17:1	Ensure Usable Search Results	5
17:2	Design Search Engines to Search the Entire Site	5
1:5	Set and State Goals	4
1:6	Focus on Performance Before Preference	4
1:7	Consider Many User Interface Issues	4
1:8	Be Easily Found in the Top 30	4
2:2	Increase Web Site Credibility	4
2:3	Standardize Task Sequences	4
2:4	Reduce the User's Workload	4
2:5	Design For Working Memory Limitations	4
2:6	Minimize Page Download Time	4
2:7	Warn of 'Time Outs'	4
2:8	Display Information in a Directly Usable Format	4
2:9	Format Information for Reading and Printing	4
2:10	Provide Feedback when Users Must Wait	4
2:11	Inform Users of Long Download Times	4
2:12	Develop Pages that Will Print Properly	4
3:4	Enable Users to Skip Repetitive Navigation Links	4
3:5	Provide Text Equivalents for Non-Text Elements	4

### Guidelines Ranked by Relative Importance

Chapter: Guideline #	Guideline Heading	Relative Importance
3:6	Test Plug-Ins and Applets for Accessibility	4
4:1	Design for Common Browsers	4
4:2	Account for Browser Differences	4
4:3	Design for Popular Operating Systems	4
4:4	Design for User's Typical Connection Speed	4
5:4	Communicate the Web Site's Value and Purpose	4
5:5	Limit Prose Text on the Homepage	4
5:6	Ensure the Homepage Looks like a Homepage	4
6:4	Structure for Easy Comparison	4
6:5	Establish Level of Importance	4
6:6	Optimize Display Density	4
6:7	Align Items on a Page	4
7:1	Provide Navigational Options	4
7:2	Differentiate and Group Navigation Elements	4
7:3	Use a Clickable 'List of Contents' on Long Pages	4
7:4	Provide Feedback on Users' Location	4
7:5	Place Primary Navigation Menus in the Left Panel	4
9:2	Provide Descriptive Page Titles	4
9:3	Use Descriptive Headings Liberally	4
9:4	Use Unique and Descriptive Headings	4
9:5	Highlight Critical Data	4
9:6	Use Descriptive Row and Column Headings	4
10:2	Link to Related Content	4
10:3	Match Link Names with Their Destination Pages	4
10:4	Avoid Misleading Cues to Click	4
10:5	Repeat Important Links	4
10:6	Use Text for Links	4
10:7	Designate Used Links	4
11:1	Use Black Text on Plain, High-Contrast Backgrounds	4
11:2	Format Common Items Consistently	4
11:3	Use Mixed-Case for Prose Text	4
11:4	Ensure Visual Consistency	4
12:1	Order Elements to Maximize User Performance	4
12:2	Place Important Items at Top of the List	4
12:3	Format Lists to Ease Scanning	4
12:4	Display Related Items in Lists	4
13:3	Label Data Entry Fields Consistently	4
13:4	Do Not Make User-Entered Codes Case Sensitive	4
13:5	Label Data Entry Fields Clearly	4
13:6	Minimize User Data Entry	4
14:1	Use Simple Background Images	4
14:2	Label Clickable Images	4

