Accessible Document Design Using Word 2010: An Overview



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Other Books by Karen McCall

Accessible and Useable PDF Documents : Techniques for Document Authors, Second Edition, ISBN 978-0-9782675-2-0
Logical Document Structure Handbook - Word 2003, ISBN 0-9738370-3-9
Logical Document Structure Handbook – Word 2007, ISBN 0-9738370-9-8
Logical Document Structure Handbook: Word 2007 Legal Edition, ISBN 978-0-9782675-3-7
Logical Document Structure Handbook: Word 2010, ISBN 978-0-9782675-4-4
Logical Document Structure Handbook: Word 2010 Legal Edition, ISBN 978-0-9782675-5-1
Logical Document Structure Handbook: PowerPoint 2010, ISBN 978-0-9782675-7-5
Microsoft Word 2007 from the Keyboard, ISBN 978-0-9781272-5-1

Author's Note

This document contains digitized versions of the content in the book “Logical Document Structure Handbook: Word 2010, and is representative of the content in an on-site workshop. It is a supplement and supportive document to that book. I recognize that people like to see things in action and I wanted to move my workshops and content to the next level. It has also provided an opportunity for me to learn about adding multimedia to a tagged accessible PDF document.

PDF is capable of “hosting” the digitized content in a more secure manner than alternatives I looked at. However, as stated in the videos themselves…”I don’t want to see this content on YouTube or anywhere else it isn’t supposed to be!”

I want to also note that at this point it looks like adding videos to a PDF document presents some accessibility issues for those of us using screen readers. I’m not creating Flash and am using Camtasia and SoundForge to create the videos. This seems to also create some player control issues for those of us using screen readers.

I’m having other issues with the captions for the videos and adding segments of audio for the title text but have included both just before the video to try and compensate. For those who require captioning, I am diligently working to get that in place and will publish a revised version of the book once I get that figured out…it sounds easier than it actually is.

So, this is the first material I’ve published in a less than accessible format but am committed to solving these issues or at least bringing them to the attention of developers.

I love the idea of interactive books! I just want them to be accessible!

Dedication

This book is dedicated to Joyce Malombe, Aimee and Greg Todd …and to my "live in" friends (left to right) Olivia Zane, Barnaby Edmund and Zoie Robert…who all keep me focused and somewhat sane.



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Introduction

Accessibility Basics

One of the best ways to describe an accessible document is to say that someone can access the content without using a monitor or a mouse. This means having a consistent "structure" to the document and several ways of navigating to specific content.

As stated in the author's note at the beginning of this book, the videos in this book are not easily accessible if you are using a screen reader. The problem is that if I create an accessible Word document (or an accessible document using any other authoring tool) I have to produce an untagged PDF in order to insert the videos in the PDF as <Annotation> Tags. Even then the Accessibility Full Check in Acrobat has "problems" with this type of content and I can't get a clean accessibility report. I also then have to retag the document and inevitably lose the linked tables of contents and any Alt text for images. If, on the other hand, I create a tagged PDF and then add the videos, I get similar errors in an Accessibility Full Check but there is less clean up in the PDF document and I can retain my linked table of contents and Alt Text for images. In either case, the videos are not "seen" by screen readers and remain inaccessible content. <Huge Sigh>

A person with advanced screen reader skills might be able to locate the video and the controls using the mouse cursor of their screen reader BUT this is not an acceptable "solution." I should be able to locate and play the videos with regular navigation commands in a PDF document.

So, although the videos are not accessible at this point in time, I am committed to finding a solution and advocating for more accessible interactive content in PDF documents and books.

The content in this series of video modules is abridged from the following books by Karen McCall and is a supplement to the book "Logical Document Structure Handbook: Word 2010."

- Logical Document Structure Handbook: Word 2010 [ISBN 978-0-9782675-4-4];
- Accessible and Usable PDF Documents: Techniques for Document Authors [ISBN 978-0-9868085-0-0].

The intent of this tutorial is to provide a quick reference and "where to start" resource for anyone creating accessible Word documents. The techniques can be transferred to other applications with similar tools.

There is more detail in both books for a more thorough reference set. The books contain step-by-step instructions for creating more accessible documents. Descriptions of books by Karen McCall[1] can be found on the Karlen Communications web site.

Karen McCall has also written a book for creating accessible PowerPoint documents and a book on using Microsoft Word from the keyboard [without a mouse]. She provides on-site and webinar based training on accessible document design. Karen has received the Microsoft MVP Award for Word for 2009-2011 (Most Valued Professional Award).

This document uses keyboard commands rather than mouse clicks. The tools used are identified for those of you who are mouse dependent. Everything done with the keyboard can be done using a mouse.

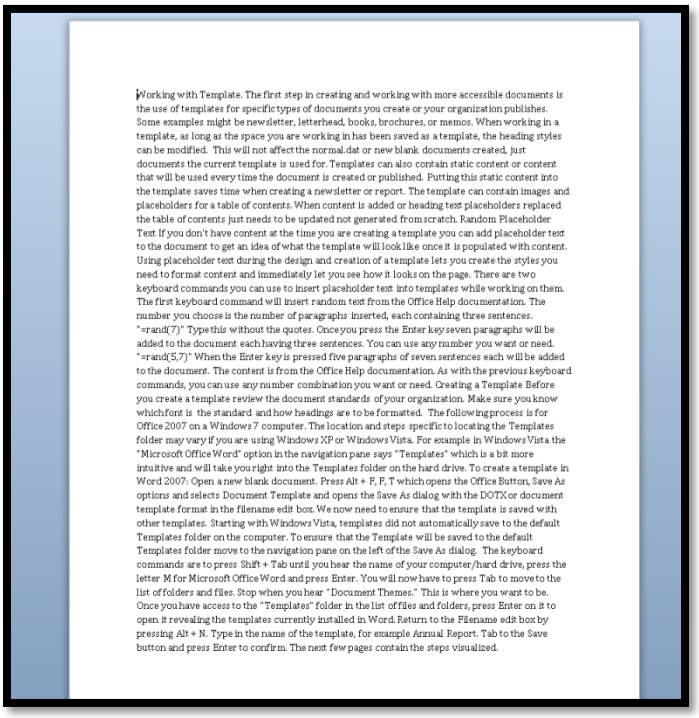
Although the videos are in an accessible PDF document, this is my first attempt at adding video to an accessible PDF document so if I've missed anything, let me know…this is a learning process for me too!

[1] Descriptions of books by Karen McCall and ordering information: http://www.karlencommunications.com/products.htm

What is "Document Structure?"

The document structure is the way we create documents. We can select text and fling formatting at it to make it look like a heading or topic change, list or other piece of content, but when someone tries to read that document using something like a screen reader for people who are blind, each piece of content is still a plain old paragraph.

Imagine trying to read a newspaper where every piece of text looked the same. Visually you had no article titles to help you find the Editor's Comments, classified, stock market information, sports or entertainment items…all the text looks the same.



Working with Template. The first step in creating and working with more accessible documents is the use of templates for specific types of documents you create or your organization publishes. Some examples might be newsletter, letterhead, books, brochures, or memos. When working in a template, as long as the space you are working in has been saved as a template, the heading styles can be modified. This will not affect the normal.dat or new blank documents created, just documents the current template is used for. Templates can also contain static content or content that will be used every time the document is created or published. Putting this static content into the template saves time when creating a newsletter or report. The template can contain images and placeholders for a table of contents. When content is added or heading text placeholders replaced the table of contents just needs to be updated not generated from scratch. Random Placeholder Text If you don't have content at the time you are creating a template you can add placeholder text to the document to get an idea of what the template will look like once it is populated with content. Using placeholder text during the design and creation of a template lets you create the styles you need to format content and immediately let you see how it looks on the page. There are two keyboard commands you can use to insert placeholder text into templates while working on them. The first keyboard command will insert random text from the Office Help documentation. The number you choose is the number of paragraphs inserted, each containing three sentences. "=rand(7)" Type this without the quotes. Once you press the Enter key seven paragraphs will be added to the document each having three sentences. You can use any number you want or need. "=rand(5,7)" When the Enter key is pressed five paragraphs of seven sentences each will be added to the document. The content is from the Office Help documentation. As with the previous keyboard commands, you can use any number combination you want or need. Creating a Template Before you create a template review the document standards of your organization. Make sure you know which font is the standard and how headings are to be formatted. The following process is for Office 2007 on a Windows 7 computer. The location and steps specific to locating the Templates folder may vary if you are using Windows XP or Windows Vista. For example in Windows Vista the "Microsoft Office Word" option in the navigation pane says "Templates" which is a bit more intuitive and will take you right into the Templates folder on the hard drive. To create a template in Word 2007: Open a new blank document. Press Alt + F, F, T which opens the Office Button, Save As options and selects Document Template and opens the Save As dialog with the DOTX or document template format in the filename edit box. We now need to ensure that the template is saved with other templates. Starting with Windows Vista, templates did not automatically save to the default Templates folder on the computer. To ensure that the Template will be saved to the default Templates folder move to the navigation pane on the left of the Save As dialog. The keyboard commands are to press Shift + Tab until you hear the name of your computer/hard drive, press the letter M for Microsoft Office Word and press Enter. You will now have to press Tab to move to the list of folders and files. Stop when you hear "Document Themes." This is where you want to be. Once you have access to the "Templates" folder in the list of files and folders, press Enter on it to open it revealing the templates currently installed in Word. Return to the Filename edit box by pressing Alt + N. Type in the name of the template, for example Annual Report. Tab to the Save button and press Enter to confirm. The next few pages contain the steps visualized.

Figure 1 Page of content with no structure or formatting.

This is the experience for someone with learning, cognitive or visual disabilities using adaptive technology trying to read a document with no structure.

Once structural elements such as headings are added, the adaptive technology "sees" them the same way they appear visually on the page. How much better is it to find information with headings and navigational support such as a table of contents or Bookmarks (in a tagged PDF document)?

Fonts and Font Sizes

One of the most asked and debated questions is “What font style and font size should I use to make my documents more accessible?”

The answer is that you can have 10 people with learning, cognitive, visual or print disabilities in a room and get 11 or 12 different answers.

For some people with learning, cognitive or visual disabilities a sans-serif or Arial type font is easier to read because it doesn’t have the “ligatures” or “hooks” on letters for word prediction. For other people with learning, cognitive or visual disabilities serif fonts such as Times New Roman is easier to read because they depend on the “ligatures” or “hooks” on the letters for word prediction. There are also fonts designed for print and those designed for computer screen display.

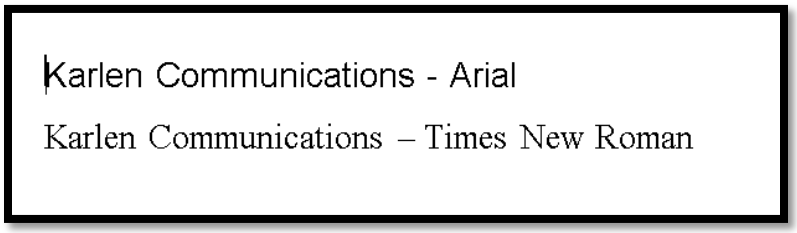


Figure 2 Font Styles: Arial and Times New Roman

This is why it is important to use standard ISO (International Standards Organization) fonts and to make sure that your font size is determined by the Normal Paragraph Style rather than selecting text and changing the font style or size.

Larger fonts aren’t necessarily better when optimizing your documents for accessibility. There are people who have tunnel vision and those with peripheral vision for whom smaller fonts are more readable. There are also people for whom large print is helpful. The best approach is to give the end-user, the person who is going to be reading your content as much choice in the way they view or interact with that content as possible. In other words create well designed and structured documents using the tools in the application you are working in.

The following images give you a rough idea of how people with some common eye conditions might view your content. The images are based on images I found on the Internet about ten years ago provided by an ophthalmology group. When I went back to cite the reference the page had been removed so these are my renditions of the images.

When we think of someone having “blind spots” we often ask what people see in the blind spots. Although I used white as the wash in one set of images and black in the other, we don’t “see” anything when vision is lost. It is a hard concept to wrap our heads around, but we don’t see black or white or anything…there simply is no vision.

