

MS Word 2003

Creating Accessible Word Documents



CALIFORNIA STATE UNIVERSITY, SACRAMENTO

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WORKSHOP DESCRIPTION

Overview

Through this workshop you will learn about the different elements needed in a word document to make it accessible to a diverse audience. Creating an accessible base document through Microsoft word will allow you to convert to accessible PDF and HTML document formats as well. We will go over the essential structural elements needed in an accessible document such as heading styles, ordered and unordered lists, and headers and footers. We will also explain how to add non-text elements, images, tables and hyperlinks to your document so that they are accessible. Lastly, we will go over how to convert your base document across formats such as PDF and HTML.

Prerequisites

Individuals taking this workshop should have basic computer skills, knowledge about the creation of documents using a word processor such as MS Word, and the ability to work in the Windows or Macintosh OS environments.

Objectives

- To learn about the different structural and design elements needed in an accessible word document.
- To understand how to include these elements when creating a document.
- To apply what you have learned about accessible word documents to create an accessible document.

CREATING ACCESSIBLE WORD DOCUMENTS

Introduction

The focus of this workshop is to create documents that are accessible to individuals with a visual impairment and that require the use of an assistive technology, like a screen reader, to navigate and read documents. Nevertheless, you should also think about other characteristics your audience members may have (physical disability, learning disability, learning style, language, etc.) and design documents that meet those needs. Although we will not cover every aspect or user characteristic, we hope that through the suggestions provided you will have a better starting point for creating accessible documents.

Some Formatting Basics

Before we get into the details of using Styles to structure a document, let's go over some general formatting elements:

- **Layout of Content** – Divide content into manageable blocks of text to make it easier for users to navigate document. For example, include headings, sub-headings to divide text into related paragraphs and sections. Use bulleted or numbered lists to display lists instead of using lengthy sentences.
- **Language Used** – Be aware of your audience and their specific needs. Use language that is appropriate to your target audience. Also, if you are using abbreviations or acronyms make sure to provide the full/expanded definition the first time you use them in a document. These can be placed in parenthesis next to the abbreviation or acronym. Do not assume your audience knows what a particular term means, define terms that may be unclear to your reader.
- **Font Type:** Choose sans-serif fonts like Arial, Tahoma, Trebuchet MS, Verdana and Helvetica which are easier to read in comparison to serif fonts like Times New Roman or Courier. For a full discussion and list of recommended fonts see [WebAIM's Fonts Article](http://www.webaim.org/techniques/fonts/) (<http://www.webaim.org/techniques/fonts/>).
- **Text Color** – Some users cannot perceive certain colors (green and red). Therefore do not rely on color to bring out text in a document, instead use a style that underlines or bolds the text.
- **Contrast** – Use a high contrast between text and background colors. Use dark text on light backgrounds and light text on dark backgrounds.

Structure Your Document

One of the most important elements in creating an accessible word document is to organize and structure your document using markup also known as tagging. Markup allows you to define the status of specific portions of text throughout your document. Through markup you define whether the text is a header, a heading 1, a heading 2, a paragraph, a column, an ordered or unordered list, or any other element type.

This is important for individuals using a screen reader, because it allows the screen reader to detect the type of text it is reading from the markup you have used to create your document. Using markup is also beneficial for the sighted user because it keeps your document in an organized and clear structure that is easier to read.

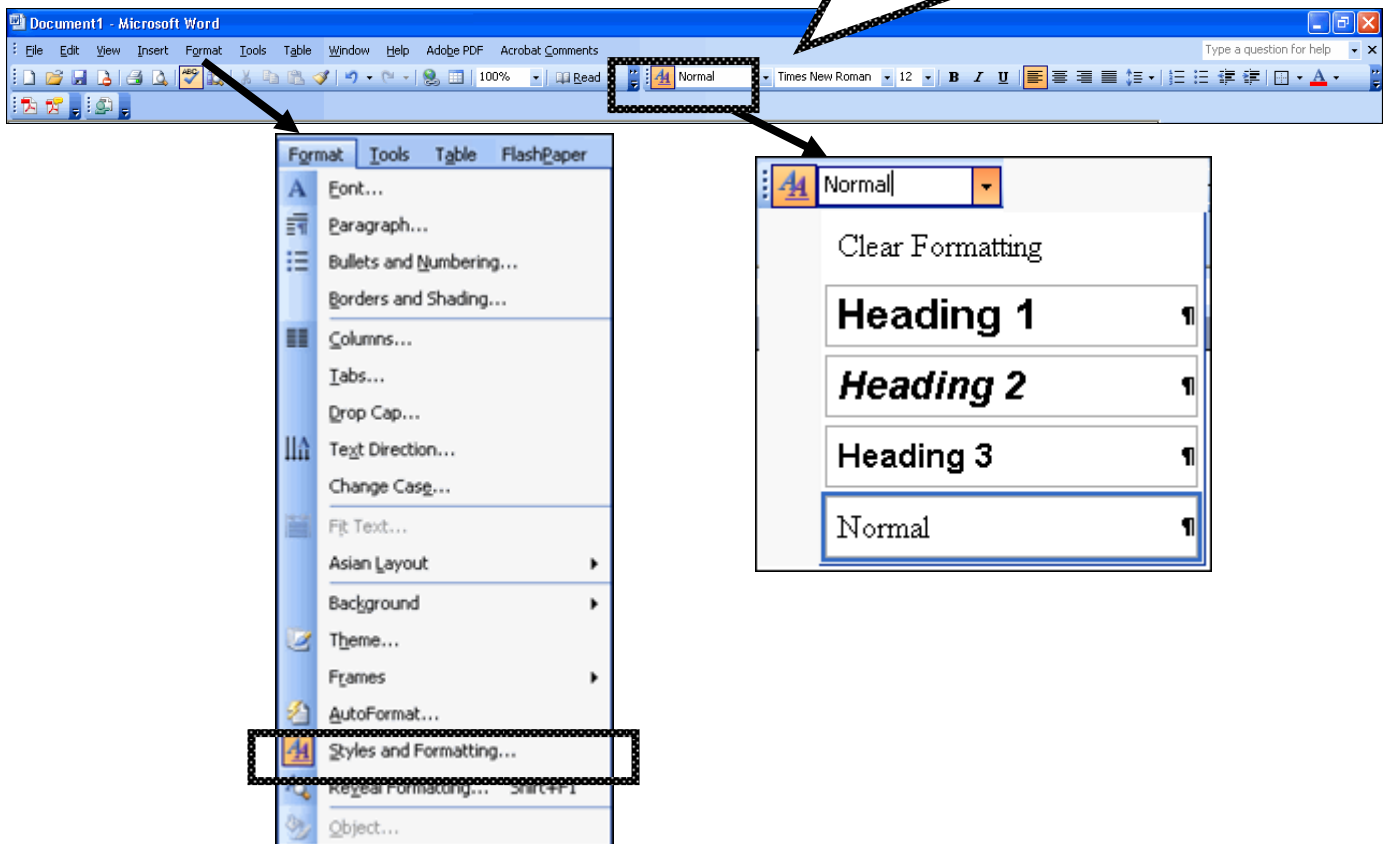
To markup a document, use the Styles tool in MS Word. You can use a built in style, modify an existing style or create your own style. Do not use direct character or paragraph formatting, such as when you select text in your document and click on **B** to bold or *I* to italicize. This will only format individual letters, words and groups of words and not define what element they represent in a document (a title, a heading, a list, etc.).

Using styles allows you to create an organized structure in your document by defining text throughout the document (i.e. a title is distinguished from a heading, from a subheading, from a paragraph, etc). Another advantage of using Styles is that the structure and organization of your base document is maintained across formats, it is easier to read by all users including individuals using assistive technologies, because elements are easier to detect.