## Guidelines Ranked by Relative Importance

Chapter: Guideline #	Guideline Heading	Relative Importance
14:3	Ensure that Images Do Not Slow Downloads	4
14:4	Use Video, Animation, and Audio Meaningfully	4
14:5	Include Logos	4
14:6	Graphics Should Not Look like Banner Ads	4
14:7	Limit Large Images Above the Fold	4
14:8	Ensure Web Site Images Convey Intended Messages	4
15:2	Avoid Jargon	4
15:3	Use Familiar Words	4
15:4	Define Acronyms and Abbreviations	4
15:5	Use Abbreviations Sparingly	4
15:6	Use Mixed Case with Prose	4
15:7	Limit the Number of Words and Sentences	4
16:4	Group Related Elements	4
16:5	Minimize the Number of Clicks or Pages	4
17:3	Make Upper- and Lowercase Search Terms Equivalent	4
17:4	Provide a Search Option on Each Page	4
17:5	Design Search Around Users' Terms	4
18:1	Use an Iterative Design Approach	4
1:9	Set Usability Goals	3
2:13	Do Not Require Users to Multitask While Reading	3
2:14	Use Users' Terminology in Help Documentation	3
2:15	Provide Printing Options	3
3:7	Ensure that Scripts Allow Accessibility	3
3:8	Provide Equivalent Pages	3
3:9	Provide Client-Side Image Maps	3
3:10	Synchronize Multimedia Elements	3
3:11	Do Not Require Style Sheets	3
4:5	Design for Commonly Used Screen Resolutions	3
5:7	Limit Homepage Length	3
6:8	Use Fluid Layouts	3
6:9	Avoid Scroll Stoppers	3
6:10	Set Appropriate Page Lengths	3
6:11	Use Moderate White Space	3
7:6	Use Descriptive Tab Labels	3
7:7	Present Tabs Effectively	3
9:7	Use Headings in the Appropriate HTML Order	3
10:8	Provide Consistent Clickability Cues	3
10:9	Ensure that Embedded Links are Descriptive	3
10:10	Use 'Pointing-and-Clicking'	3
10:11	Use Appropriate Text Link Lengths	3
10:12	Indicate Internal vs. External Links	3
10:13	Clarify Clickable Regions on Images	3

## Guidelines Ranked by Relative Importance

Chapter: Guideline #	Guideline Heading	Relative Importance
10:14	Link to Supportive Information	3
11:5	Use Bold Text Sparingly	3
11:6	Use Attention-Attracting Features when Appropriate	3
11:7	Use Familiar Fonts	3
11:8	Use at Least a 12-Point Font	3
12:5	Introduce Each List	3
12:6	Use Static Menus	3
13:7	Put Labels Close to Data Entry Fields	3
13:8	Allow Users to See Their Entered Data	3
13:9	Use Radio Buttons for Mutually Exclusive Selections	3
13:10	Use Familiar Widgets	3
13:11	Anticipate Typical User Errors	3
13:12	Partition Long Data Items	3
13:13	Use a Single Data Entry Method	3
13:14	Prioritize Pushbuttons	3
13:15	Use Check Boxes to Enable Multiple Selections	3
13:16	Label Units of Measurement	3
13:17	Do Not Limit Viewable List Box Options	3
13:18	Display Default Values	3
14:9	Limit the Use of Images	3
14:10	Include Actual Data with Data Graphics	3
14:11	Display Monitoring Information Graphically	3
15:8	Limit Prose Text on Navigation pages	3
15:9	Use Active Voice	3
15:10	Write Instructions in the Affirmative	3
15:11	Make First Sentences Descriptive	3
16:6	Design Quantitative Content for Quick Understanding	3
16:7	Display Only Necessary Information	3
16:8	Format Information for Multiple Audiences	3
17:6	Allow Simple Searches	3
17:7	Notify Users when Multiple Search Options Exist	3
17:8	Include Hints to Improve Search Performance	3
18:2	Solicit Test Participants' Comments	3
18:3	Evaluate Web Sites Before and After Making Changes	3
18:4	Prioritize Tasks	3
18:5	Distinguish Between Frequency and Severity	3
18:6	Select the Right Number of Participants	3
1:10	Use Parallel Design	2
2:16	Provide Assistance to Users	2
3:12	Provide Frame Titles	2
3:13	Avoid Screen Flicker	2
5:8	Announce Changes to a Web Site	2