First, people who have Retinitis Pigmentosa which is a degenerative eye condition may view documents this way. In each of the following images, the “normal view” is on the left of the image.



Figure 3 How someone with Retinitis Pigmentosa might view their surroundings.

People with Cataracts may view their surrounding and documents like this:



Figure 4 How someone with cataracts might view their

Here is how someone with Diabetic Retinopathy might view their surroundings and document content:



Figure 5 How someone with diabetic retinopathy might view

For someone with Glaucoma this might be the progression of their eye condition:



Figure 6 How someone with Glaucoma might view their surroundings.

Then there is glare sensitivity (top of the image) and night blindness (bottom of the image):



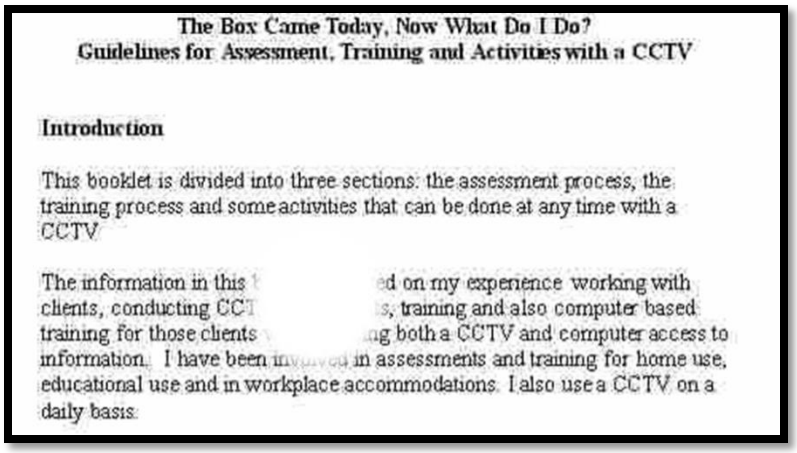
Figure 7 How someone with glare sensitivity or night blindness might view their surroundings.

Here is how someone with Macular Degeneration might view their surroundings. In this image, the representations of a “normal view” are on the right side of the image.



Figure 8 How someone with Macular Degeneration might view their surroundings.

If we transfer these concepts to the printed page or computer monitor, this is how someone with Macular Degeneration might view content:



The Box Came Today, Now What Do I Do?
Guidelines for Assessment, Training and Activities with a CCTV

Introduction

This booklet is divided into three sections: the assessment process, the training process and some activities that can be done at any time with a CCTV

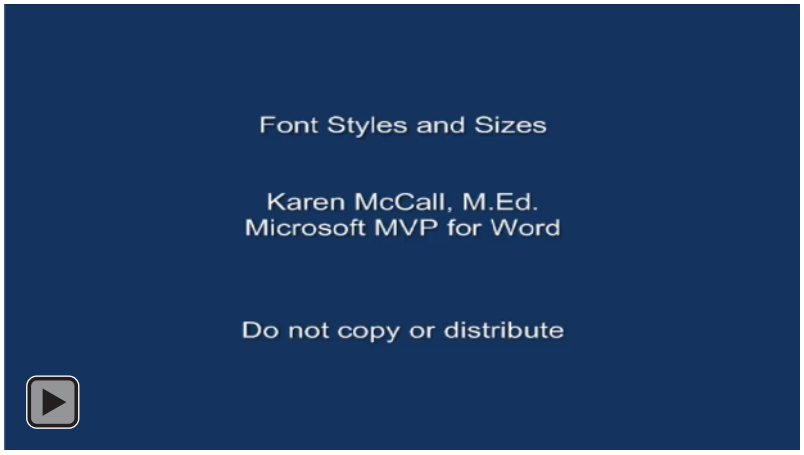
The information in this [illegible]d on my experience working with clients, conducting CC[illegible]s, training and also computer based training for those clients [illegible]g both a CCTV and computer access to information. I have been in[illegible]n assessments and training for home use, educational use and in workplace accommodations. I also use a CCTV on a daily basis.

Figure 9 How someone with macular degeneration might view content.

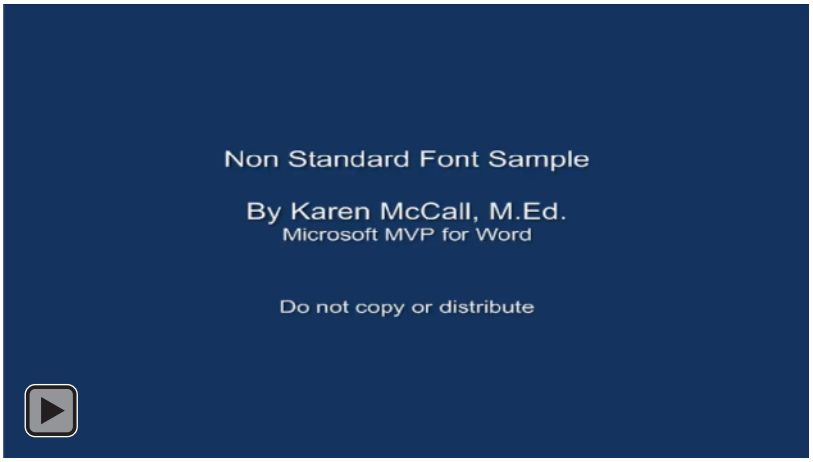
If you use the tools in Word to structure your document, the person reading the document can choose how they view or interact with your content. They can change the font or font size using their own Style set, and all content in the document will scale according to their preference. They can change the colour of text using a Theme to optimize the text for readability.

There is a video in this topic called the Non-Standard Font video that has text formatted using the Betsy Font which is available with the installation of a popular application. I say this because it is on my computer and I didn't purchase or install any special fonts…it is just there. The video demonstrates what can go wrong when non-standard fonts are used for documents.

Fonts and Font Sizes video.



Non-Standard Font video.



Text Formatting

There are some types of font formatting that will cause accessibility or readability problems and others that are simply best practice for more accessible and readable documents.

Using all capital letters for large pieces of content such as paragraphs causes readability problems for everyone whether they have a disability or not. The reason is that all capital letters removes our ability to use word prediction based on the shape of words. Use all uppercase sparingly.

Italics for large pieces of content can also cause readability issues because the formatting slants the font and makes parts of it thinner which can also affect the ability to use word prediction. Use italics sparingly.

Two spaces after punctuation can cause readability issues if combined with full justification. Digital documents use proportional fonts so the rules changed to single spacing after punctuation and left justification of content. This prevents those wide white rivers you often see in text that distracts your eye from reading to follow that white Visual River of distraction.

Many people suggest using only the Verdana font for documents. Verdana is a display font which means that it is most effective if the content is only going to be used on a computer screen. Word now uses Calibri and Cambria for DOCX documents. Research has gone into the development of these types of more readable fonts, however the document author needs to keep in mind the publishing format of the document. Themes would allow for end-users to swap out fonts and font sizes that don't work for them but if the document were to be printed you might want to use a font that is more readable in print. Creating tagged PDF brings another element to the table. Using Preferences in Adobe Reader lets the end-user customize how they view and interact with the tagged PDF document. Design begins with making decisions about how the document will be used.

All of these elements and attributes need to be considered when designing a document. Often we don't think of these components. We just begin typing and flinging formatting or take documents and reformat for specific end-user preferences.

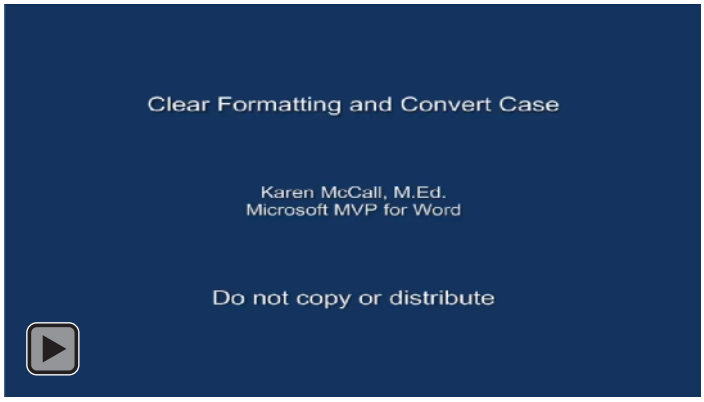
Clearing Formatting

It is important to select the text you want to clear formatting from before you use the techniques to clear and restore formatting. It is also important when applying styles that you select the text first to avoid any formatting spill over to other content. Selecting text before formatting is the safest way to limit the formatting of content to the text you want it applied to.

The following keyboard commands will clear formatting of selected text:

- Press Alt + H, E to activate the Erase button on the Home Ribbon. Of all of the methods listed here, this is the most effective and removes all formatting. Applying the Normal paragraph style doesn't in some instances.
- Press Ctrl + Spacebar to remove manual formatting.
- Press Ctrl + Q to remove paragraph formatting.
- Pressing Ctrl + Shift + N to selected text applies the Normal paragraph style.

Watch the Clear Formatting video.



Word Options to Match Destination Formatting

As of Word 2007 there was an option to "match destination formatting" when you were copying and pasting content from one document to another. Although this works well with some documents, with others some of the legacy or old formatting still comes with the content. Always review the content you've copied to ensure that no unwanted formatting has come with it.

To change the Copy and Paste options in Word:

1. Press Alt + F, T for File/Backstage area, Word Options.
2. When the Word Options dialog opens, choose the Advanced category.
3. About half way down the Advanced category is the section for Cut, Copy and Paste options.
4. The choices are made through list boxes. This process is quite accessible if you are using adaptive technology such as a screen reader.
5. Choose to keep the source formatting when pasting within the same document.
6. Choose to keep text only when pasting between documents.
7. Choose to use the destination styles, which is the default for pasting between documents where there is a conflict in styles.
8. Choose to keep text only when pasting from other programs.

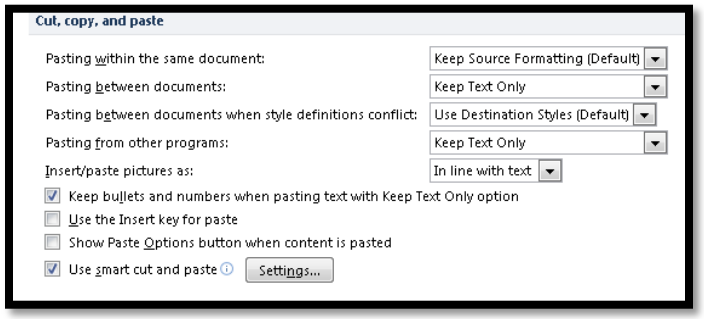


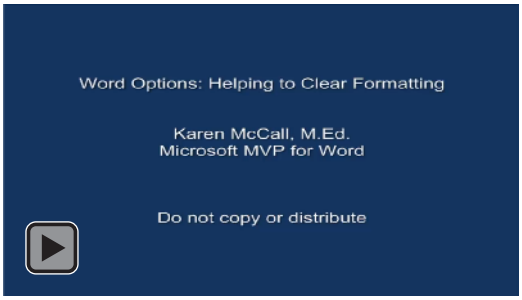
Figure 10 Cut copy and paste options in Word.

Keep in mind that sometimes these settings don't work and are no substitute for ensuring that the formatting is removed from content before you copy and paste it between documents. I tend to use it as a safeguard rather than my primary method of removing formatting from repurposed content.

NotePad

If all else fails, take the content into NotePad or some other plain text editor to remove the formatting. Then copy it into your Word document. With NotePad in later versions of Windows you may have to remove bulleted or numbered lists. You can't remove formatting from tables using NotePad. Use the methods previously identified in this tutorial to do that.

Word Options, Copy, Cut and Paste video.



Working with Templates

The first step in creating more accessible documents is to create a template for each type of document you are going to create. For example, a newsletter template, an annual report template, a letterhead template…or an iPad App template as I did for this content. With a template that has any text that is repeated for each version of the document, such as contact information and all of the colours and styles (branding) everyone who creates newsletters, annual reports or letters for your organization can use the styles and document parts available to them in the template.

Anyone working on the document doesn't have to guess at what has been done before, which usually ends up in a dog's breakfast of formatting and navigational nightmares.