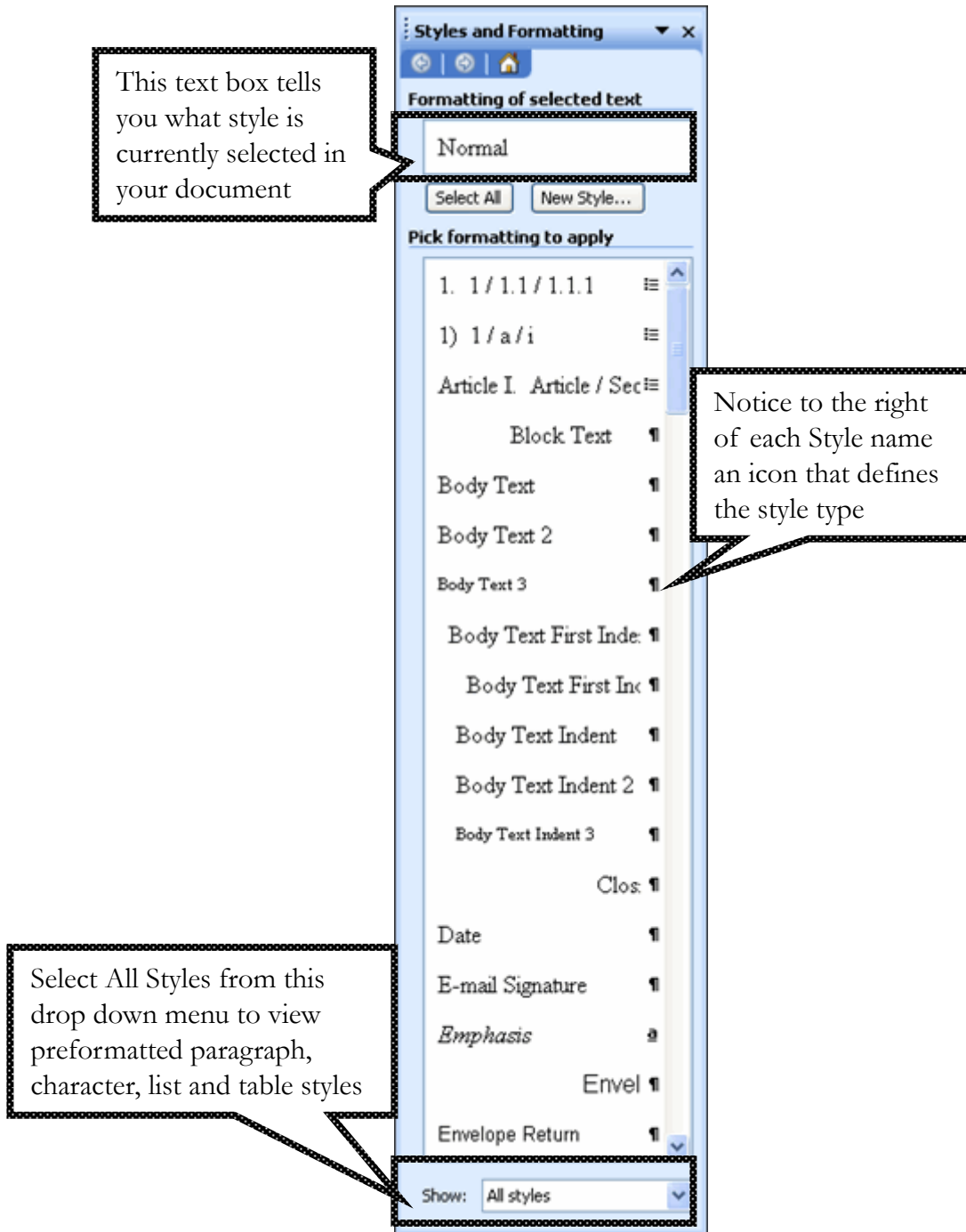
Using Styles

In order to structure your document through markup you must use the Styles and Formatting function under the Format Menu in Microsoft Word. You can also access Styles in Word from the Style drop down tool on the Formatting Toolbar. However, this Style drop down menu is used to apply styles to selected text in your document and displays what style is currently being used in the document based on your current location in the document. You cannot modify and/or create styles from this tool. Therefore to Modify an existing style or create a new style you must open the Styles and Formatting task pane from the Format menu or click on the Styles and Formatting Icon on the formatting toolbar.

You can access Styles in Word from the Format menu, the Styles drop down tool, or the Styles & Formatting shortcut on the toolbar.



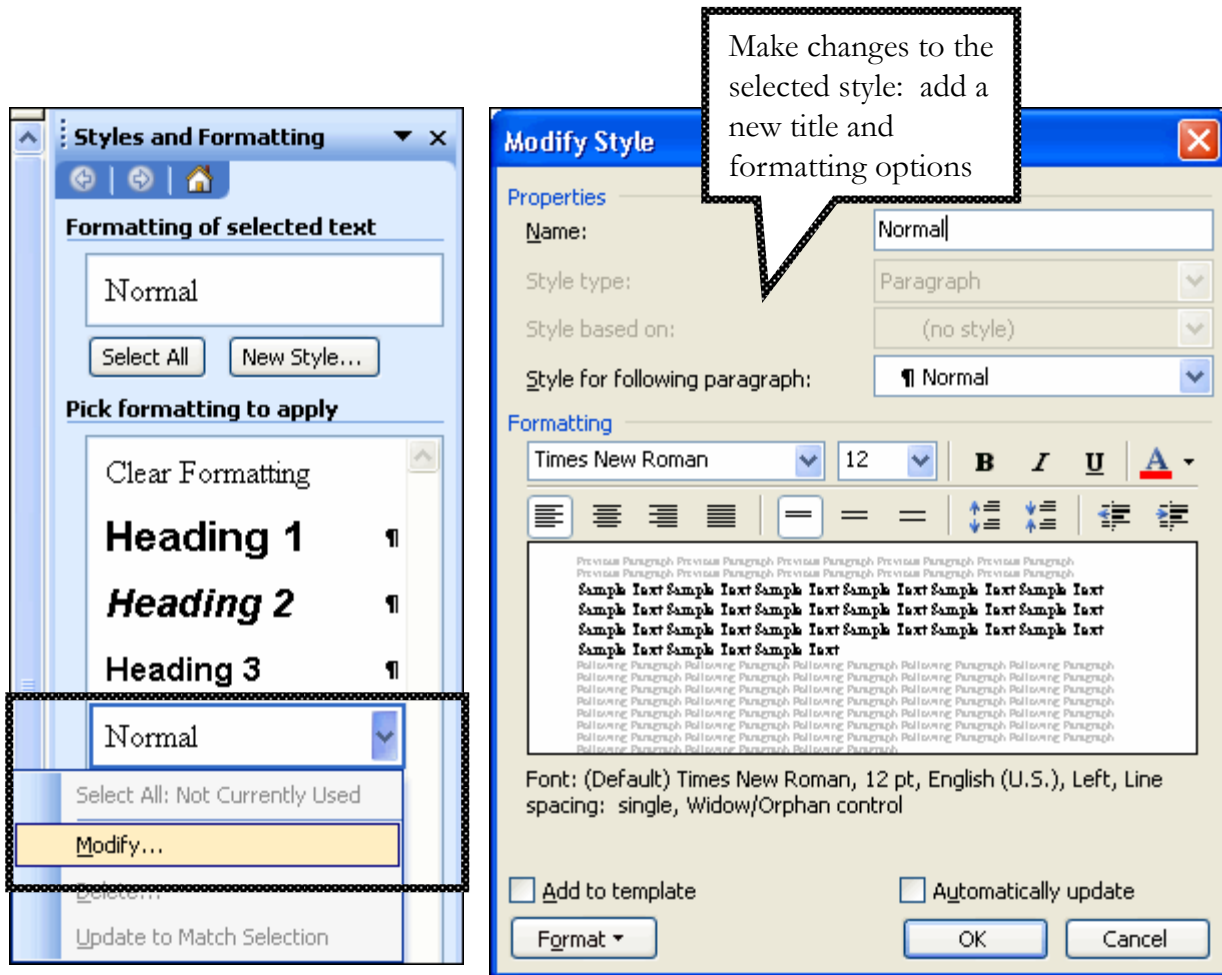
When you open the Styles and Formatting task pane you will see different preformatted styles. For a new blank document the default list of styles shown includes three heading styles called Heading 1, Heading 2, and Heading 3 and a paragraph style called Normal, there are however more styles you can choose from. To view all preformatted styles select All Styles from the drop down menu at the bottom of the Styles and Formatting task pane.



