Energy is

Outer shell

Writing Web Content

"Vigorous writing is concise. A sentence should contain no unnecessary words, a paragraph no unnecessary sentences, for the same reason that a drawing should have no unnecessary lines and a machine no unnecessary parts." - William Strunk Jr., in Elements of Style

Content is the most important part of a website.

Content is the most important part of a website. If the content does not provide the information needed by users, the website will provide little value no matter how easy it is to use the site.

When preparing prose content for a website, use familiar words and avoid the use of jargon. If acronyms and abbreviations must be used, ensure that they are clearly understood by typical users and defined on the page.

Minimize the number of words in a sentence and sentences in a paragraph. Make the first sentence (the topic sentence) of each paragraph descriptive of the remainder of the paragraph. State clearly the temporal sequence of instructions. Also, use upper- and lowercase letters appropriately, write in an affirmative, active voice, and limit prose text on navigation pages.

15:1 Define Acronyms and Abbreviations

Guideline: Do not use unfamiliar or undefined acronyms or abbreviations on websites.

Comments: Acronyms and abbreviations should be used sparingly and must be defined in order to be understood by all users. It is important to

Relative Importance: 0000 Strength of Evidence: 92000

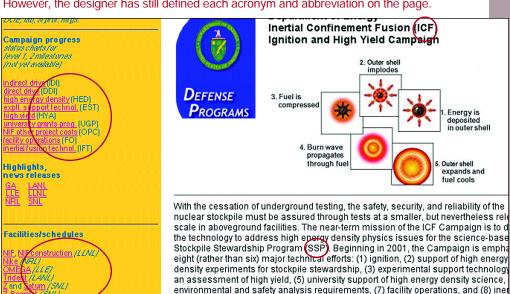
remember that users who are new to a topic are likely to be unfamiliar with the topic's related acronyms and abbreviations. Use the following format when defining acronyms or abbreviations: Physician Data Query (PDQ). Acronyms and abbreviations are typically defined on first mention, but remember that users may easily miss the definition if they scroll past it or enter the page below where the acronym or abbreviation is defined.

Sources: Ahlstrom and Longo, 2001; Evans, 1998; Morrell, et al., 2002; Nall, Koyani and Lafond, 2001; Nielsen and Tahir, 2002; Tullis, 2001.

Undefined acronyms on a homepage may leave users confused regarding the site's contents or purpose.



This detailed, highly-technical content page is designed for experts and not novice users. However, the designer has still defined each acronym and abbreviation on the page.



Relative Importance:

Guideline: Show complete words rather than abbreviations whenever possible.

Strength of Evidence:

Comments: The only times to use abbreviations are when they are significantly shorter, save needed space, and will be readily understood by typical users. If users must read abbreviations, choose only common abbreviations.

Sources: Ahlstrom and Longo, 2001; Engel and Granda, 1975; Evans, 1998; Smith and Mosier, 1986.

Example:

If abbreviations are in common usage (FBI, DEA) then it is acceptable to use them. However, if an abbreviation is not in common usage (USPIS, USPP), the complete title should be used.



15:3 Use Familiar Words

Guideline: Use words that are frequently seen and heard.

Relative Importance:

0280

Strength of Evidence:

02800

Comments: Use words that are familiar to, and used frequently by, typical users. Words that are more frequently seen and heard are better and more quickly recognized. There are several sources of commonly used words (see Kucera and Francis, 1967 and Leech et al., 2001 in the Sources section).

Familiar words can be collected using open-ended surveys, by viewing search terms entered by users on your site or related sites, and through other forms of market research.

Sources: Furnas, et al., 1987; Kucera and Francis, 1967; Leech, Rayson and Wilson, 2001; Spyridakis, 2000; Whissell, 1998.

15:4 Use Mixed Case with Prose

Relative Importance:

Guideline: Display continuous (prose) text using mixed upper- and lowercase letters.

Strength of Evidence:

Comments: Reading text is easier when capitalization is used conventionally to start sentences and to indicate proper nouns and acronyms. If an item is intended to attract the user's attention, display the item in all uppercase, bold, or italics. Do not use these methods for showing emphasis for more than one or two words or a short phrase because they slow reading performance when used for extended prose.

Sources: Breland and Breland, 1944; Engel and Granda, 1975; Moskel, Erno and Shneiderman, 1984; Poulton and Brown, 1968; Smith and Mosier, 1986; Spyridakis, 2000; Tinker and Paterson, 1928; Tinker, 1955; Tinker, 1963; Vartabedian, 1971; Wright, 1977.