Creating a Template

The following process is for Office 2010 on a Windows 7 computer. The location and steps specific to locating the Templates folder may vary if you are using Windows XP or Windows Vista (you may have Trusted Templates for either of these instead of Templates).

To create a template in Word 2010:

1. Open a new blank document.
2. Press Alt + F, D, C, T which opens the File/Backstage area, Save and Send options, Change Format, and select Word Template.
3. Press Enter on Word Template to open the Save As dialog.
4. The filename is selected and the file type is Word Template which will create a DOX or document template.
5. We now need to ensure that the template is saved with other templates.
    a. Starting with Windows Vista, templates did not automatically save to the default Templates folder on the computer.
6. To ensure that the Template will be saved to the default Templates folder, move to the navigation pane on the left of the Save As dialog. You will need to press the Shift + Tab keys approximately 5/five times.
    a. You will hear one of the folders on your hard drive such as Documents, Music or Pictures if you are using a screen reader.
7. Press the Home key to move to the top of the Navigation pane and you should see or hear "Microsoft Word" or "Microsoft Office Word."

8. Press Enter on this link.
9. Press Tab once to move to the list of folders and files. You are now in the area of your hard drive where templates are stored. The “Templates” folder should have focus but is not selected. Press the Spacebar to select it and then press Enter to open it.
    a. In the list of templates you will find the Normal.DOTX which is the document template all new documents are based on when you press Ctrl + N.
10. Return to the Filename edit box by pressing Alt + N.
11. Type in the name of the template, for example Annual Report.
12. Either Tab to the Save button or press Alt + S to save the template.
    a. If you are using a screen reader, use the keyboard command for reading the title bar of a Window to verify that you are now working in the template. For example you will see or hear “Annual Report.DOTX.

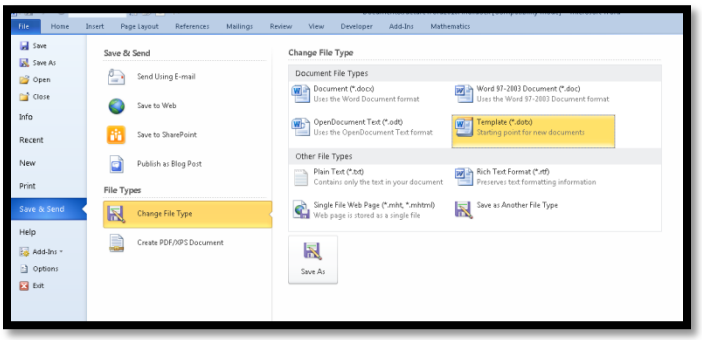


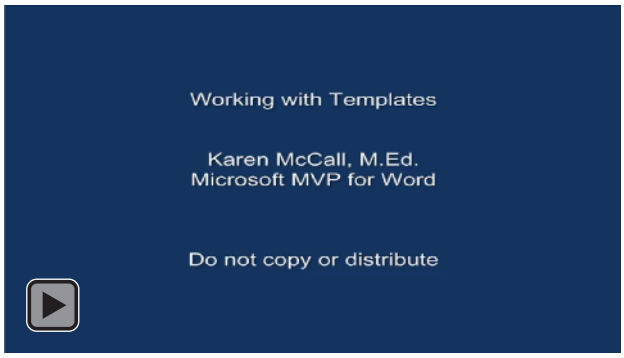
Figure 11 Save as Word Template from the File/Backstage area.

Other keyboard commands you can use to get to the Save As dialog are:

- F12.
- File/Backstage, Save As or Alt + F, A.

Once the Save As dialog opens, make sure you go to the Templates folder as the location for the template, and choose the “files of Type” to be Word Template.

Creating a Template video.



Using a Template

When you want to use the template don't choose it from the list of recently opened documents. This will open the template for editing rather than opening a new document based on your template.

To use a template you've created:

1. Press Alt + F, N for File/Backstage area, New.
2. The File/Backstage New area opens and you press Tab to enter the various choices for the new document.
3. Press M to move to and open My Templates to open the New Document dialog.
4. This opens the standard New Document dialog where you can choose the template you want.
5. In the New Document dialog you can use first character navigation to find your template. For example, pressing N will take you to the first template that begins with the letter N [such as Newsletter]. Pressing N again will take you to any other templates that begin with the letter N.

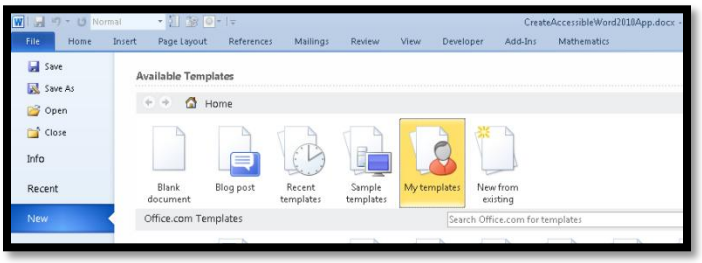
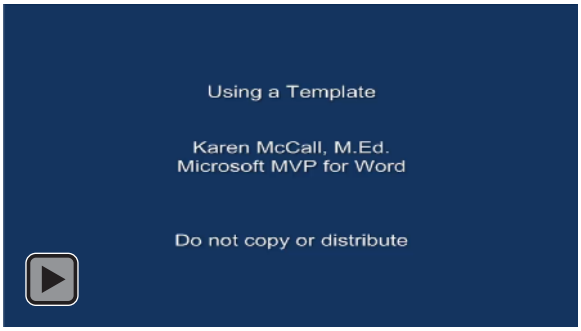


Figure 12 New document from template in File/Backstage area.

Using a Template video.



Random Placeholder Text

If you don't have content at the time you are creating a template you can add placeholder text to the document to get an idea of what the template will look like once it is populated with content. Using placeholder text during the design and creation of a template lets you create the Styles you need to format content and immediately lets you see how it looks on the page.

There are two keyboard commands you can use to insert placeholder text into templates while working on them.

The first keyboard command will insert random placeholder text from the Office Help documentation. The number you choose is the number of paragraphs inserted, each containing three sentences.

"=rand(7)"

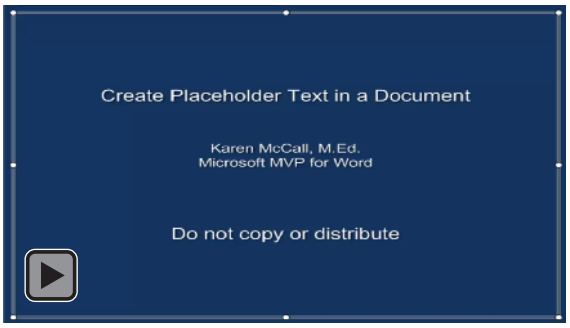
Type this without the quotes. Once you press the Enter key seven paragraphs will be added to the document each having three sentences. You can use any number you want or need.

"=rand(5,7)"

When the Enter key is pressed, five paragraphs of seven sentences each will be added to the document. The content is from the Office Help documentation. As with the previous keyboard commands, you can use any number combination you want or need. Remember to delete this before you save your new template.

If you want Latin placeholder text type either **=lorem (6)** for six paragraphs of three sentences each or **=lorem(6, 5)** for six paragraph of Latin text with five sentences each.

Random Placeholder Text video.



Working with Themes

Office 2010 has a set of Themes that can be used with documents. Unlike formatting in versions before Office 2007, any combination of Themes can be applied to a document or template.

You can even create your own Theme based on your organization's standards and guidelines for documents. This is the recommended process for working with documents as we move forward.

This allows for the better branding and common look and feel for all documents whether they are Word, Excel, PowerPoint or Outlook based. Once you create a Theme in one Office application, it is available to you in all other Office applications.

A Theme or combination of Theme elements can be saved as part of a template.

However, you can also swap out Theme Fonts, Theme Colours and Theme Effects of templates. Themes are powerful tools when creating documents. There are preinstalled Themes that come with Microsoft Office. These include Office, Meridian, Foundry, Apex, Civic, Opulent, and Concourse.

Using Themes lets end-users create their own Themes for their specific needs and then swap out the current Theme of the document for their own, which in turn optimizes the accessibility of a well-structured document.

This is possible due to the new DOCX for WordML format of documents. This may not be possible if you are using legacy formats such as the DOC format. It will depend on the parts of the Theme you try to apply.

Themes are files that have a THMX extension. They are binary files rather than XML files. They are stored in the AppData/Roaming/Microsoft/Templates folder for the computer user in a Document Themes folder.

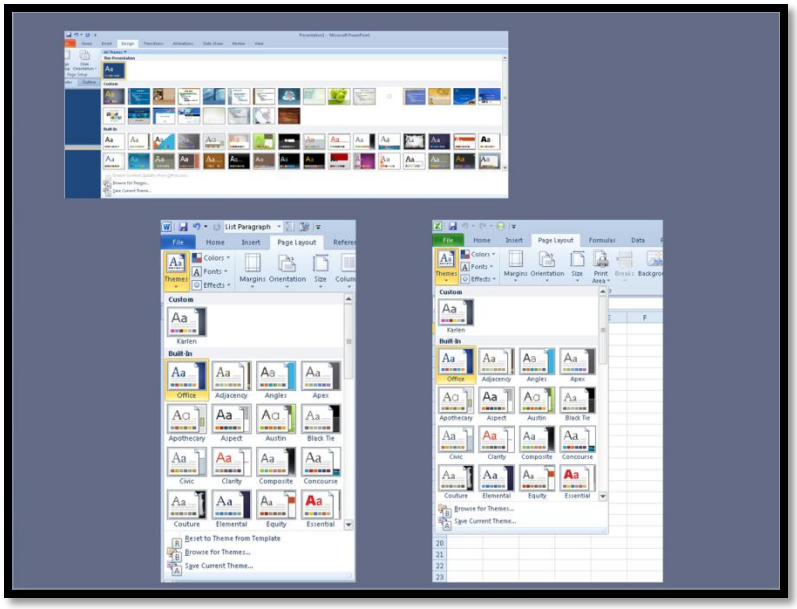


Figure 13 PowerPoint, Word and Excel Themes Gallery.

The preceding image shows the Themes Gallery for PowerPoint, Word and Excel. Microsoft is always adding new Themes. If you have Office set to automatically update, new Themes will be installed as they are available.

For those of you who can't wait to take a look at them, The Themes can be found under the Page Layout Ribbon. The keyboard command to access the built-in Themes is Alt + P, T, H.

To access individual components of each Theme:

- Press Alt + P, T, F to explore the Theme Fonts.
- Press Alt + P, T, C to explore the Theme Colour.
- Press Alt + P, T, E to explore Theme Effects

There are four components to a Theme:

- Font
- Colour
- Effects
- Theme itself.

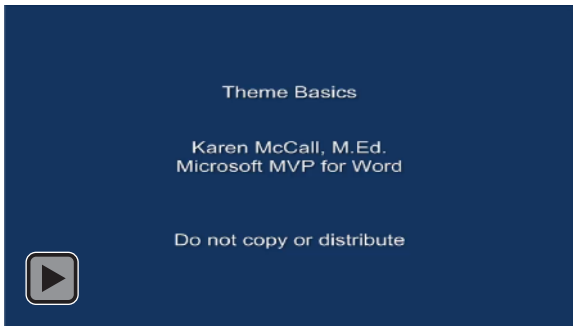
The Theme itself contains the three elements of font, colour and effects. To create a single Theme you will need to save these four components with the same name.

I recommend creating a new font, colour and/or effects Theme first and then saving all components as a new Theme.

With each modification, the individual elements can be saved as new Theme parts and then the global Theme can be saved.

I know it sounds complicated but it isn't.

Theme Basics video.



Theme Fonts

The keyboard command for viewing the installed Theme Fonts is Alt + P, T, F for "Theme Font." This view of them gives you a Thumbnail of what they will look like in the document.

Use the arrow keys to move up and down the list, watching your document change to each font . Press Enter on the font set you want to use. Of course, you can always use the mouse to do this.

If you look at your document and don't like the effect, press Ctrl + Z to Undo the change. Then go back to the Theme Font Alt + P + T + F and choose another Theme Font.

There are other options in the Font Gallery. Pressing Alt + P, T, F, C will let you create a new Theme Font.