Modifying a Style

You may modify an existing style or create your own custom style. To modify an existing style follow these steps:

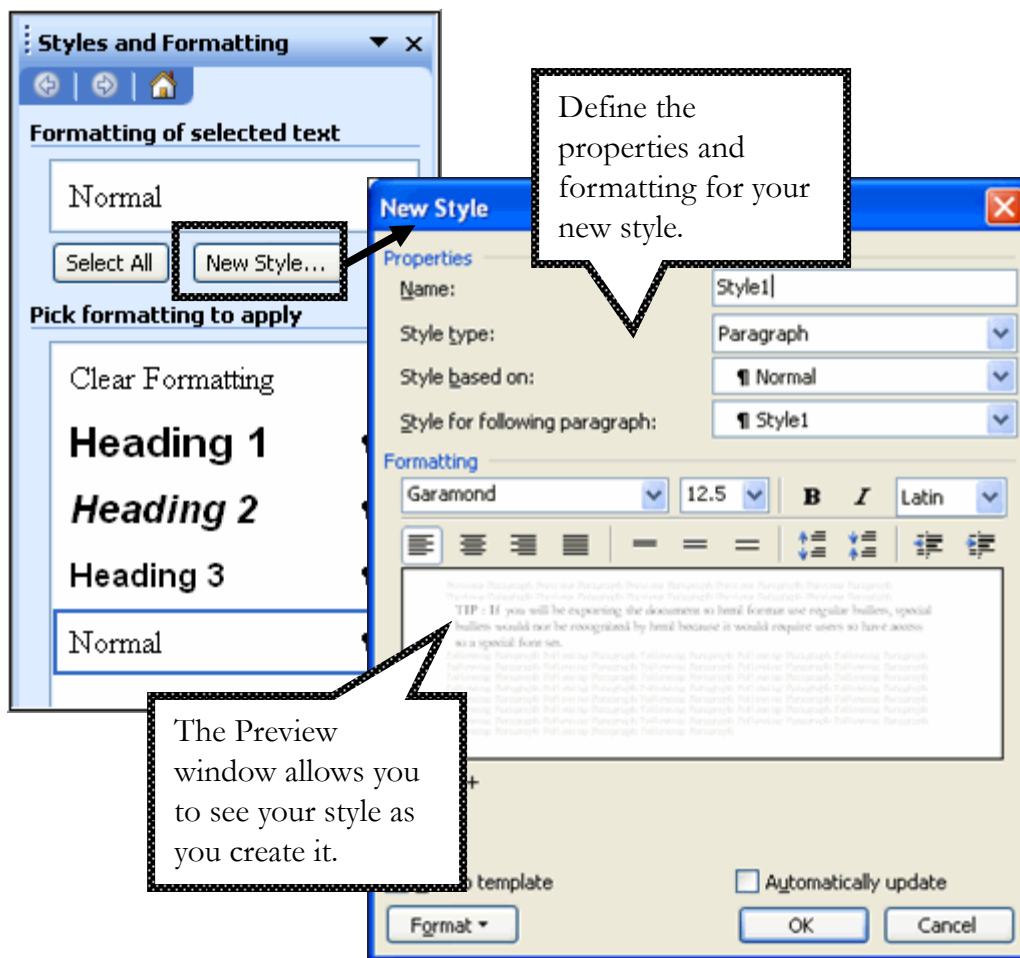
- step 1.* From the Styles and Formatting task pane choose one of the preformatted styles you would like to modify.
- step 2.* On the right of the Style's name, click on the drop down arrow and select Modify. This will open the Modify Style dialog box.
- step 3.* Provide a name for your style based on the type of text you will be applying it to.
- step 4.* Select the style for the following paragraph from the drop down list (usually this will be normal).
- step 5.* Change the font type, font size, line spacing, add a border, etc. from the Formatting section.
- step 6.* Once you have made your changes to the style, click OK to save your changes.
- step 7.* To apply your style to text in your document simply select the text and click on the name of your style from the Styles and Formatting task pane.



Creating a New Style

If existing preformatted styles do not meet your needs you can create a custom style that you can then apply to your selected document text. To create a new style follow these steps:

- step 1.** Select the New Style button from the Styles and Formatting task pane which will open the New Style dialog box.
- step 2.** You will see two sections: Properties and Formatting.
- step 3.** From the Properties section you will define the style name, the type of style: paragraph, character, table or list (choose based on the type of text you will be applying the style to).
- step 4.** From the Formatting section select the font type, font size, alignment and other formatting options.
- step 5.** Click OK to save you new style.

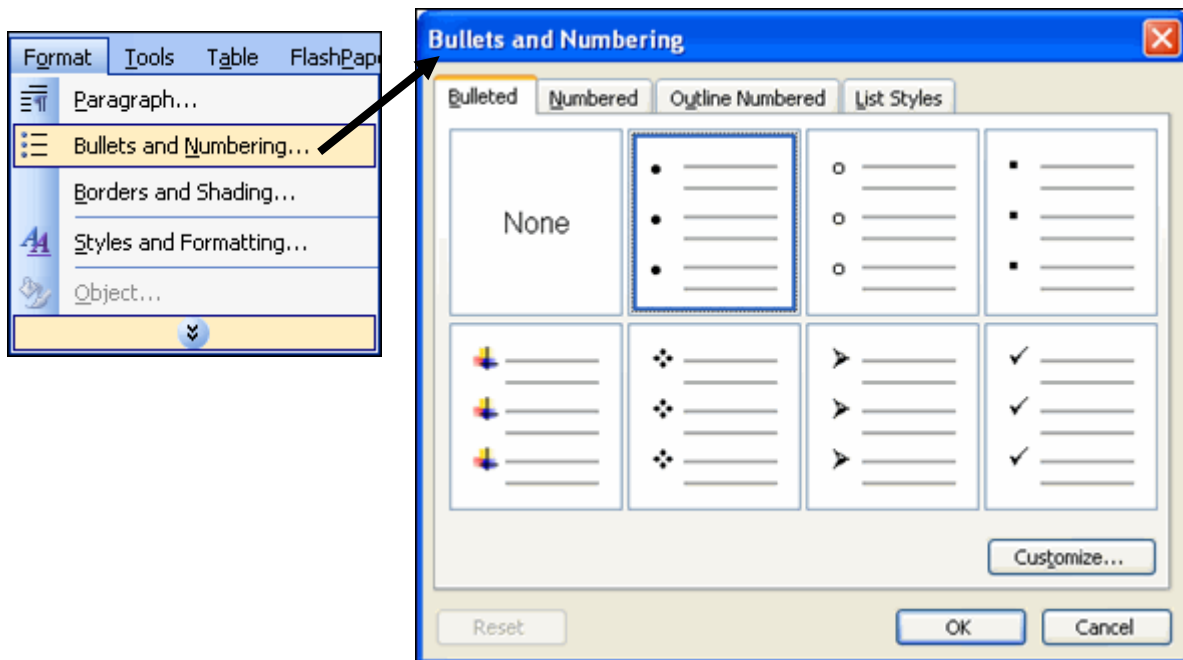


TIP : Avoid using direct formatting from the formatting toolbar to format text in your document because it only performs character formatting and does not create a labeled style.