Example:

This block of text is an example of displaying continuous (prose) text using mixed upper- and lowercase letters. It's not difficult to read.

THIS BLOCK OF TEXT IS AN EXAMPLE OF DISPLAYING CONTINUOUS (PROSE) TEXT USING ALL UPPERCASE LETTERS. IT'S MORE DIFFICULT TO READ.

See page xxi for detailed descriptions of the rating scales

15:5 Avoid Jargon

Guideline: Do not use words that typical users may not understand.

Relative Importance: 00000 **Strength of Evidence: 0088**0

Comments: Terminology plays a large role in the user's ability to find and understand information. Many terms are familiar to designers and content writers, but not to users. In one study, some users did not understand the term "cancer screening." Changing the text to "testing for cancer" substantially improved users understanding.

To improve understanding among users who are accustomed to using the iargon term, it may be helpful to put that term in parentheses. A dictionary or glossary may be helpful to users who are new to a topic, but should not be considered a license to frequently use terms typical users do not understand.

Sources: Cockburn and Jones, 1996; Evans, 1998; Horton, 1990; Mayhew, 1992; Morkes and Nielsen, 1997; Morkes and Nielsen, 1998; Nall, Koyani and Lafond, 2001; Schramm, 1973; Spyridakis, 2000; Tullis, 2001; Zimmerman and Prickett, 2000: Zimmerman, et al., 2002.

Example:

This is a website often visited by the public. As such, the site language should be accessible and free of jargon.

What's New About KDE

Are You New to KY? Calendars

Certification

Max Data System News Room

Parents & Families Partners

Proof of Progress Publications & Videos School Improvement Testing & Reporting

MEP reading score Latest News The results of the 2002 Na

Progress (NAEP) in reading 8th-grades continue to ma

Phase II SEEK Adeq The second of two financia Support Education Excelle program has been release

D and Mentor Fund Regi The Kentucky Department for teachers and administra and/or math leaders for th percentage of students so and math. Application dead

Kentucky Board of Education Saying they are "deeply co funding of Kentucky's syst

When searching google.com/unclesam for "thyroid cancer," this page is the first returned "hit." Thus, this is the first government page that a user may encounter. To accommodate these users, the page content should be free of jargon and words that a new

: I-131 and Radioactive Fallout (12/11/2002, N Questions and Answer

From the National Institutes of Health

Questions and Answers: I-131 and Radioactive Fallout (National Canci What You Need To Know About Thyroid Cancer (National Cancer Insti

General/Overviews

Cancer of the Thyroid (American Thyroid Association) What is Thyroid Cancer? (American Cancer Society)

Clinical Trials

ClinicalTrials.gov: Thyroid Neoplasm National Institutes of Health)

Diagnosis/Symptoms

Can Thyroid Cancer Be Found Early? (American Cancer Society) How is Thyroid Cancer Diagnosed? (American Cancer Society)

How is Thyroid Cancer Staged? (American Cancer Society)

Thyroid Scan/Thyroid Uptake Study Links to PDF File (National Inst TRH Stimulation Test Links to PDF File (National Institutes of Health

Disease Management

Thyroid Cancer: What Happens After Treatment? (American Cancer S

user might not understand.

See page xxi for detailed descriptions of the rating scales

0000

15:6 Make First Sentences Descriptive

Guideline: Include the primary theme of a paragraph, and the scope of what it covers, in the first sentence of each paragraph.

Relative Importance: 92500

Strength of Evidence: 00000

Comments: Users tend to skim the first one or two sentences of each paragraph when scanning text.

Sources: Bailey, Koyani and Nall, 2000; Lynch and Horton, 2002; Morkes and Nielsen, 1997; Morkes and Nielsen, 1998; Spyridakis, 2000.

Example:

Descriptive first sentences set the tone for each of these paragraphs, and provide users with an understanding of the topic of each section of text.

Programs

Nuclear Weapons | Nonproliferation and Materials Control | Energy and Critical Infrastructure **Emerging Threats**

The Emerging Threats program develops high-impact responses to national security challenges. As the 9/11 terrorist attacks only begin to indicate, advanced technologies - chemical, biological, nuclear, and informational -- create the potential for greater harm than ever to our nation.