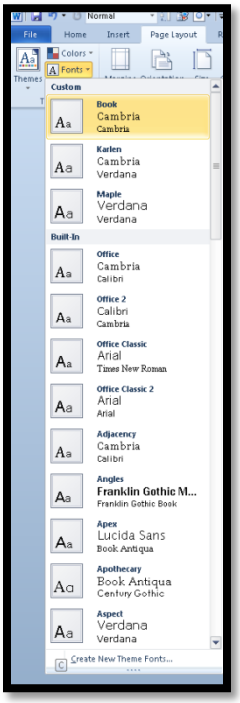


Figure 14 Theme Font Gallery.

It is recommended that you also create a new Theme, Theme Colours, and Theme Effects with the same name, even if some of these elements don't change.

Using the Tab key, move to heading font or press Alt + H. Press the down arrow key to open a list box and move through the list until you find the font you want. Press Enter and the name will appear on the List box. Press Tab and move to Body font and do the same thing. Notice that the fonts change in the Sample box to the right. Once you choose the fonts to use in the new Theme Font, remember to name the new Theme Font. For example, I have a Theme Font named Karlen.

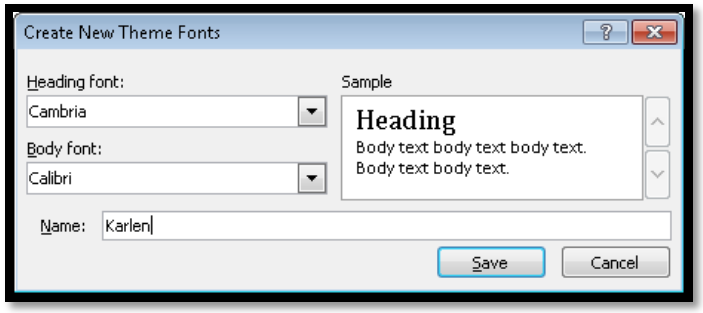
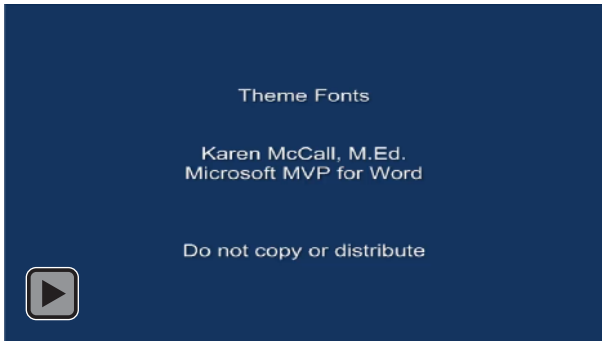


Figure 15 Create New theme Font dialog.

When the New Theme Font is created, it will appear in the list of available Theme Fonts when you press Alt + P, T, F. When you create customized Themes or Theme sets, a "Custom" category is added to the Themes Galleries. This lets you easily distinguish between the built-in Themes and the Custom Themes.

Create New Theme Fonts video.



Theme Colours

For people with colour deficits, creating a set of Theme Colours that are usable is a powerful tool. Once again I recommend that you create a new Theme Colour set and name it with the same name that the new, custom Theme Font was named. In this example it would be “Karlen.”

The first step is to look at the Theme Colours and see if there is a Theme Colour close to what you prefer.

Typically, I find that the colour used for links often makes them invisible or unreadable in a document.

To view, apply or create a new Theme Colour press Alt + P, T, C for "Theme Colours." This opens the Theme Colours Gallery. Each Theme has its own colour set.

To change some element or elements of the Theme Colours, choose “Create New Theme Colour” by pressing Alt + P, T, C, C.

Create a New Theme Colour

To modify colour in the Theme and save it as a new Theme:

1. With our Oriel document open, press Alt + P, T, C to open the Theme Colour list.
2. Choose Create new Theme Colours by pressing the letter C.
3. This opens a dialog with all of the assigned colours for the current Theme Colour set.
4. For our example, move to the Hyperlink element, press Alt + H, and open the colour palette. This is the colour we will change for our Karlen Theme.
    a. If we are looking at the blues in the palette they are all pretty muted. We are looking for a brighter blue.
5. This opens another dialog that shows the Standard Colors tab and a Custom Colors tab where you can enter values for the colour you want or choose from a larger colour palette. To move around the Custom Color tab use your tab key until the cross hairs are highlighted then, using your arrow keys move around the colour palette. If you press tab again you will be at the side bar where you can move up and down to choose the depth of the colour. You can also enter values and view the color changes to the right.
6. Choose a bright blue that is comparable to the standard blue hyperlink colour.
7. Move to and activate the OK button to close the dialog.
8. Notice that you can see a difference in the previous colour assigned for links in documents. In this case I did try the lighter blue but links didn't stand out enough.
9. Once you are returned to the New Theme Colour dialog you need to name the Theme Colour set.
10. I've called this colour set Karlen to match the Theme Font set I created.

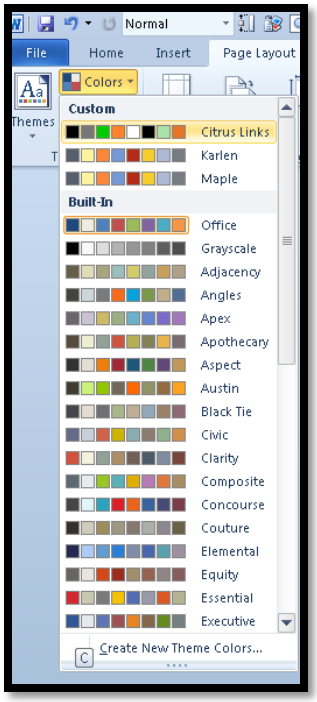
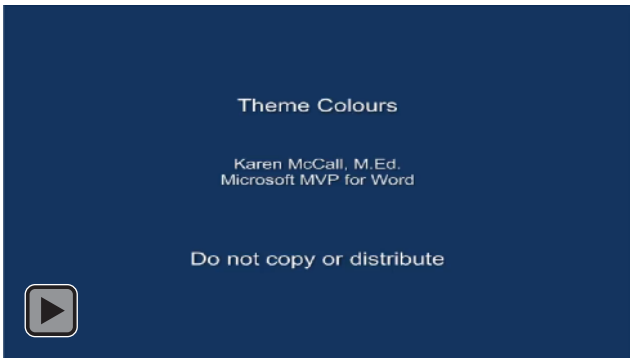


Figure 16 Theme Colour Gallery.

Create New Theme Colours video.



Modify a Theme Colour

To edit an existing Theme Colour set:

1. Press Alt + P, T, C for Theme Colour.
2. The Theme Colour Gallery opens.
3. Use the Up or Down Arrow to select the Theme you need to modify; in this case it is Karlen.
4. Press the AppKey to open the context menu.
5. Choose Edit
6. Your colour Theme will open and you can make any edits you need.
7. The modifications will be saved when you activate the OK button in the dialog.

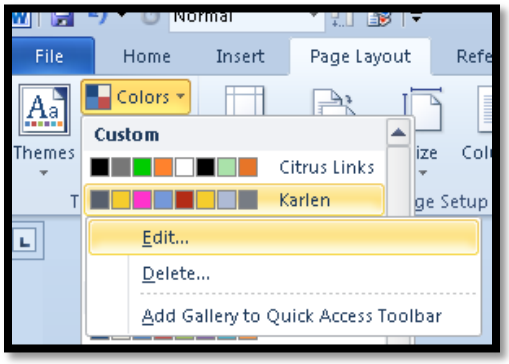


Figure 17 Edit or Modify Theme Colour.

Theme Effects

You cannot modify or create built-in Theme Effects. These are the shadows, lines, fills, 3-D effects and so forth that can be applied to various objects in a document Theme. Theme Effects are the textures, the look and feel for SmartArt and other graphical objects as well.

What you can do before you save the new Theme is to press Alt + P, T, E to open the Theme Effects Gallery and choose a different effect to be used for your new Theme.

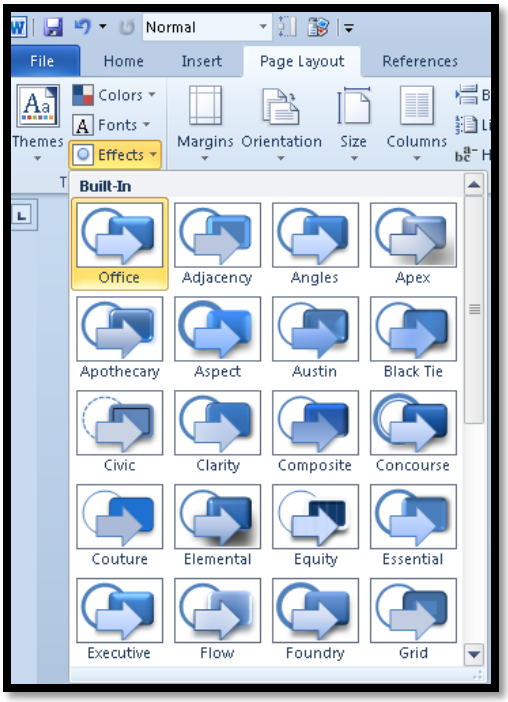


Figure 18 Theme Effects Gallery.

I've not been able to find a way to distinguish which Theme Effects I'm using other than going to the Theme Effects Gallery to see what I've selected. There is no obvious visible difference in applying one Theme Effect set over another. I can't find a way to preview the effects for an existing Theme.

Create a New Theme

We've created a new Theme Font, Theme Colour and maybe chosen a different Theme Effect for the Theme we are about to create. Now we can create a global Theme. By applying the Theme we can apply all of its parts, font colours and effects. We can also choose to apply the Karlen Theme fonts or Karlen Theme Colours independent of the overall Theme. The Karlen Theme will be available in other Office applications such as Excel and PowerPoint.

To create the Karlen Theme or the new Theme:

1. With the document we've been working in open and the Karlen Theme Font and Karlen Theme Colour applied to the document, press Alt + P, T, H, A.
    a. If you don't choose a different Theme Effect the default for the current Theme will be used. As mentioned in the previous section, I can't find a way to distinguish the options for Theme Effects to make an informed decision as to which set of Theme Effects I might want to use.
2. The standard Save As dialog opens but you are in the Document Themes folder in the user files for your computer. The dialog is called Create New Theme.
3. Name the Theme; in this case it will be Karlen.
4. Tab to and activate the Save button by pressing Enter.

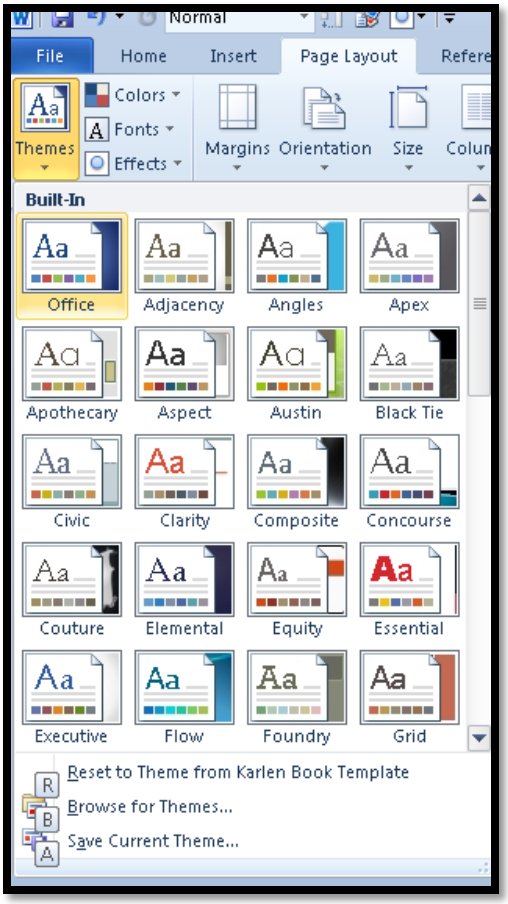
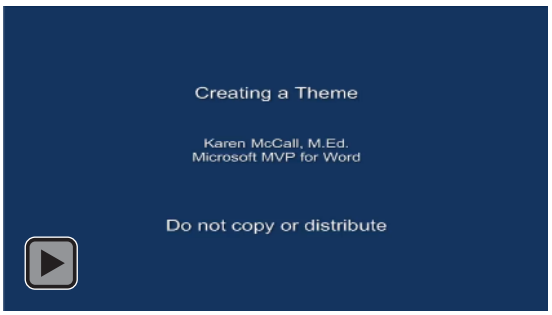


Figure 19 Theme Gallery.