Creating a Style for Ordered and Unordered Lists

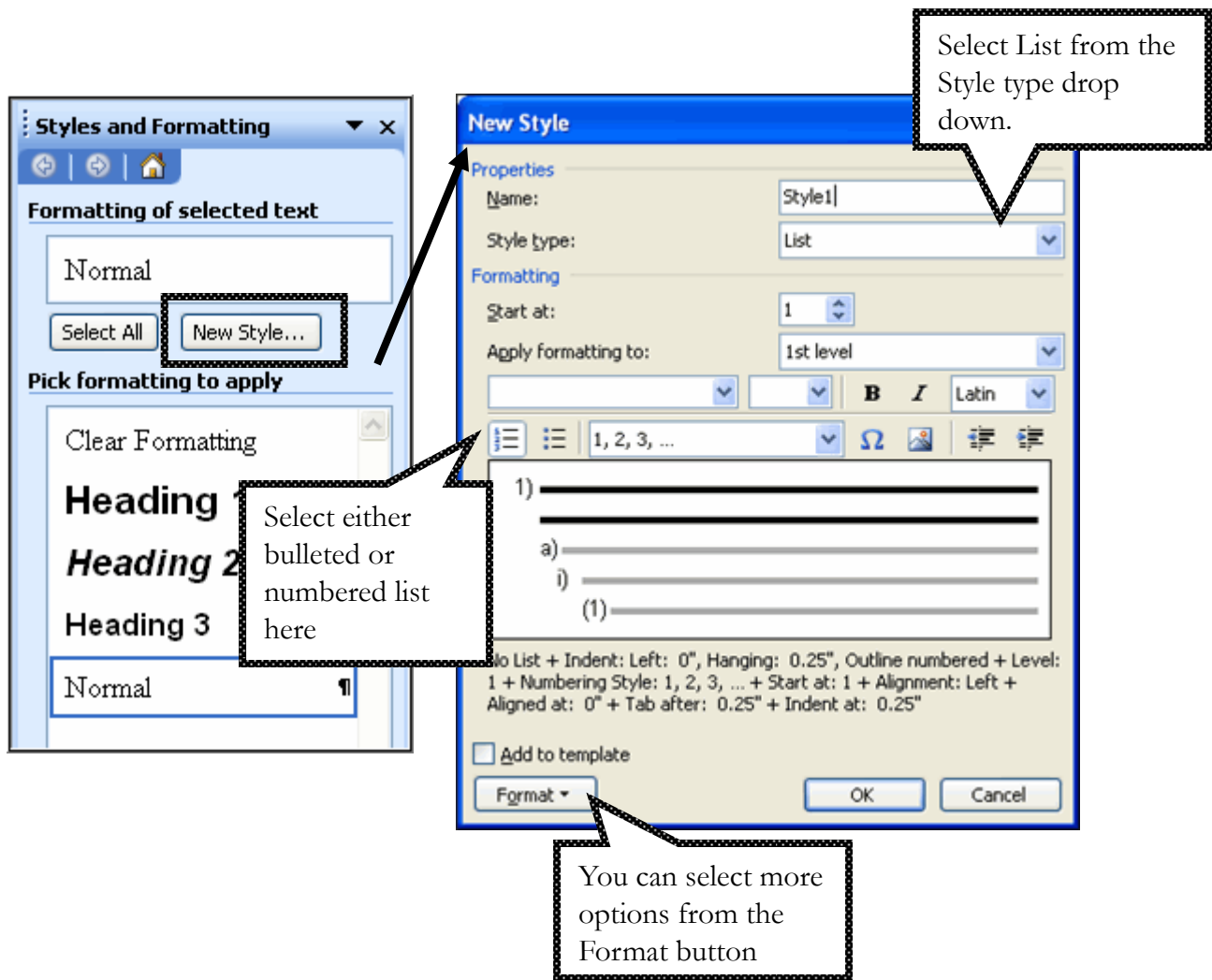
There are two ways you can create ordered and unordered lists and customize a list type in your document. The first option is to create them by accessing the Format menu and selecting the Bullets and Numbering option.

- step 1.* Navigate to the Menu Bar and click on Format
- step 2.* From the drop down menu select Bullets and Numbering, a new window labeled Bullets and Numbering window will appear
- step 3.* Select the bullet style you want from the preformatted list styles: bulleted, numbered, outline numbered or list styles
- step 4.* Once you have applied the list style it will appear listed along with other styles on the Style and Formatting task pane.



You can also add an existing list style, modify an existing style or create your own custom list style specific to your needs, from the Styles and Formatting pane.

- step 1.* Select New Style from the Styles and Formatting pane.
- step 2.* From the Style Type drop down menu select List.
- step 3.* Define the characteristics of your style including: name, font type and size, bulleted or numbered, etc.
- step 4.* View created style within the preview box and make changes as necessary
- step 5.* Click OK to add New Style to list of styles.



TIP : If you will be exporting the document to html format use regular bullets, special bullets would not be recognized by html because it would require users to have access to a special font set.

Headers and Footers

In addition to using paragraph styles in your documents to organize and define the structure of a document, elements such as page numbers, notes and citations should be placed within a header and/or footer. These should not be done manually, for example typing out the number 1, 2, 3 etc. at the top or bottom of every page as page numbers, because they will not be included within the marked up structure of the document. To add a header and/or footer to a document select Header and Footer from the View Menu.

Working with Images

Besides text, most documents also include images. Some of the most common images used within documents are:

- Descriptive or Informative images
- Decorative images such as icons or logos
- Charts to represent information from a data table

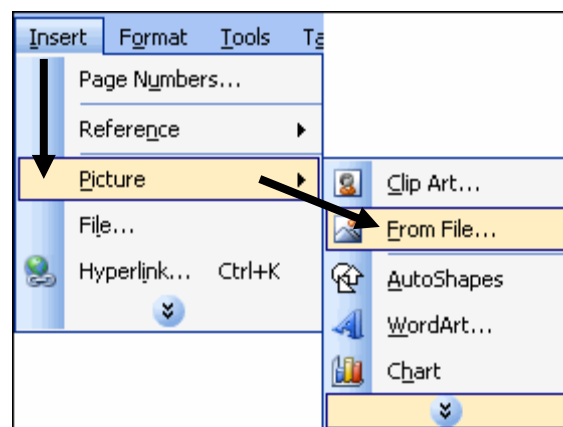
The overall purpose of including images in any document should be to help the reader comprehend the purpose and/or meaning of the content they are reading. Thus, it is important that if you are including images in a document that all individuals understand their purpose.

There are two fundamental procedures you should follow when including images in your documents in order to ensure that images are accessible to your audience:

1. Use the Insert function in Word to add images to your document, do not copy and paste images.
2. Add an alternative text description, also known as Alt-text. These alternative text descriptions should not repeat what is already stated in captions within the document or other document text.

The following are the basic steps to include accessible images in your documents:

- step 1.* Navigate to the Menu Bar and click on Insert.
- step 2.* From the Insert drop down menu select Picture, a sub-menu will appear with various options.
- step 3.* Choose the option depending on where the image is located, usually you will be selecting From File to locate the image on your computer or other storage media.



Once the image is inserted, add an alternative text description.

step 4. You can either click on the image to select it and from the Format menu click on Picture, double click on the image to open the Format Picture window, or right click on the image and select Format Picture.