Sandia's integrated science expertise allows us to develop technologically superior weapons and security systems. From basic research to global intelligence, Sandia supports numerous government and industry agencies in combating terrorism and threats against our armed forces and homeland. We apply our scientific and engineering knowledge to:

- · Identify and neutralize biological and chemical agents, whether released accidentally or intentionally
- · Disable explosive devices, including land mines and bombs
- · Detect and defeat hard-to-find offensive threats, including weapons storage facilities and mobile targets
- Sandia remains ready to provide our nation with the technical

· Generate precise battlefield information capability to respond to threats against our armed forces, our nation, and our survival as a free nation.



Protecting America's Infrastructure - Sandia is working to raise construction standards to produce structures that can better withstand a wide range of threats. In the Oklahoma City bombing, most of the victims were killed not by the blast but by the building when its nine floors collapsed like a house of

Research-Based Web Design & Usability Guidelines

15:7 Use Active Voice

Guideline: Compose sentences in active rather than passive voice.

00000 **Strength of Evidence: 0000**

Comments: Users benefit from simple, direct language. Sentences in active voice are typically more concise than sentences in passive voice. Strong verbs help the user know who is acting and what is being acted upon. In one study, people who had to interpret federal regulation language spontaneously translated passive sentences into active sentences in order to form an understanding of the passages.

Sources: Flower, Hayes and Swarts, 1983; Horton, 1990; Palermo and Bourne, 1978; Palmquist and Zimmerman, 1999; Redish, Felker and Rose, 1981; Smith and Mosier, 1986; Spinillo and Dyson, 2000/2001; Spyridakis, 2000; Wright, 1977: Zimmerman and Clark, 1987.

Example: Active Voice Example

Passive Voice Example

"John hit the baseball." "The baseball was hit by John."

15:8 Write Instructions in the Affirmative

Guideline: As a general rule, write instructions in affirmative statements rather than negative statements.

Relative Importance: **885**00 **Strength of Evidence:**

Comments: When giving instructions, strive to tell users what to do (see a dentist if you have a

toothache), rather than what to avoid doing (avoid skipping your dentist appointment if you have a toothache). If the likelihood of making a wrong step is high or the consequences are dire, negative voice may be clearer to the user.

Sources: Greene, 1972; Herriot, 1970; Krull and Watson, 2002; Palmquist and Zimmerman, 1999; Smith and Mosier, 1986; Wright, 1977; Zimmerman and Clark, 1987.

An example of negative voice pointing out consequences to the user.

Message successfully posted by: 156.40.129.142 (Logged!).

IMPORTANT: Do **NOT** press BACK - If you come back to this page, your message will be posted a second time!

> See page xxi for detailed descriptions of the rating scales **0000**

Relative Importance:

15:9 Limit the Number of Words and Sentences

Guideline: To optimize reading comprehension, minimize the number of words in sentences, and the number of sentences in paragraphs.

Relative Importance: 00000

151

Writing Web Content

Strength of Evidence: മെമ

Comments: To enhance the readability of prose text, a sentence should not contain more than

twenty words. A paragraph should not contain more than six sentences.

Sources: Bailey, 1996; Bailey, Koyani and Nall, 2000; Bouma, 1980; Chervak, Drury and Ouellette, 1996; Evans, 1998; Kincaid, et al., 1990; Marcus, 1992; Mills and Caldwell, 1997; Nielsen, 1997c; Palmquist and Zimmerman, 1999; Rehe, 1979; Spyridakis, 2000; Zimmerman and Clark, 1987.

Example: This is an example of how to optimize reading comprehension. The number of words in a sentence is minimized, and there are few sentences in each paragraph.

Smallpox Vaccine: What you should know

There's been a lot in the news about the smallpox vaccine. What is it and how does it work?

The smallpox vaccine was used until the early 1970s to wipe out smallpox worldwide. Much like other vaccines, the smallpox vaccine protects against infection by helping your body develop immunity to the smallpox virus. The smallpox vaccine is made from a live virus that's very similar to the smallpox virus. The vaccine doesn't cause smallpox, but it can cause life-threatening problems in some people.

If smallpox was wiped out long ago, why am I hearing about the vaccine now?

A smallpox epidemic hasn't occurred for many years, but there are still stocks of the virus in laboratories throughout the world. It is possible that these stocks of the smallpox virus could be used as weapons in a bioterrorism attack. The United States government has developed a plan to help protect Americans against smallpox in the event of bioterrorism.

What is a Smallpox Response Team?