You can now apply your theme, in this case the Karlen Theme, to any document or you can choose to apply only Karlen Theme Fonts or Karlen Theme Colours.

Create a New Theme video.



Themes versus Templates

Confused? What is the difference between a Theme and a template? How do I know which one to use?

A template can have a Theme but can also have default images such as a company logo, decorative images that are consistently used for a specific document and any specific formatting or text Styles. A template is also confined to the application for which it is created for. For example you can't use a Word template in PowerPoint or Excel.

Think of a Theme as a global document style. Once you apply a Theme you can then add or modify existing paragraph or character styles within that global document style.

A Theme determines the fonts and colours, as well as effects that are available in the document. Think of it as the visual aspects of the template or document. A Theme can be part of a template or applied to a specific document.

The template provides the underlying structure for the document, whether it is a book, flyer, brochure, or letterhead. The Theme provides the look and feel of that document.

The power of Themes is that you can create a Theme based on an organizational brand and then use that Theme for every document and template you need. Create the Theme once and use it many times.

There is a good article on the Microsoft web site explaining the difference between templates and Themes[2]. This article is related to PowerPoint, however it applies to the use of templates and Themes in all Office applications.

Style Sets

As mentioned briefly in this chapter, if you need to use specific fonts or font sizes for documents, a Theme might not give you the flexibility you need. Themes, while being able to apply a specific font, cannot apply a specific font size. The font size is the default of 11 point. The easiest way for someone to quickly swap out a specific font and font size is to create a Style Set. This section provides the step-by-step instructions for doing this.

As a document author creating global documents, the tools to use are Templates, Themes and Styles. It is the end-user or person who is opening the document to read it that implements the Style Set.

On the Home Ribbon there is a button to the far right called Change Style Set. You can access it by pressing Alt + H, G.

This gives you several options.

[2] Difference between templates and Themes article on Microsoft site: http://office.microsoft.com/en-us/powerpoint/HA103575281033.aspx

- You can choose from a list of Style Sets that are built-in such as “Distinctive,” “Elegant” and “Fancy.”
- You can create your own Style Set which is something like Verdana 16 point.
- If you are used to working with Themes and have created a Theme Font you can choose Fonts and apply the Theme Font, although this would not affect the font size, just the font Style.

Using the ability to change a style set, someone with a visual disability can create a style set that will change the look and feel of the document to be more readable.

Step 1 - Modify the Normal Paragraph Style:

1. It is always better to work with content in a document.
2. Open a new document (Ctrl + N).
3. Use the ability to insert random text using =rand(x, y) where x is the number of paragraphs and y is the number of sentences in each paragraph. This will give you some text to work with. Press Ctrl + Home to move to the top of your document.
4. Press Ctrl + Shift + S to open the Apply Styles Pane. This will float over the document, but if you are using a screen reader it will have focus once it is opened.
5. Make sure that the Normal Style is the one identified in the Apply Styles Pane in the list box Style Name.
6. Tab to the Modify button and press Enter.
7. The standard Modify Style dialog opens.
8. Tab to the Font Style area under Formatting and choose the font you prefer. You can either type it in or open the list by pressing the down arrow key and use first character navigation to find it.
9. Tab to the Font Size list and press the Down Arrow to open the list.
10. Locate the font size you want and press Enter.
11. If you want to choose a default colour for all text in the document when the Style Set is used, press Tab to move to the colour palette, press the Spacebar to open the colour selections, and choose a colour. There is no keyboard command to quickly move to the colour palette. You will need to press the Tab key several times.
12. This is the Modify Style dialog and it can apply to new documents based on this template which we don’t want to check; or this document only. Since we are only using this document as a sort of sandbox to figure out what our Style set should look like, I recommend that the check box for this document be the only one checked.
13. Do not choose to Automatically Update.
14. Tab to and activate the OK button. You will return to the Apply Styles Pane. Press Esc to exit this pane. Notice that the font has changed in the document. Also notice that the Apply Styles pane is still visible but “greyed” out and your cursor is again in the document.

Step 2 - Create the new Style Set that can be swapped out for the current Style Set:

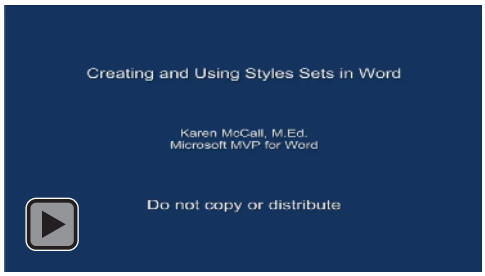
1. With the changes to the Normal Style in front of you and before you close the sandbox document without saving, press Alt + H, G to open the Change Styles options.

2. The first item in the list is Style Set.
3. Press The Right Arrow to open Style Set.
4. Press the letter Q to open the Save Quick Style Set dialog. This is the last item in the list of choices so you can also press the Up Arrow to get to it quickly.
5. When you press Q and the Save Quick Style dialog opens, your focus is in the filename edit box where you can type the name of your Quick Style or Style Set. Type in a name for your Style Set. I chose Karlen for mine but you can call it "Accessible" if you like.
    a. It will appear in the list of available Style Sets in alphabetical order. You cannot use first character navigation in the list of Style Sets so this might influence your choice of a name.
6. Press Enter or Alt + S to Save the new Style Set.
7. When you press Alt + H + G, and open the Style Set list, your Style set will be there and, when chosen, will apply your font and font attributes to the document.

You can make this the default Style Set to be used for all documents you create. One thing to keep in mind is that these are your preferences and someone else reviewing or editing your documents may not find your Style set accessible. Of course, if they have their own Style set they can swap out yours!

There is a more comprehensive document on Swapping Style Sets[3] on the Karlen Communications web site on the pages for Microsoft Office 2007 and 2010.

Create Style Set video.



[3] Swapping Style Sets documentation on Karlen Communications web site: http://www.karlencommunications.com/

Working with Styles

We've looked at how to create a template and a Theme for the document look and feel. Now we can look at the way the document is structured and formatted.

The first place to start in looking at how to structure a document is the Styles used by the native application. Each application has "specifications" as to what a standard paragraph or body text is. Each piece of body text or paragraph that you create looks the same and has the same elements. This is how the application knows how to present and display it to you and this also determines how the body text or paragraph should appear when printed. This is all done behind the scene as you type or dictate content.

You can modify the "normal" body text or paragraph attributes, however, in some applications, it is difficult to reset them if your plans go awry and you end up with a Style that is unusable. If you are not going to create a template, it is preferable to take the existing Style and create a new one based on it or to make sure that you check the check box to only modify the Normal paragraph style for the specific document you are working on. The limitation of this is that if you then need to use those styles for other documents, you'll have to remember what you did or use the Import/Export tool in Word to import the styles you want.

If you do create chaos in the Styles of the Normal.DOCX template you can exit Word, delete Normal.DOTX from the Templates folder under your computer username and then restart Word. This will rebuild the Normal.DOCX template with the defaults. If you had Styles in that template you wanted, they will be lost.

Imagine a newspaper, magazine, school textbook, or even a novel that was one long series of paragraphs with no visual cues for a change in content, important information to remember, or even page numbers or a Table of Contents. This would be a document without a logical document structure and clearly, it would be very difficult to read.

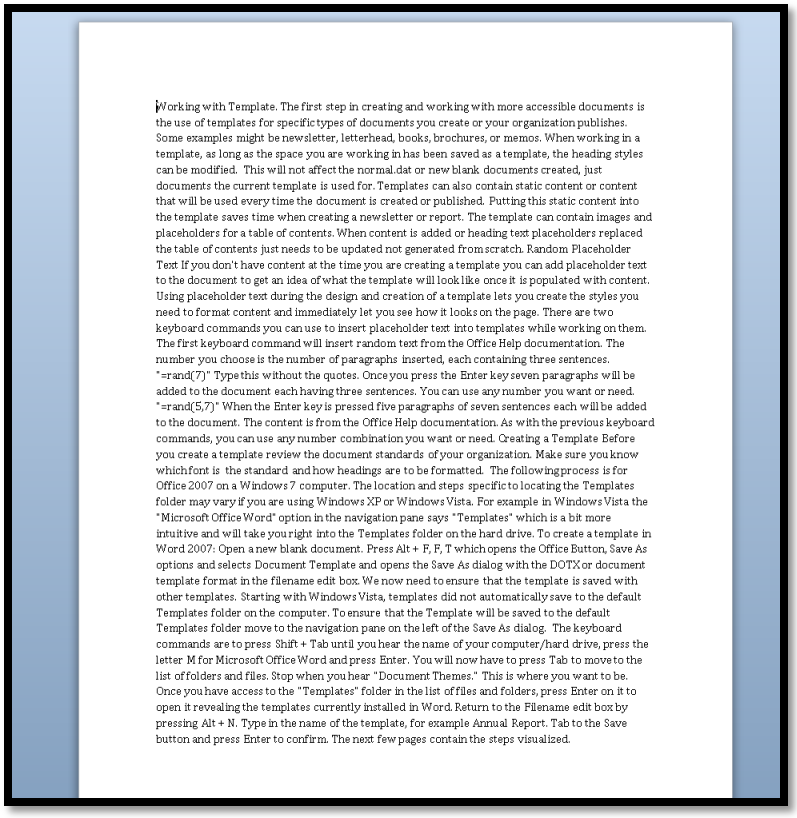
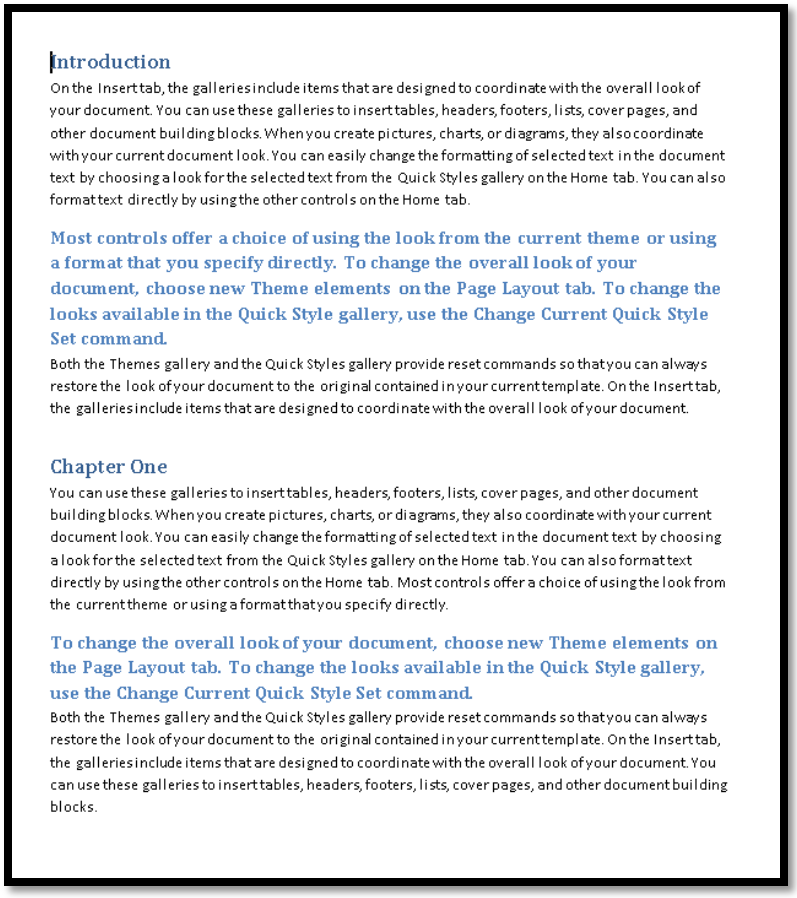