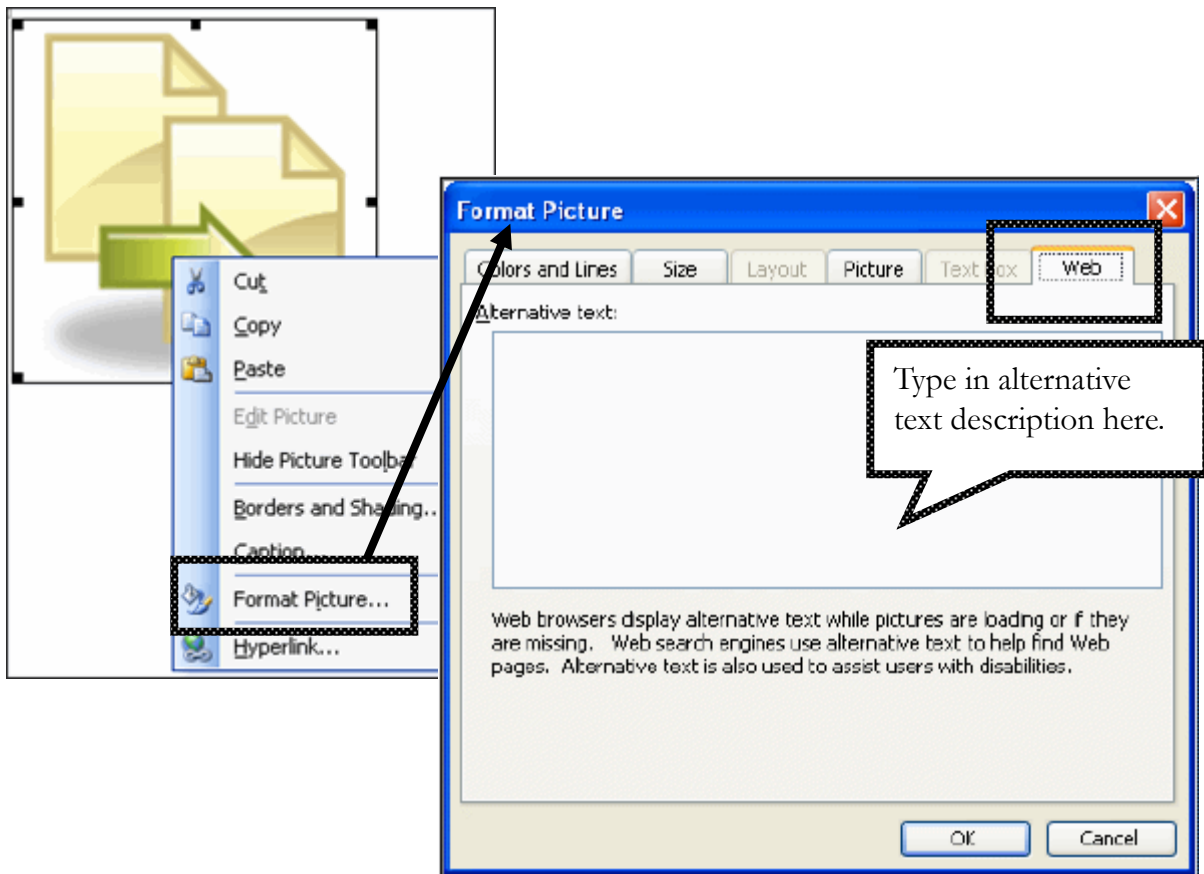
step 5. On the Format Picture window, select the Web tab.

step 6. In the text box provided, type in a description for the image and click OK.

step 7. Your image is now ready with an alt-text description that will be carried over to other formats of your document such as PDF and HTML.



TIP : Word on Macintosh does not provide the Alt text option. Use Word on Windows to add alt text descriptions to images. Or you can use the use the Insert Caption option in Macintosh to add a description above or below an image.



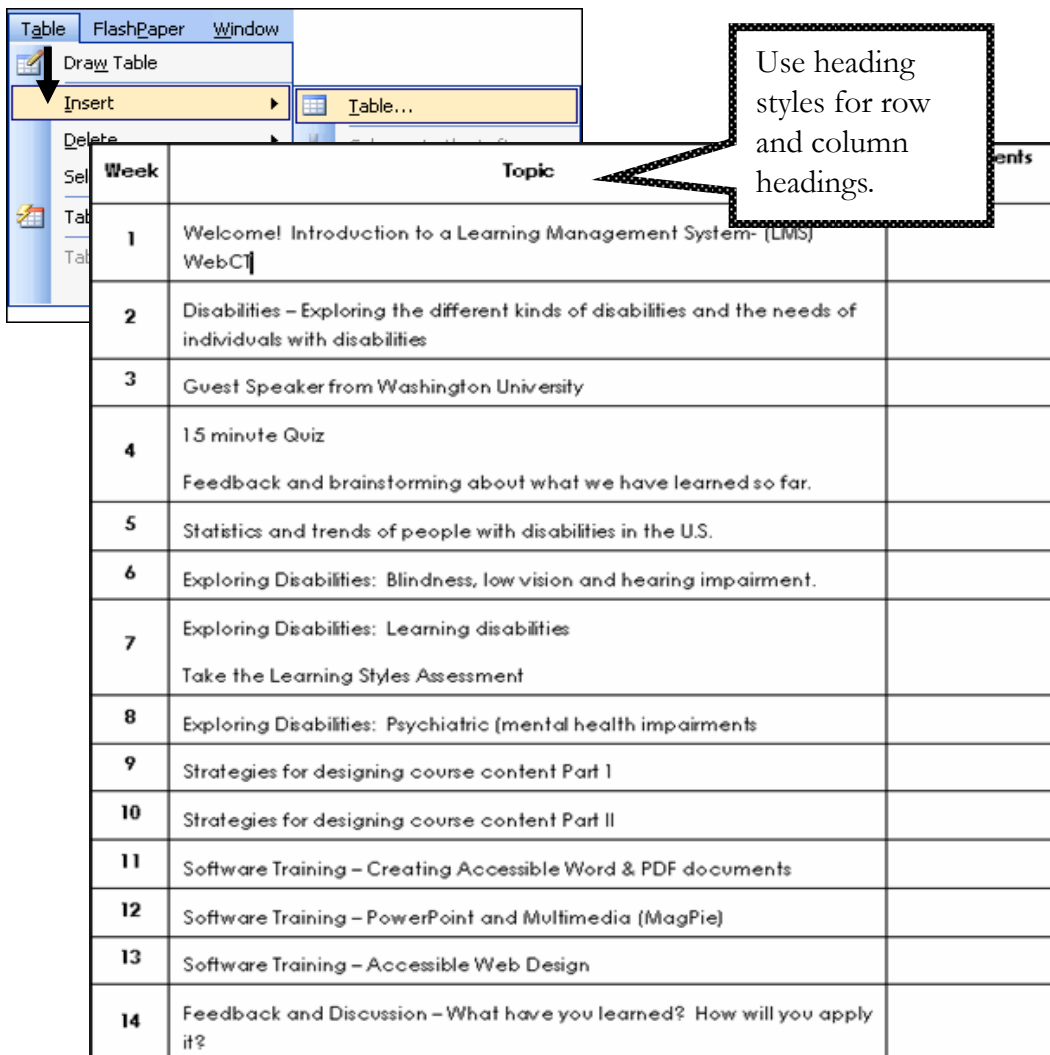
TIP : Before inserting images into your document, edit them and resize them as necessary using a picture editing software such as Adobe Photoshop or Paint.

Tables

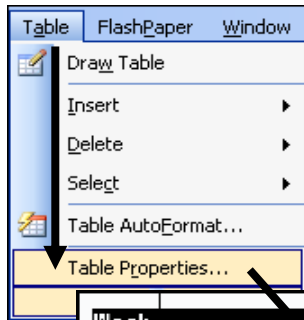
In addition to images and charts, you may also add Tables in your document to organize information or to display data. The following are some guidelines when creating tables in Word:

- Create Tables from the Table Menu and select either Insert Table or Draw Table
- Use Heading Styles for row and column headings
- If the table continues on to another page make sure you repeat the table header on the new page (turn on “Repeat As Header Row at the Top of Each Page”)
- Turn off “Allow Row to Break Across Pages” option under the Table Properties
- Keep table simple, do not nest tables or merge cells. Simple data tables have one row of headings or one column of headings or both.