## Guidelines Ranked by Relative Importance

Chapter: Guideline #	Guideline Heading	Relative Importance
5:9	Attend to Homepage Panel Width	2
6:12	Choose Appropriate Line Lengths	2
7:8	Keep Navigation-Only Pages Short	2
7:9	Use Appropriate Menu Types	2
7:10	Use Site Maps	2
8:2	Facilitate Rapid Scrolling While Reading	2
8:3	Use Scrolling Pages for Reading Comprehension	2
8:4	Use Paging Rather Than Scrolling	2
8:5	Scroll Fewer Screenfuls	2
9:8	Provide Users with Good Ways to Reduce Options	2
11:9	Color-Coding and Instructions	2
11:10	Emphasize Importance	2
11:11	Highlighting Information	2
12:7	Start Numbered Items at One	2
12:8	Use Appropriate List Style	2
13:19	Place Cursor in First Data Entry Field	2
13:20	Ensure that Double-Clicking Will Not Cause Problems	2
13:21	Use Open Lists to Select One from Many	2
13:22	Use Data Entry Fields to Speed Performance	2
13:23	Use a Minimum of Two Radio Buttons	2
13:24	Provide Auto-Tabbing Functionality	2
14:12	Introduce Animation	2
14:13	Emulate Real-World Objects	2
14:14	Use Thumbnail Images to Preview Larger Images	2
16:9	Use Color for Grouping	2
17:9	Provide Search Templates	2
18:7	Use the Appropriate Prototyping Technology	2
18:8	Use Inspection Evaluation Results Cautiously	2
18:9	Recognize the 'Evaluator Effect'	2
1:11	Use Personas	1
6:13	Use Frames When Functions Must Remain Accessible	1
7:11	Use 'Glosses' to Assist Navigation	1
7:12	Breadcrumb Navigation	1
12:9	Capitalize First Letter of First Word in Lists	1
13:25	Minimize Use of the Shift Key	1
14:15	Use Images to Facilitate Learning	1
14:16	Using Photographs of People	1
18:10	Apply Automatic Evaluation Methods	1
18:11	Use Cognitive Walkthroughs Cautiously	1
18:12	Choosing Laboratory vs. Remote Testing	1
18:13	Use Severity Ratings Cautiously	1

Appendices

Guidelines Ranked by Strength of Evidence

Chapter: Guideline #	Guideline Heading	Relative Importance
1:1	Provide Useful Content	5
2:3	Standardize Task Sequences	5
2:5	Design for Working Memory Limitations	5
6:7	Align Items on a Page	5
9:3	Use Descriptive Headings Liberally	5
11:1	Use Black Text on Plain, High-Contrast Backgrounds	5
11:6	Use Attention-Attracting Features when Appropriate	5
11:7	Use Familiar Fonts	5
11:10	Emphasize Importance	5
12:1	Order Elements to Maximize User Performance	5
13:22	Use Data Entry Fields to Speed Performance	5
14:1	Use Simple Background Images	5
14:4	Use Video, Animation, and Audio Meaningfully	5
14:15	Use Images to Facilitate Learning	5
15:6	Use Mixed Case with Prose	5
16:4	Group Related Elements	5
16:9	Use Color for Grouping	5
18:1	Use an Iterative Design Approach	5
1:2	Establish User Requirements	4
1:8	Be Easily Found in the Top 30	4
1:10	Use Parallel Design	4
2:6	Minimize Page Download Time	4
2:10	Provide Feedback When Users Must Wait	4
2:13	Do Not Require Users to Multitask While Reading	4
3:3	Do Not Use Color Alone to Convey Information	4
5:3	Create a Positive First Impression of Your Site	4
5:6	Ensure the Homepage Looks like a Homepage	4
6:2	Place Important Items Consistently	4
6:3	Place Important Items at Top Center	4
6:4	Structure for Easy Comparison	4
6:9	Avoid Scroll Stoppers	4
6:11	Use Moderate White Space	4
6:12	Choose Appropriate Line Lengths	4
6:13	Use Frames when Functions Must Remain Accessible	4
7:8	Keep Navigation-Only Pages Short	4
7:9	Use Appropriate Menu Types	4
7:10	Use Site Maps	4
8:1	Eliminate Horizontal Scrolling	4
8:2	Facilitate Rapid Scrolling While Reading	4
8:3	Use Scrolling Pages for Reading Comprehension	4
8:4	Use Paging Rather Than Scrolling	4
9:1	Use Clear Category Labels	4