Working with Template. The first step in creating and working with more accessible documents is the use of templates for specific types of documents you create or your organization publishes. Some examples might be newsletter, letterhead, books, brochures, or memos. When working in a template, as long as the space you are working in has been saved as a template, the heading styles can be modified. This will not affect the normal.dat or new blank documents created, just documents the current template is used for. Templates can also contain static content or content that will be used every time the document is created or published. Putting this static content into the template saves time when creating a newsletter or report. The template can contain images and placeholders for a table of contents. When content is added or heading text placeholders replaced the table of contents just needs to be updated not generated from scratch. Random Placeholder Text If you don't have content at the time you are creating a template you can add placeholder text to the document to get an idea of what the template will look like once it is populated with content. Using placeholder text during the design and creation of a template lets you create the styles you need to format content and immediately let you see how it looks on the page. There are two keyboard commands you can use to insert placeholder text into templates while working on them. The first keyboard command will insert random text from the Office Help documentation. The number you choose is the number of paragraphs inserted, each containing three sentences. "=rand(7)" Type this without the quotes. Once you press the Enter key seven paragraphs will be added to the document each having three sentences. You can use any number you want or need. "=rand(5,7)" When the Enter key is pressed five paragraphs of seven sentences each will be added to the document. The content is from the Office Help documentation. As with the previous keyboard commands, you can use any number combination you want or need. Creating a Template Before you create a template review the document standards of your organization. Make sure you know which font is the standard and how headings are to be formatted. The following process is for Office 2007 on a Windows 7 computer. The location and steps specific to locating the Templates folder may vary if you are using Windows XP or Windows Vista. For example in Windows Vista the "Microsoft Office Word" option in the navigation pane says "Templates" which is a bit more intuitive and will take you right into the Templates folder on the hard drive. To create a template in Word 2007: Open a new blank document. Press Alt + F, F, T which opens the Office Button, Save As options and selects Document Template and opens the Save As dialog with the DOTX or document template format in the filename edit box. We now need to ensure that the template is saved with other templates. Starting with Windows Vista, templates did not automatically save to the default Templates folder on the computer. To ensure that the Template will be saved to the default Templates folder move to the navigation pane on the left of the Save As dialog. The keyboard commands are to press Shift + Tab until you hear the name of your computer/hard drive, press the letter M for Microsoft Office Word and press Enter. You will now have to press Tab to move to the list of folders and files. Stop when you hear "Document Themes." This is where you want to be. Once you have access to the "Templates" folder in the list of files and folders, press Enter on it to open it revealing the templates currently installed in Word. Return to the Filename edit box by pressing Alt + N. Type in the name of the template, for example Annual Report. Tab to the Save button and press Enter to confirm. The next few pages contain the steps visualized.

Figure 20 Page with no structure.

Misuse of Headings

I mentioned mistakes or misuse of headings earlier in this section of the book. One of the most prevalent uses of headings is to identify important information in a document. This has serious implications for the use of other document tools and for adaptive technology such as screen readers.

The following image illustrates two paragraphs of text formatted as headings.



Introduction

On the Insert tab, the galleries include items that are designed to coordinate with the overall look of your document. You can use these galleries to insert tables, headers, footers, lists, cover pages, and other document building blocks. When you create pictures, charts, or diagrams, they also coordinate with your current document look. You can easily change the formatting of selected text in the document text by choosing a look for the selected text from the Quick Styles gallery on the Home tab. You can also format text directly by using the other controls on the Home tab.

Most controls offer a choice of using the look from the current theme or using a format that you specify directly. To change the overall look of your document, choose new Theme elements on the Page Layout tab. To change the looks available in the Quick Style gallery, use the Change Current Quick Style Set command.

Both the Themes gallery and the Quick Styles gallery provide reset commands so that you can always restore the look of your document to the original contained in your current template. On the Insert tab, the galleries include items that are designed to coordinate with the overall look of your document.

Chapter One

You can use these galleries to insert tables, headers, footers, lists, cover pages, and other document building blocks. When you create pictures, charts, or diagrams, they also coordinate with your current document look. You can easily change the formatting of selected text in the document text by choosing a look for the selected text from the Quick Styles gallery on the Home tab. You can also format text directly by using the other controls on the Home tab. Most controls offer a choice of using the look from the current theme or using a format that you specify directly.

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Figure 21 Paragraphs of text formatted as headings.

Both paragraphs would be included when a Table of Contents is generated for this document. This amount of text overwhelms other information in the Table of Contents, preventing the Table of Contents from being used as an effective navigational tool.

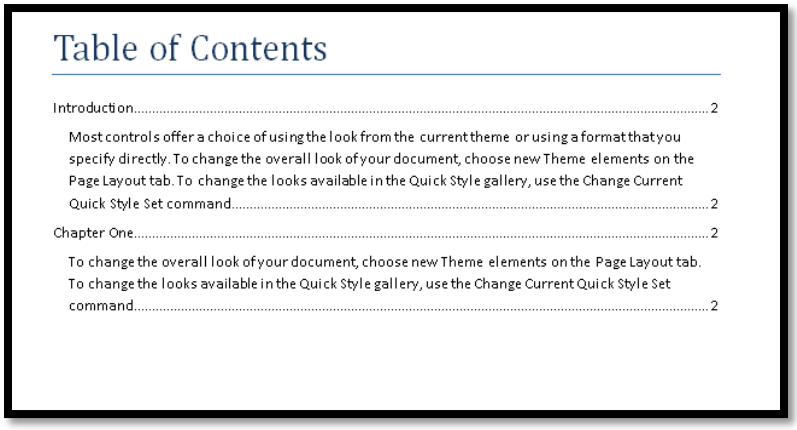


Table of Contents

Introduction 2

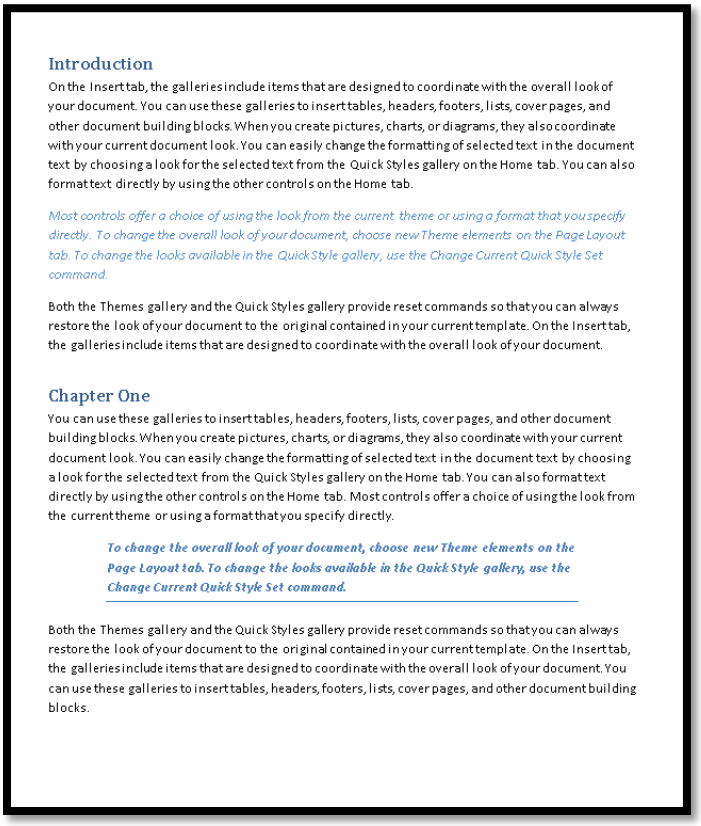
Most controls offer a choice of using the look from the current theme or using a format that you specify directly. To change the overall look of your document, choose new Theme elements on the Page Layout tab. To change the looks available in the Quick Style gallery, use the Change Current Quick Style Set command 2

Chapter One 2

To change the overall look of your document, choose new Theme elements on the Page Layout tab. To change the looks available in the Quick Style gallery, use the Change Current Quick Style Set command 2

Figure 22 paragraphs of text in the table of contents.

The better solution would be to create a paragraph Style that isolates the text as something important needing the reader's attention. We'll do this later in this book. An alternative that might be more practical is to use one of the paragraph styles in the Normal.DOTX template: Quote or Intense Quote.



Introduction

On the Insert tab, the galleries include items that are designed to coordinate with the overall look of your document. You can use these galleries to insert tables, headers, footers, lists, cover pages, and other document building blocks. When you create pictures, charts, or diagrams, they also coordinate with your current document look. You can easily change the formatting of selected text in the document text by choosing a look for the selected text from the Quick Styles gallery on the Home tab. You can also format text directly by using the other controls on the Home tab.

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Chapter One

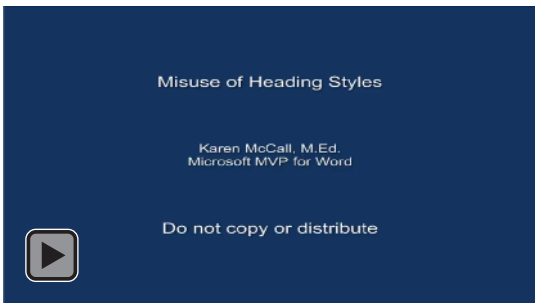
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Figure 23 Two paragraphs, one formatted with Quote style and one with Intense Quote style.

Misuse of Heading Styles video.



Applying a Heading Style

The most common Styles you will work with are Heading Styles. Heading Styles provide visual distinction between topics. For example, a chapter title might be a Heading 1. Any sub-topics under that chapter heading would be identified by the appropriate heading level.

Heading levels should reflect the hierarchy of the topics in the document. Headings should move from Heading 1 to Heading 2 and then Heading 3. Headings should not skip from Heading 1 to Heading 3 or Heading 2 followed by Heading 4. This does not accurately represent the hierarchy of the content in a document.

I hear the question...

But I like the way Heading 3 looks so I just used it for everything in the document.

OK, we can work with that.

The solution might be to make Heading 1 look like Heading 3. You can modify the existing heading in a template or create a Custom Heading if you need more than one look and feel for a heading level. Keep in mind that headings are navigational points and therefore should be in a slightly larger font so they are easier to see. So, if your text is 11 point and you make Heading 1 12 point, that leaves Heading 2 at 10 point and Heading 3 at 8 point, which would make them smaller fonts than the normal body text of our document. This in turn would not make them stand out as navigational points. Making the body text smaller might create readability issues for those not using adaptive technology.

Remember that what you are doing provides the hierarchy of content...its order of importance in the document. We also need to let go of the visual and focus on the underlying structure of what we are looking at.

As stated in the previous section of this book on templates, there is no "reset" button to return the normal headings back to their original look and feel if you mangle them horribly unless you delete the Normal.DOCX and rebuild it.

First create a template. Then create your Theme. Then modify the inherent Heading Styles to look the way you want, or create Custom Heading Styles for a more specific look and feel to your documents.

If we create a visual representation of a heading by formatting the text by simply enlarging the font, bolding, underlining, etc. in order to make it stand apart from a paragraph, that visual representation of a "heading" has the underlying structure of a normal paragraph. It can't be used to generate a Table of Contents without bookmarking it, a person using a screen reader can't find it among all the other paragraphs in a document, and you won't be able to use it to generate Bookmarks in a tagged PDF document converted from Word without extra steps.

Once again, for those of you who just want to start using Heading Styles, here are the keyboard commands to apply them to selected text. I recommend always selecting content you want to format to ensure that the formatting is only applied to what you want. Often turning on formatting, typing and

then turning off formatting results in forgetting to turn formatting off at the appropriate time. This results in conflicting formatting that will appear “randomly” when documents are converted to other formats such as tagged PDF.

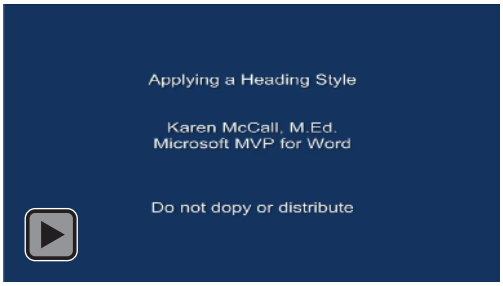
To apply Heading Styles to the selected text press:

- Ctrl + Alt + number 1 for a Heading 1.
- Ctrl + Alt + 2 for Heading 2.
- Ctrl + Alt + 3 for Heading 3.