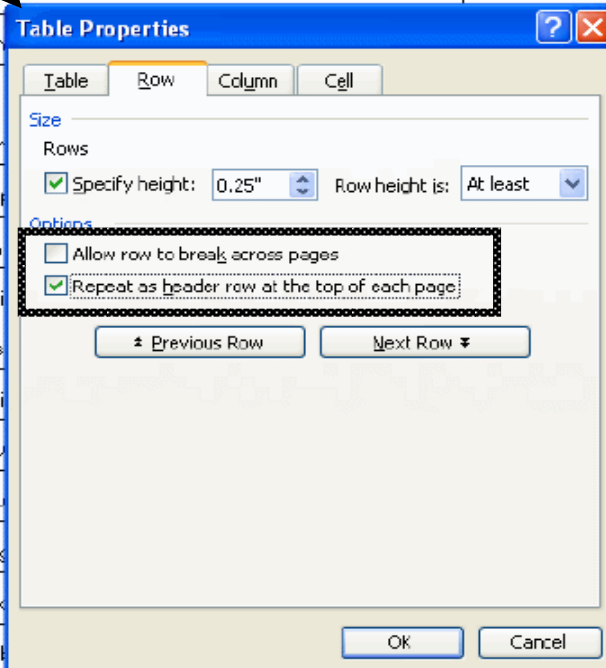
It is important to note that assistive technology such as screen readers, read tables in a linear form. For example, the screen reader begins reading from the first row of the table and then progresses left to right across the columns. When the row ends, it continues to the start of the second row and so forth. Also, screen readers assume that the first row and column of a table contain heading information. In order for assistive technology to recognize which cells are the headers in a table, these have to be marked with tags in PDF or HTML.



Week	Topic	Points
1	Welcome! Introduction to a Learning Management System- (LMS) WebCT	
2	Disabilities – Exploring the different kinds of disabilities and the needs of individuals with disabilities	
3	Guest Speaker from Washington University	
4	15 minute Quiz Feedback and brainstorming about what we have learned so far.	
5	Statistics and trends of people with disabilities in the U.S.	
6	Exploring Disabilities: Blindness, low vision and hearing impairment.	
7	Exploring Disabilities: Learning disabilities Take the Learning Styles Assessment	
8	Exploring Disabilities: Psychiatric (mental health impairments)	
9	Strategies for designing course content Part I	
10	Strategies for designing course content Part II	
11	Software Training – Creating Accessible Word & PDF documents	
12	Software Training – PowerPoint and Multimedia (MagPie)	
13	Software Training – Accessible Web Design	
14	Feedback and Discussion – What have you learned? How will you apply it?	



Week	Topic	Assignments Due
1	Welcome! Introduction to a Learning Management System- (LMS) WebCT	
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3	Guest Speaker from Washin	
4	15 minute Quiz Feedback and brainstormin	
5	Statistics and trends of peop	
6	Exploring Disabilities: Blindn	
7	Exploring Disabilities: Learnin Take the Learning Styles Ass	
8	Exploring Disabilities: Psychi	
9	Strategies for designing cou	
10	Strategies for designing cou	
11	Software Training – Creatin	
12	Software Training – PowerP	
13	Software Training – Accessib	
14	Feedback and Discussion –What have you learned? How will you apply it?	



Hyperlinks

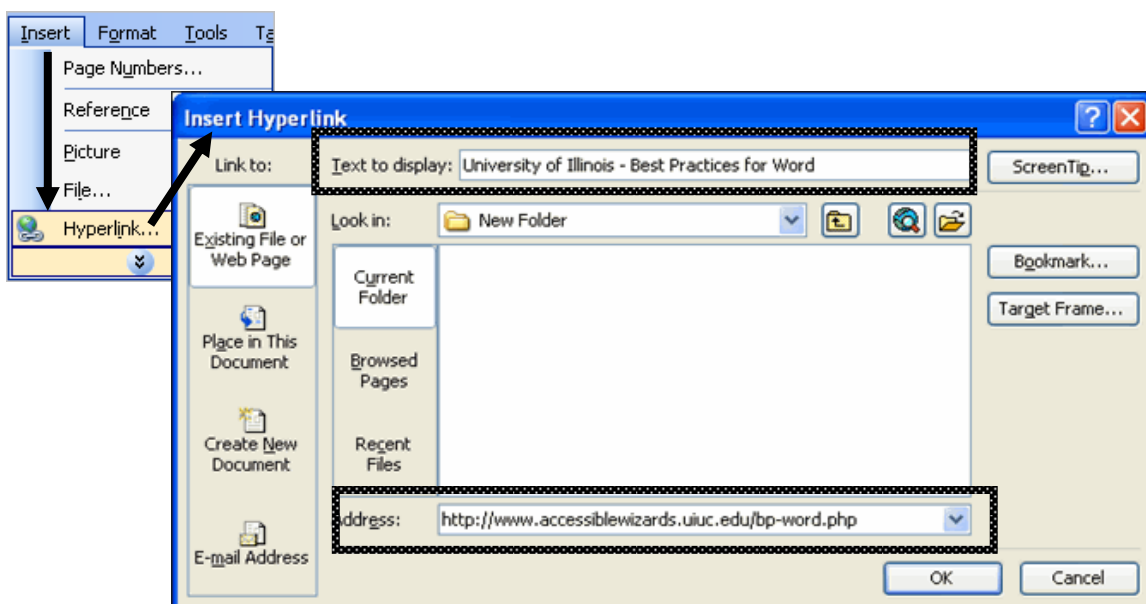
Hyperlinks are elements within electronic documents that link to another section in the document or to another electronic document such as a webpage, another word document, a presentation, a spreadsheet, etc.

When placing hyperlinks in a document you should provide a text description that will become the active link to the website or other document. Listing the URL to a website (<http://www.csus.edu>) as a link, is not sufficient. Instead, a descriptive text label (i.e. Sac State Website) is required. These descriptive labels should not be ambiguous such as “Click Here” or “Click,” they should be descriptive, to help the reader understand where the link is going to take them to.

You can display the URL to website at the side of a descriptive text label for a link such as: [Accessibility at Sac State Website \(http://www.csus.edu/accessibility/\)](http://www.csus.edu/accessibility/). However, if the URL is too long and confusing avoid listing it in your document. Also, if including multiple links in a document, separate these by using non-linked characters in between or by placing them in a bulleted list. This will help screen readers detect multiple links.