## Guidelines Ranked by **Strength of Evidence**

Chapter: Guideline #	Guideline Heading	Relative Importance
10:1	Use Meaningful Link Labels	4
10:3	Match Link Names with Their Destination Pages	4
10:5	Repeat Important Links	4
10:6	Use Text for Links	4
10:9	Ensure that Embedded Links are Descriptive	4
11:4	Ensure Visual Consistency	4
11:8	Use at Least 12-Point Font	4
11:9	Color-Coding and Instructions	4
12:2	Place Important Items at Top of the List	4
12:3	Format Lists to Ease Scanning	4
12:4	Display Related Items in Lists	4
12:5	Introduce Each List	4
12:8	Use Appropriate List Style	4
13:9	Use Radio Buttons for Mutually Exclusive Selections	4
13:13	Use a Single Data Entry Method	4
13:25	Minimize Use of the Shift Key	4
14:2	Label Clickable Images	4
14:3	Ensure that Images Do Not Slow Downloads	4
14:5	Include Logos	4
14:6	Graphics Should Not Look like Banner Ads	4
14:10	Include Actual Data with Data Graphics	4
14:11	Display Monitoring Information Graphically	4
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15:1	Make Action Sequences Clear	4
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15:7	Limit the Number of Words and Sentences	4
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16:1	Organize Information Clearly	4
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16:7	Display Only Necessary Information	4
18:2	Solicit Test Participants' Comments	4
18:6	Select the Right Number of Participants	4
18:8	Use Inspection Evaluation Results Cautiously	4
18:9	Recognize the 'Evaluator Effect'	4
18:11	Use Cognitive Walkthroughs Cautiously	4
18:12	Choosing Laboratory vs. Remote Testing	4
18:13	Use Severity Ratings Cautiously	4
1:3	Understand and Meet User's Expectations	3
1:4	Involve Users in Establishing User Requirements	3
1:6	Focus on Performance Before Preference	3
1:7	Consider Many User Interface Issues	3



Guidelines Ranked by **Strength of Evidence**

Chapter: Guideline #	Guideline Heading	Relative Importance
1:9	Set Usability Goals	3
2:1	Do Not Display Unsolicited Windows or Graphics	3
2:2	Increase Web Site Credibility	3
2:4	Reduce the User's Workload	3
2:7	Warn of 'Time Outs'	3
2:8	Display Information in a Directly Usable Format	3
2:9	Format Information for Reading and Printing	3
2:11	Inform Users of Long Download Times	3
2:14	Use Users' Terminology in Help Documentation	3
2:16	Provide Assistance to Users	3
3:9	Provide Client-Side Image Maps	3
5:1	Enable Access to the Homepage	3
5:4	Communicate the Web Site's Value and Purpose	3
5:5	Limit Prose Text on the Homepage	3
5:9	Attend to Homepage Panel Width	3
6:1	Avoid Cluttered Displays	3
6:5	Establish Level of Importance	3
6:6	Optimize Display Density	3
6:8	Use Fluid Layouts	3
6:10	Set Appropriate Page Lengths	3
7:2	Differentiate and Group Navigation Elements	3
7:3	Use a Clickable 'List of Contents' on Long Pages	3
7:5	Place Primary Navigation Menus in the Left Panel	3
7:6	Use Descriptive Tab Labels	3
7:7	Present Tabs Effectively	3
7:12	Breadcrumb Navigation	3
9:4	Use Unique and Descriptive Headings	3
9:5	Highlight Critical Data	3
9:6	Use Descriptive Row and Column Headings	3
10:10	Use 'Pointing-and-Clicking'	3
10:11	Use Appropriate Text Link Lengths	3
10:13	Clarify Clickable Regions of Images	3
11:3	Use Mixed-Case for Prose Text	3
11:5	Use Bold Text Sparingly	3
11:11	Highlighting Information	3
12:6	Use Static Menus	3
13:1	Distinguish Required and Optional Data Entry Fields	3
13:3	Label Data Entry Fields Consistently	3
13:5	Label Data Entry Fields Clearly	3
13:6	Minimize User Data Entry	3
13:8	Allow Users to See Their Entered Data	3
13:10	Use Familiar Widgets	3