One of the things that document authors should do is to organize the topics in their publication. This is similar to organizing your thoughts for a slide presentation. How do you want the document to start and how do you want the content to flow?

There are times when the content seems to flow on its own and there are other times when it needs a bit of help.

Apply a Heading Style video.



Modify a Heading Style

As mentioned, if you don't like a Heading Style, you can modify it in your template. One thing to keep in mind when determining normal text or body text font size is that the other Styles in the document do not automatically adjust to reflect the new base font size. For example, in the Normal.DOCX template the text font size is 11 point and the Heading 1 font size is 16 point. If you adjust the body text or normal text to 16 point, the Heading 1 text will also be at 16 point. You will need to manually adjust the relative font sizing.

To modify a Heading Style:

1. Type some text into the document.
2. Select the text and apply a Heading 1 to it by pressing Ctrl + Alt + number 1.
3. Press Alt + H, F, Y to open the Styles Pane.
    a. Because you selected text and applied the Heading 1 Style, this Style will have focus in the Styles Pane.
4. With the Heading 1 Style selected in the Styles Pane, press the AppKey to open the context menu.
5. Choose Modify from the list of options and press Enter.
6. This will open the Modify Styles dialog.
7. You can now adjust the font, font size, font colour, borders, alignment and so forth for the Heading 1 Style.
8. Once you are finished, make sure that the check box to "Add to Quick Styles" list is still selected and then choose one of the radio buttons to either only use the modification in the current document or for new documents based on the current template.
9. Do not choose to automatically update Styles. This is where you can inadvertently corrupt your Styles.
10. Tab to and activate the OK button to confirm the modifications.

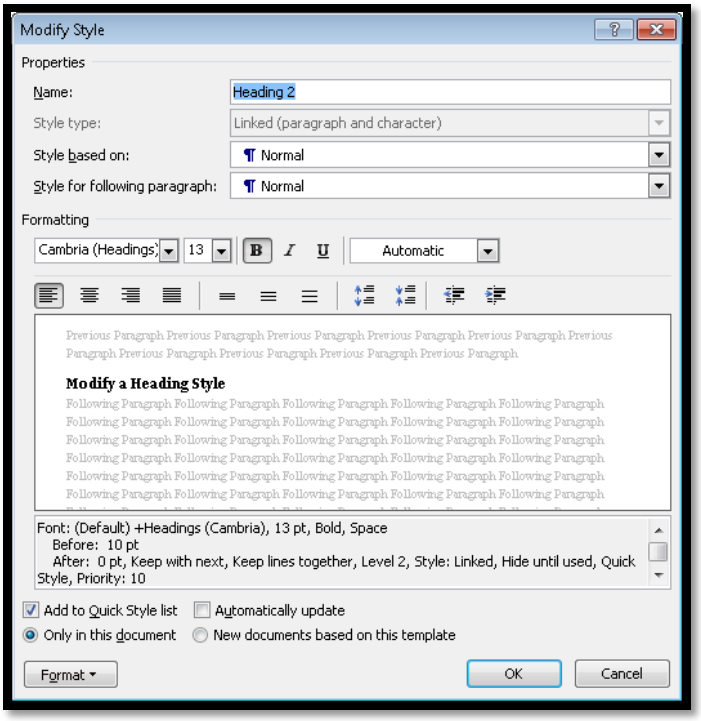
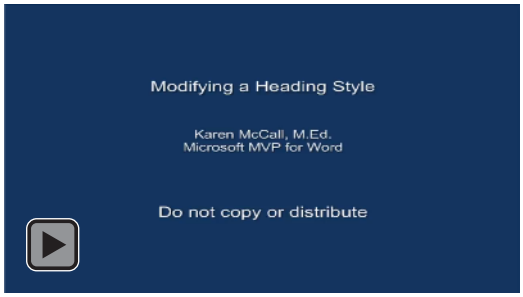


Figure 24 Modify Styles dialog.

Within the Modify Style dialog there is a button that can be accessed labeled “Format.” This button contains options for borders, paragraph spacing, additional font tools and other formatting options.

Modify a Heading Style video.



Custom Heading Styles

There are times in documents when you need to create Custom Styles for headings. For example, when you want two or more pieces of content to have a top level role in the document but you need them to look slightly different. The key is to base any Custom Style on an existing Style in Microsoft Word.

If you follow this process, it helps you visually confirm that the Style you've created looks the way it should.

To create a Custom Heading Style:

1. Launch Microsoft Word.
2. With a new/blank document open, type your name.
3. Select your name and press Ctrl + Alt + the number 1 to apply the Heading 1 Style.
    a. You can apply other levels of headings by pressing Ctrl + Alt + 2 for a Heading 2 or Ctrl + Alt + 3 for a Heading 3. For this example we will work with a Heading 1.
4. Press Alt + H, F, Y to open the Styles Pane.
5. This opens a pane on the right of your screen and your focus should be in it. To toggle between the task pane and your document, press F6. To move back to the document press Shift + F6.
6. By default, Heading 1 is the Style "in focus." This is because it is applied to the selected text in the document. By selecting text and applying a Style you want to customize, you don't have to go through the list of Styles to find the one you want.
    a. Tab to the New Style button located at the bottom left corner on the Styles Pane and press Enter. This opens a dialog box with all the formatting currently applied to a Heading 1. The image below shows the "Style based on" selected. The Style listed in this list box is what the new Style will be based on. Notice that under Formatting in this dialog you can see the formatting applied to this Style.
7. Your focus is in the name edit box and "Style1" is selected. Type in the name of your new Style. In the case of documents created for Karlen Communications, I've called the Style based on Heading 1 "Karlen 1."
8. Tab to the next edit box. In our example, the key is to leave the Style based on Heading 1. This Style is what automated tools will be looking for when generating a table of contents, index, or creating bookmarks for your tagged PDF documents.
9. Press Tab again and you can modify the Style that comes immediately after a Heading 1. It is recommended that you leave this as it is.
10. Pressing Tab again takes you into the attributes under the heading of formatting or "specifications" of a Heading 1 where you can modify things like font, colour, size, Style, alignment and so forth. Continue using Tab to move from attribute to attribute. Standard dialog box keyboard commands will work in this dialog.
11. You can also choose Alt + the letter O to activate the Format button, which will let you add borders, shading, Paragraph Formatting, Tabs, Numbering and "Paragraph Frames." Paragraph Frames are completely inaccessible and should be avoided.
12. There is one other critical piece to creating your Custom Style. You must check the check box to add this Style to the template.

13. Do not check the check box to automatically update. This will automatically update the Styles and formatting with any formatting done to individual pieces of text. This can get quite messy in a list of Styles.
14. Activate the OK button to confirm your new Style.

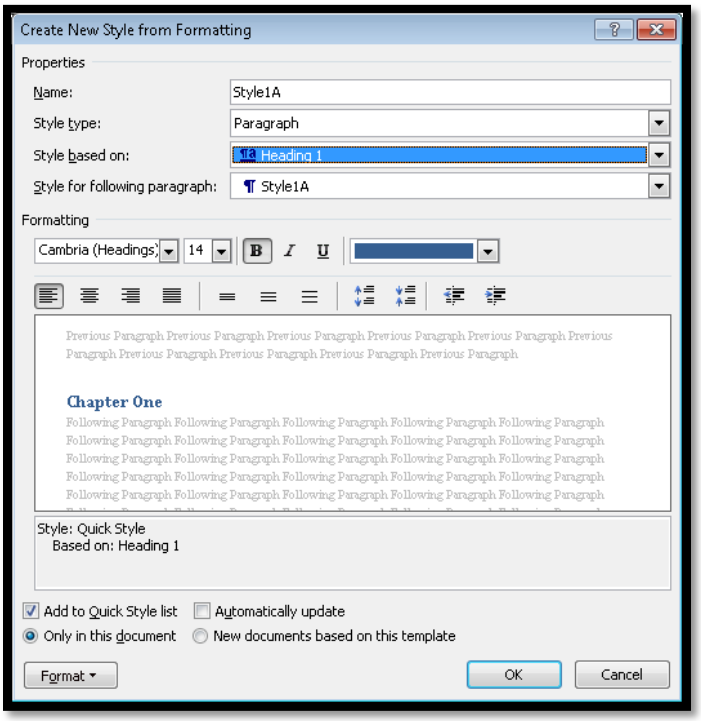


Figure 25 New Style dialog.

It may be necessary to activate the Options button in the Styles Pane and choose to have Styles displayed alphabetically . The default might be to display Styles according to their recommended use in the document.

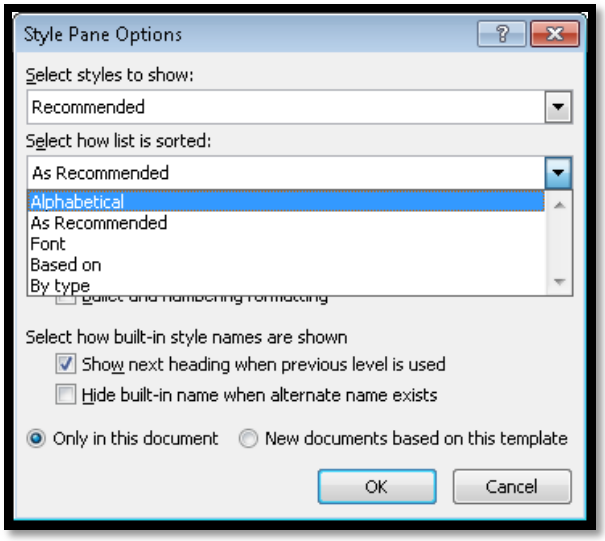
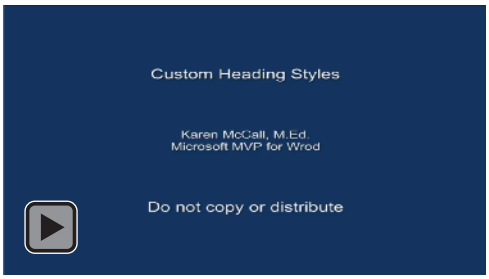


Figure 26 Alphabetical Styles in the Styles Pane options dialog.

You can use this Custom Style in other documents based on this template. If you choose to only use the Custom Style in the current document it will not be available to you in documents based on this template.

Custom Heading Styles video.



Paragraph and Character Styles

In a document, you can have Paragraph Styles or Character Styles.

What is the difference?

The difference comes from being able to work in an XML based environment. Using Paragraph Styles, we can format large pieces of the document to have a specific role or structure in the document. Character Styles, on the other hand are more decorative and are intended for a few characters or words only. There is no structural element for a character style. Character Styles are pure decorative formatting.

Why should I use them if they are decorative formatting?

If you have pieces of content such as letters, numbers or words that you need to have specific and consistent formatting throughout your documents, using a Character Style ensures this consistency.

For someone using adaptive technology, such as a screen reader, who has Style identification turned on, it means they will be notified when they come across a Character Style by its name, such as “Important” or “Emphasis.” This has more meaning than randomly applying bold, italic or underline, and you have more flexibility to use decorative display options.

A Character Style lets you combine formatting for characters in the document. If you bold something, that is pretty much what you can do to the text using the “bold” command. If you apply a Character Style such as “strong” you can combine colour, font size, font Style and borders to the content the Character Style is applied to.

Again, one application of a Style gives you all the formatting you used previously for the same type of content.

To create a Character Style:

1. Make sure that the Style you are on is the Normal paragraph Style. You might want to type a word or two then select the text.
2. Open the Styles Pane by pressing Alt + H, F, Y. Be sure that the focus is on Normal in the styles list.
3. Move to the New Style button and press Enter to activate it.
4. The New Style dialog opens. Notice that you are in the Name edit box.
5. For this example, I’ll call the new Style “Note.” Type in Note
6. Press tab to the Style type list and choose “Character” by pressing the down arrow key or using first letter navigation and typing the letter “C” and pressing Enter.
7. Notice that your options are now limited in terms of what you can use to format a character.
8. For the Note Style, I turned on Bold, changed the font size to 12, the (font colour is a dark purple) and then went into the Format options and put a light purple shading behind the text. Normally I wouldn’t over format like this, but this lets you see the power of both character styles and over formatting text as a readability barrier.