A Smallpox Response Team is a group of medical professionals who have received the smallpox vaccine. In the event of a smallpox attack, these people could continue to provide health care to others. The Department of Health and Human Services (DHHS) is now working with state and local governments to form these response teams.

Should everyone get the smallpox vaccine?

For most people, whether they are vaccinated against smallpox depends on whether there has been an outbreak of the disease. In most cases, the vaccine causes mild side effects, such as soreness around the vaccination site, fever and body aches. A small percent of people will suffer serious side effects and may even die. Thus, if there hasn't been an outbreak of smallpox, the risks associated with the vaccine don't outweigh the benefits for most people. The following groups of people are more likely to have severe reactions and should only be vaccinated if actually exposed to smallpox:

Research-Based Web Design & Usability Guidelines

15:10 Limit Prose Text on Navigation Pages

Guideline: Do not put a lot of prose text on navigation pages.

02800 **Strength of Evidence: 999**00

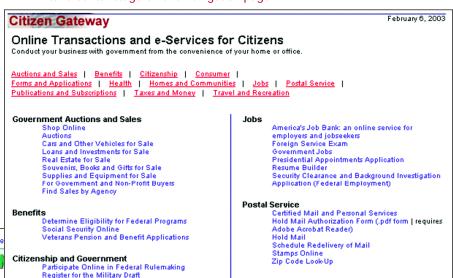
Relative Importance:

Comments: When there are many words on navigation pages, users tend to rapidly scan for specific words or begin clicking on many different

links, rather than reading the text associated with the links.

Sources: Bailey, Koyani and Nall, 2000; Evans, 1998; Morkes and Nielsen, 1998; Nielsen, 2000; Spyridakis, 2000.

Example: The lack of prose text allows navigation elements to take center stage on this navigation page.



NFAC Links:

Skip Navigation

AC Leadership ws & Info velopment ategic Plan

elated Links:

te Office Locato

Welcome to the Food and Agriculture Council Homepage.

The Food and Agriculture Council (FAC) at the national, state, and local levels are the vehicles used to coordinate the U.S. Department of Agriculture's programs, initiatives, and activities requiring cooperative involvement across mission area and agency lines. FACs were instituted by the Secretary of Agriculture in order to provide a policy level, cross agency, decision making and communication medium as needed to achieve the USDAs goals and objectives.

The National FAC (NFAC) is the management entity designated by the Secretary of Agriculture to carry out USDA's field restructuring and modernization effort. The NFAC is comprised of the Administrators of all USDA agencies that are active at the State level. The Chair of the NFAC rotates annually between the Administrators of the Farm Service Agency, the Chief of the Natural Resources Conservation Service, and the Deputy Under Secretary for Operations and Management of the Rural Development agencies.

The NFAC is supported by an Executive Officer who also heads USDAs Service Center Implementation Team (SCIT). The SCIT is an interagency staff that supports the activities of the NFAC, and initiates activities and projects on behalf of the partner agencies to ensure the successful implementation of the USDAs Service

The large volume of prose text forces navigation links (the primary purpose of the page) into the left panel.

NFAC Main Menu

15:11 Make Action Sequences Clear

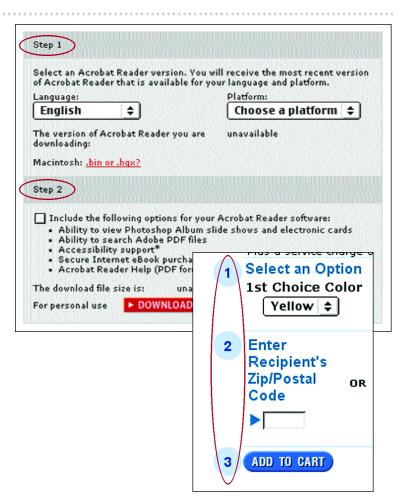
Guideline: When describing an action or task that has a natural order or sequence (assembly instructions, troubleshooting, etc.), structure the content so that the sequence is obvious and consistent.

Relative Importance: **02**000 **Strength of Evidence: 0060**0

Comments: Time-based sequences are easily understood by users. Do not force users to perform or learn tasks in a sequence that is unusual or awkward.

Sources: Czaja and Sharit, 1997; Farkas, 1999; Krull and Watson, 2002; Morkes and Nielsen, 1998; Nielsen, 2000; Smith and Mosier, 1986; Wright, 1977.

Example:



See page xxi for detailed descriptions of the rating scales **0000**0