To create a hyperlink do the following:

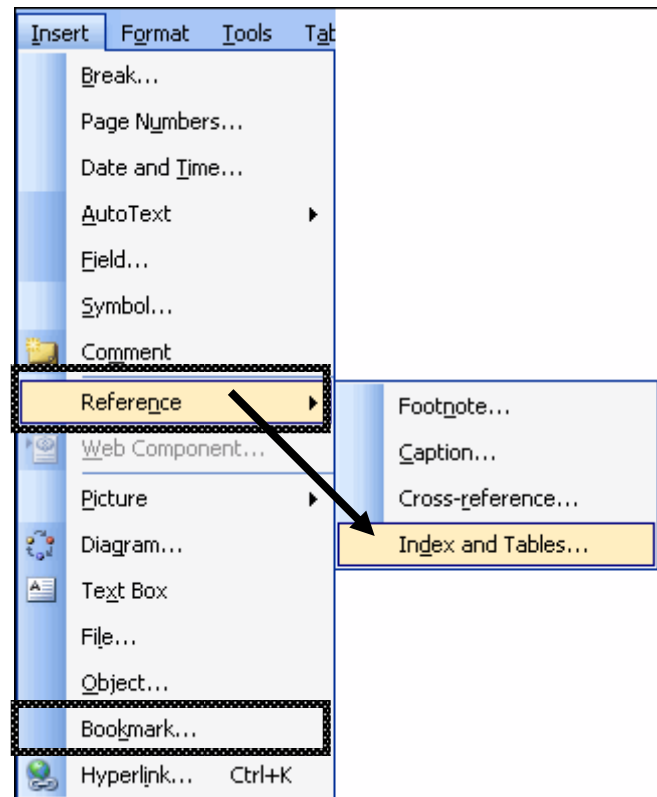
- step 1.* Highlight the text that describes the electronic document you want to link to
- step 2.* From the Format Menu select Hyperlink, the Edit Hyperlink window will open
- step 3.* Within the Text to display, text box, you will see the text you highlighted in your document
- step 4.* Select the location of the electronic document you want to link to (within document, a web page, another file, e-mail address)
- step 5.* Type in the URL of the document you want to link to in the text box labeled Address, and click OK
- step 6.* In Microsoft Word by default, hyperlinks will be in blue and underlined



Bookmarks and Table of Contents

If you are creating long documents make sure you include both bookmarks and a table of contents. Bookmarks allow users to move through the content of your document, it is best to add bookmarks to all of the major sections of your document.

- You can access both Bookmarks and Table of Contents from the Insert Menu and by selecting Index and Tables or Bookmarks.
- Limit the hierarchy to 3 levels of heading in a Table of Contents
- Update the table of contents to reflect changes made either in the organization of content or changes to content.



Other Accessibility Issues

We have talked about many structural and design elements that you can implement in your documents to make them accessible. However, file size and access to specific software applications like Microsoft Office are other important issues related to accessibility.

File Size

Users who do not have a high speed internet connection such as DSL may find it difficult to download files from a specific website, an online course management system like WebCT, and their email. Thus, it is important that when you make documents available to users electronically, that these documents are not too large that would impede users without access to high speed internet connections from downloading them. You can reduce the file size of your documents by following some basic tips:

- Before adding images to a document resize and edit images using an image editor like Adobe Photoshop or Paint.
- Break up large documents into smaller documents if possible.
- Convert word documents into other formats such as Adobe PDF or HTML.

Access to Software

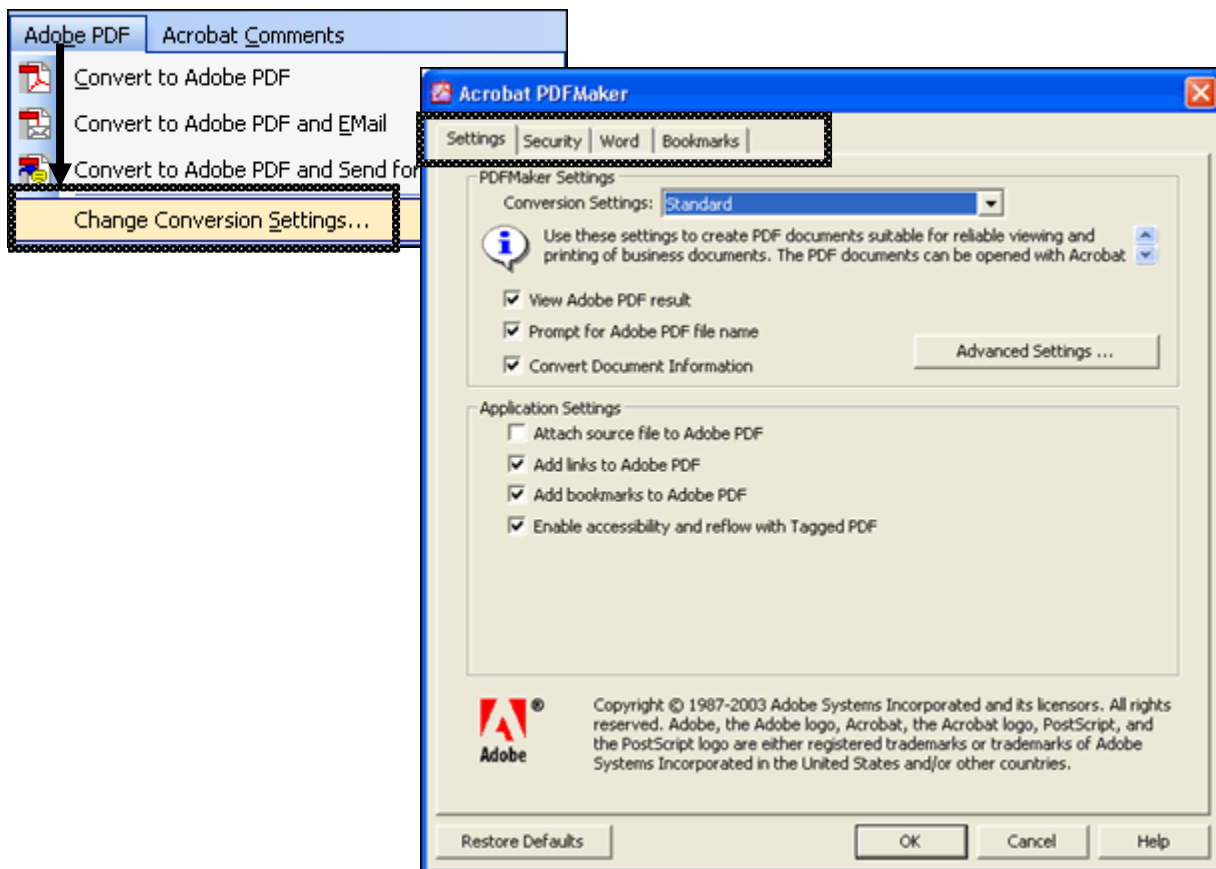
There are still many users that may not have access to specific software from their home computers, thus they may not be able to download files that use specific software such as MS Office applications. One suggestion is to add a link to the different MS Office application viewers such as Word Viewer. You can also provide an html version of your document, which only requires users to have access to an internet browser.

Converting your Base Document to PDF

In order for your document to be converted into a tagged PDF document you must use the Adobe Acrobat Plug In to convert your document. Using the Adobe Acrobat Plug-In automates the process of creating Tags to your PDF document. The Print to PDF option creates an untagged PDF document, therefore if you use this option you will have to add tags within Adobe Acrobat and if changes are made to the base document and converted to PDF, you must redo all of the tags. To begin the process of converting your word document into PDF format follow these directions:

1. Check the Adobe Acrobat PDF Maker Settings
2. There are four tabs within the Adobe Acrobat PDF Maker Settings you must check: Settings, Security, Word and Bookmark tabs.
3. Save your word document before converting to Adobe PDF format.

To convert your document to PDF select Convert to Adobe PDF from the Adobe PDF menu or use the shortcut button on the PDF maker toolbar.



TIP : PDF accessibility is not fully supported using PDF Maker on Macintosh. Use Windows to convert your documents into PDF format.