## Guidelines Ranked by **Strength of Evidence**

Chapter: Guideline #	Guideline Heading	Relative Importance
13:14	Prioritize Pushbuttons	3
13:15	Use Check Boxes to Enable Multiple Selections	3
13:16	Label Units of Measurement	3
13:17	Do Not Limit Viewable List Box Options	3
13:24	Provide Auto-Tabbing Functionality	3
14:7	Limit Large Images Above the Fold	3
14:8	Ensure Web Site Images Convey Intended Messages	3
14:12	Introduce Animation	3
15:3	Use Familiar Words	3
15:8	Limit Prose Text on Navigation Pages	3
16:5	Minimize the Number of Clicks or Pages	3
16:6	Design Quantitative Content for Quick Understanding	3
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17:1	Ensure Usable Search Results	3
17:2	Design Search Engines to Search the Entire Site	3
17:5	Design Search Around Users' Terms	3
17:7	Notify Users When Multiple Search Options Exist	3
17:8	Include Hints to Improve Search Performance	3
17:9	Provide Search Templates	3
18:3	Evaluate Web Sites Before and After Making Changes	3
18:5	Distinguish Between Frequency and Severity	3
18:7	Use the Appropriate Prototyping Technology	3
18:10	Apply Automatic Evaluation Methods	3
1:5	Set and State Goals	2
1:11	Use Personas	2
2:12	Develop Pages that Will Print Properly	2
2:15	Provide Printing Options	2
3:1	Comply with Section 508	2
3:2	Design Forms for Users Using Assistive Technologies	2
3:4	Enable Users to Skip Repetitive Navigation Links	2
3:5	Provide Text Equivalents for Non-Text Elements	2
3:6	Test Plug-Ins and Applets for Accessibility	2
3:7	Ensure that Scripts Allow Accessibility	2
3:8	Provide Equivalent Pages	2
3:10	Synchronize Multimedia Elements	2
3:12	Provide Frame Titles	2
4:1	Design for Common Browsers	2
4:2	Account for Browser Differences	2
4:3	Design for Popular Operating Systems	2
4:4	Design for User's Typical Connection Speed	2
4:5	Design for Commonly Used Screen Resolutions	2
5:2	Show All Major Options on the Homepage	2

## Guidelines Ranked by Strength of Evidence

Chapter: Guideline #	Guideline Heading	Relative Importance
5:7	Limit Homepage Length	2
5:8	Announce Changes to a Web Site	2
7:1	Provide Navigational Options	2
7:4	Provide Feedback on Users' Location	2
7:11	Use 'Glosses' to Assist Navigation	2
8:5	Scroll Fewer Screenfuls	2
9:2	Provide Descriptive Page Titles	2
9:7	Use Headings in the Appropriate HTML Order	2
9:8	Provide Users with Good Ways to Reduce Options	2
10:2	Link to Related Content	2
10:4	Avoid Misleading Cues to Click	2
10:7	Designate Used Links	2
10:8	Provide Consistent Clickability Cues	2
10:12	Indicate Internal vs. External Links	2
10:14	Link to Supportive Information	2
11:2	Format Common Items Consistently	2
12:7	Start Numbered Items at One	2
12:9	Capitalize First Letter of First Word in Lists	2
13:2	Label Pushbuttons Clearly	2
13:4	Do Not Make User-Entered Codes Case Sensitive	2
13:7	Put Labels Close to Data Entry Fields	2
13:11	Anticipate Typical User Errors	2
13:12	Partition Long Data Items	2
13:18	Display Default Values	2
13:19	Place Cursor in First Data Entry Field	2
13:20	Ensure that Double-Clicking Will Not Cause Problems	2
13:21	Use Open Lists to Select One from Many	2
13:23	Use a Minimum of Two Radio Buttons	2
14:9	Limit the Use of Images	2
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17:4	Provide a Search Option on Each Page	2
17:6	Allow Simple Searches	2
18:4	Prioritize Tasks	2
3:11	Do Not Require Style Sheets	1
3:13	Avoid Screen Flicker	1