Converting your Base Document to HTML

One advantage of converting your word documents in HTML format is that you provide users who do not have access to specific software applications like MS Office, the ability to access and download your documents. Also, if you have included structural elements such as heading styles, alternative text descriptions to your document (as explained throughout this document) these elements are transferred into the HTML format of your document. There are two options available when converting your document to HTML format:

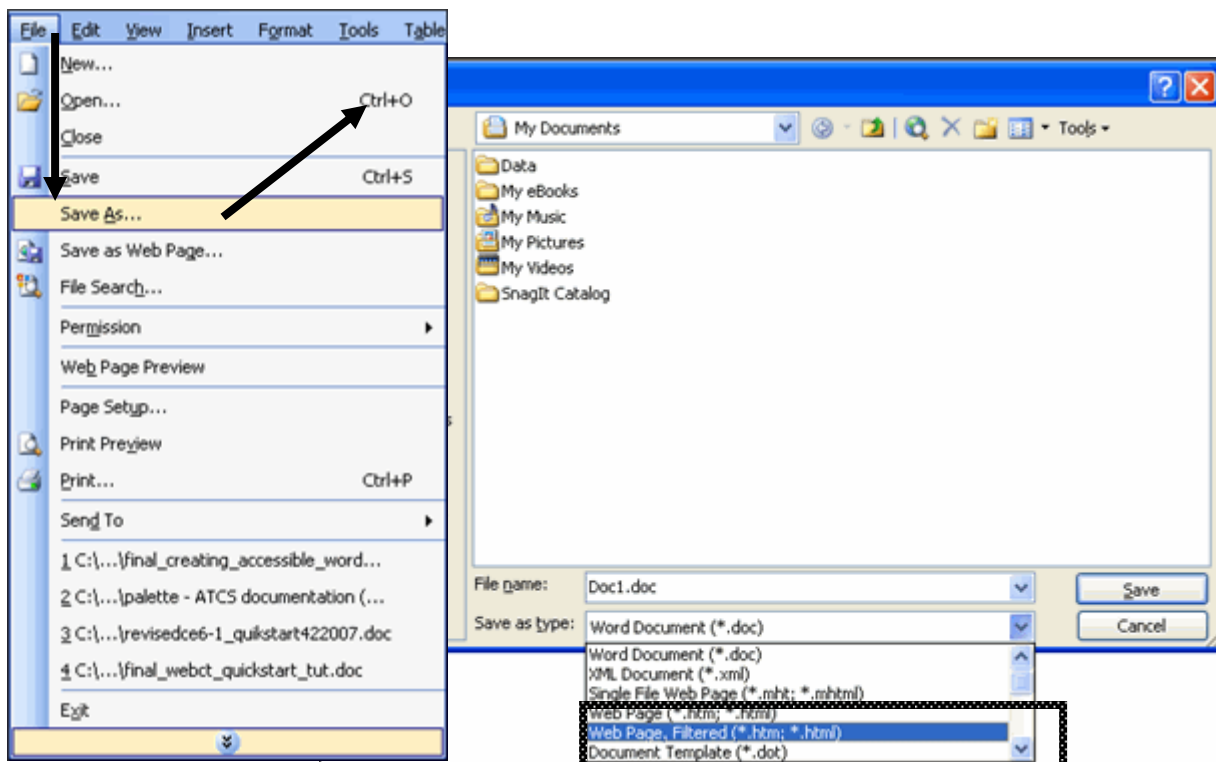
1. Save as Web Page
2. Save as Web Page, Filtered

We recommend that if you are to convert your document(s) into HTML format, that you save as a filtered webpage because this format maintains most of the original document's appearance and it is smaller in size because it does not add on extra HTML as the Save as Web Page option. Therefore we will focus on explaining how to save a word document as a filtered web page below.

Filtered Webpage

The process of saving a word document into HTML format is very similar to saving as a word document format.

- step 1.* When you are ready to save your document, navigate to the File menu and select Save As.
- step 2.* The Save As window will open. From the Save as type drop down menu select Web Page, Filtered.
- step 3.* Provide your document a name and click Save.



Conclusion

Creating accessible base documents, such as word documents is essential in developing accessible documents across various formats such as PDF and HTML. We have covered the basic structural elements needed in an accessible document which include: heading styles, correctly inserting ordered and unordered lists, headers and footers, hyperlinks, tables and images. We have also looked at how to add alternative text descriptions to non-text elements such as images, which allow audience members using assistive technology such as screen readers, to read your documents correctly. Lastly, we covered how to convert word documents into PDF and HTML formats, which will retain the structural elements that have been included in the base document.

RESOURCES

Alternate Formats

For questions regarding provision of instructional materials in alternate formats for students with visual impairments, learning disabilities, or mobility impairments that impact their ability to read printed materials, please contact the Services to Students with Disabilities' High Tech Center at (916)278-7915/htc@csus.edu..

[The High-Tech Center Website](http://www.csus.edu/sswd/services/htc.html)

<http://www.csus.edu/sswd/services/htc.html>

Faculty / Staff Resource Center

Located in ARC 3012. Assistance available on walk-in basis.

Open Lab on Fridays, 1-4 pm (Fall, Winter, Spring)

Open Lab on Thursdays 1-4 pm (Summer only)

[FSRC Website](http://www.csus.edu/uccs/fscenter/)

<http://www.csus.edu/uccs/fscenter/>

Getting Help

[University Help Desk](mailto:helpdesk@csus.edu)

(916) 278-7337 or helpdesk@csus.edu

[Academic Technology Consultants](http://www.csus.edu/atcs/contact.htm)

<http://www.csus.edu/atcs/contact.htm>

[Help Desk - Problem Reports & Contact Information](http://www.csus.edu/uccs/helpdesk/contact.stm)

<http://www.csus.edu/uccs/helpdesk/contact.stm>

[Training Requests](mailto:training@csus.edu)

training@csus.edu

Campus Resources

[Training](http://www.csus.edu/training)

<http://www.csus.edu/training>

[Training Handouts](http://www.csus.edu/training/handouts)

<http://www.csus.edu/training/handouts>

[Online Tutorials](http://www.csus.edu/atcs/tools/tutorials.htm)

<http://www.csus.edu/atcs/tools/tutorials.htm>

[Educational Tools](http://www.csus.edu/atcs/tools)

<http://www.csus.edu/atcs/tools>

[Creating Instructional Materials](http://www.csus.edu/atcs/tools/accessible/)

<http://www.csus.edu/atcs/tools/accessible/>

[Accessibility at Sacramento State](http://www.csus.edu/accessibility)

<http://www.csus.edu/accessibility>

Online Resources

[Accessibility Features of Microsoft Word - Web Accessibility for All](http://www.cew.wisc.edu/accessibility/tutorials/MSWordFeatures.htm)

<http://www.cew.wisc.edu/accessibility/tutorials/MSWordFeatures.htm>

[Accessible Web Publishing Wizard for Microsoft Office: Best Practices for Word](http://www.accessiblewizards.uiuc.edu/bp-word.php)

<http://www.accessiblewizards.uiuc.edu/bp-word.php>

[Creating Accessible PDF from MS Word – Web Accessibility Center The Ohio State University](http://www.wac.ohio-state.edu)

<http://www.wac.ohio-state.edu>

[Data and Layout Tables – University of Wisconsin-Madison Web Accessibility 101](http://www.doit.wisc.edu/accessibility/online-course/standards/tables.htm)

<http://www.doit.wisc.edu/accessibility/online-course/standards/tables.htm>

[Microsoft Office \(Microsoft Word\)](http://www.document-solutions.com/accessibility/AdobeAccessChapter3a9.html)

<http://www.document-solutions.com/accessibility/AdobeAccessChapter3a9.html>

[NCDAE – Microsoft Word Fact sheet](http://ncdae.org/tools/factsheets/word.cfm?template=print)

<http://ncdae.org/tools/factsheets/word.cfm?template=print>

[Using Markup for Word and Word Perfect – Web Accessibility for All](http://www.cew.wisc.edu/accessibility/tutorials/structuralmarkuptutorial.htm)

<http://www.cew.wisc.edu/accessibility/tutorials/structuralmarkuptutorial.htm>

[WebAIM: Microsoft Word](http://www.webaim.org/techniques/word/)

<http://www.webaim.org/techniques/word/>

Books

[Microsoft Word 2007 Bible](#) – Herb Tyson