9. Move to and activate the OK button to create the Style once you've formatted the Style the way you want.

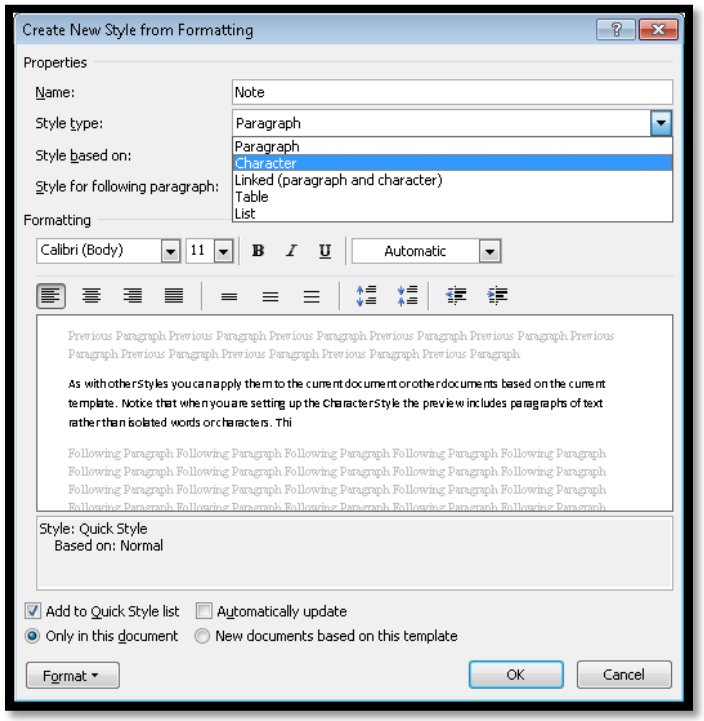


Figure 27 Creating a character style.

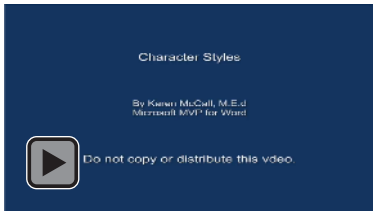
As with other Styles, you can apply them to the current document or other documents based on the current template. Notice that when you are setting up the Character Style the preview includes paragraphs of text rather than isolated words or characters. This is normal. Just make sure you have the Character option chosen in the Style type.

When the Note Style is applied to single characters or words, the formatting is consistent and uniform.

If you don't like the way the Note Style looks, for example the background shading in this case detracts from the impact of the isolated text, changing this in the Note Style changes it everywhere the Note Style is used in the document or in new documents based on the template. You don't have to spend time going through the document to find all instances of the formatting. You locate the Character Style in the Style Pane, modify it, and all instances of its use in your document or template will be changed once you activate the OK button.

There are two character styles in the Normal.DOTX: Strong and Emphasis. You can modify either of these instead of creating a new style to avoid confusion for others who might be revising or editing the document passed on your template.

Character Style video.



Paragraph Styles

Normally I would modify the Quote or Intense Quote style in a template to do this. However, it is good practice to work through creating a new style for this type of paragraph formatting/decoration.

To create an outstanding Paragraph Style:

1. Add some random text to your document and select it or select an existing paragraph in the document.
2. Open the Styles Pane by using Alt + H, F, Y.
3. Choose the New Style button.
    a. You have a normal paragraph in the document selected and this is what you want.
4. Your cursor is in the “Name” edit box. Give the new Style a name like "Important" or "Attention." Make sure that someone else who might be revising the document or using the template will know what that Style is for based on its name.
5. Make any changes you want to the font, size, colour, alignment and so forth .
6. Press Alt + letter O to open the Format button options.
7. Choose Borders.
8. This opens the Borders and Shading dialog.
9. Choose the border you want as well as its colour, thickness, number of sides you want it to appear and so forth.
10. If you want extra space between the text and the border, activate the Options button in the Borders dialog and add some padding. In this document I made the padding 14 point top, bottom, left and right.
    a. Tab to and activate the OK button once you are finished.
11. Make sure that the border is applied to the paragraph and not the text. This is a list box just under the visual image of what the text will look like once it has borders.
12. For this book and the example shown in the following image I also went to the Shading tab and chose one of the lightest fill/shadings for this document’s colour palette. If you add shading, make sure that the text is still readable. You could modify the text to be white and the fill colour or shading to be darker…as long as it passes a colour contrast validation.
13. Tab to and activate the OK button once you think you have the look and feel you want.
14. You can always come back and modify the Style if you do not like your choice.
15. Remember to choose whether this Style is available in this document or any documents based on this template. Do not check “Automatically update.”
16. Tab to and activate the OK button to finish creating the Style. Notice that it appears in the Styles Pane list.

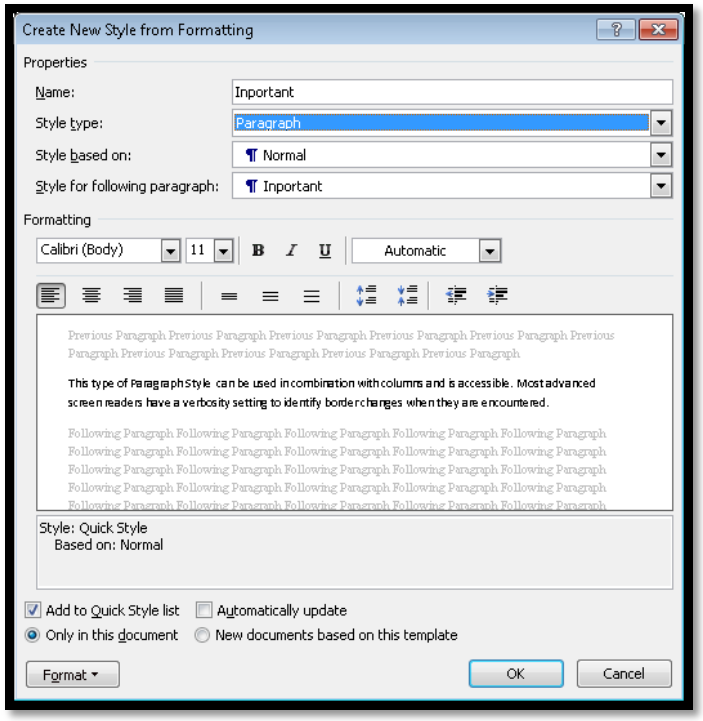
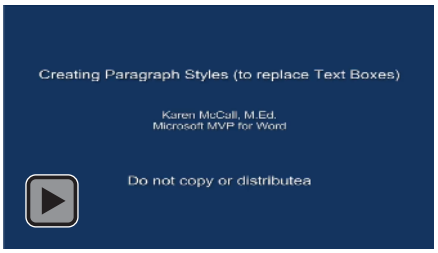


Figure 28 Creating a new Paragraph style.

This type of Paragraph Style can be used in combination with columns and is accessible. Most advanced screen readers have a verbosity setting to identify border changes when they are encountered.

Paragraph Style video.



Tools for Working with Styles

Word has several tools that will help you review the structure and Styles of the document you are working in. These tools include a Navigation Pane with a list of headings in the document, reveal formatting tool, Style Inspector and Style Organizer.

Navigation Pane

One of the tools available to you to look at the headings and their hierarchy in a document is the "Navigation Pane." The Navigation Pane is found under the View Ribbon. The keyboard command to check the check box to show the Navigation Pane is Alt + W, K.

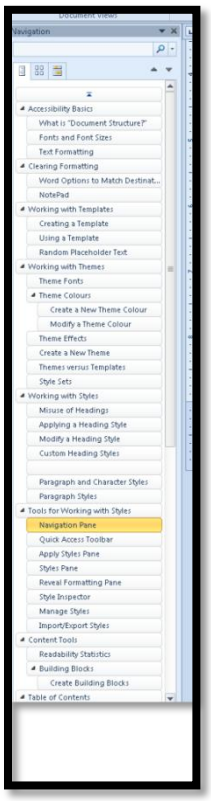
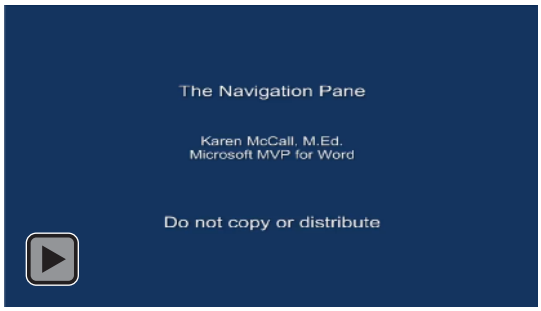


Figure 29 Navigation Pane.

To close this pane , press Alt + W, K again. You can also press Ctrl + Spacebar to open the context menu, then press C for Close if the Navigation Pane is in focus.

Navigation Pane video.



Quick Access Toolbar

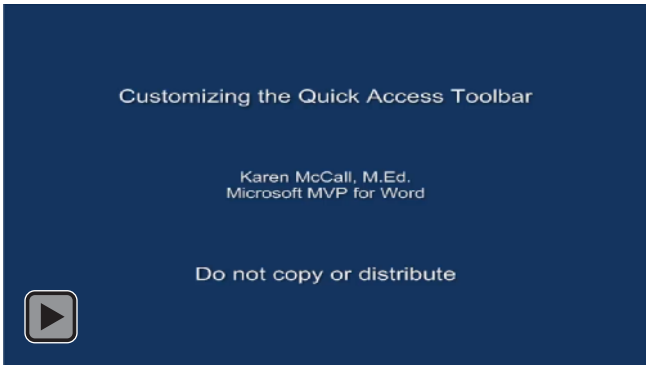
The Quick Access Toolbar is located just above the Home tab in the row of Ribbons. It is a place where you can put the tools that are not on the ribbon, or tools you just use often and want close at hand. For example, I put the Apply Style Pane in the Quick Access Toolbar so that I just have to press Alt + 4 and my focus is in it and I can use it.



Figure 30 Quick Access Toolbar.

This lets me use the Apply Styles Pane the same way I would have in Word 2003 when it was on the Formatting Toolbar. It also lets me get information about the font at my cursor point at a glance.

Quick Access Toolbar video.



Apply Styles Pane

You can also press Ctrl + Shift + S for the Apply Styles Pane and choose the appropriate Heading Style from the drop down list. To choose a Style, press the Spacebar to open the list of styles and use the Up and Down Arrows to go through the list of Styles, or simply type in the Style you want to apply such as List Paragraph.

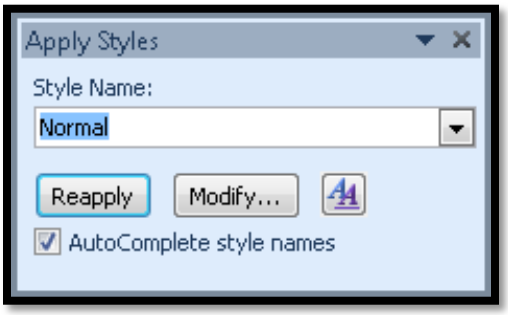
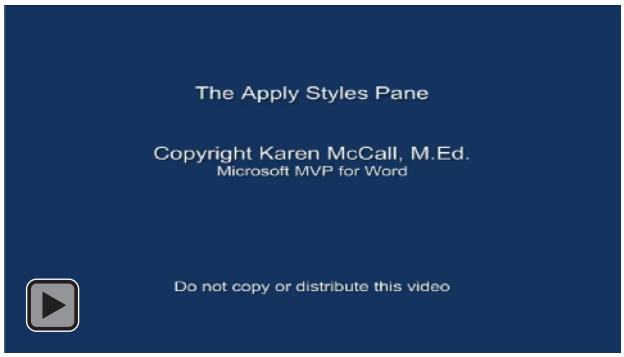


Figure 31 Apply Styles Pane.

If you are using adaptive technology, you can open the Apply Styles Pane and choose to Modify the style here instead of going through the Styles Pane. There is also a New Styles button in the Apply Styles Pane. Select the text with the formatting you want to modify or base the new style on before opening the Apply Styles Pane.

To close this pane, press Shift + F6 until it is in focus. Press Ctrl + Spacebar and then the letter C for Close.

Apply Styles Pane video.



Styles Pane

The Styles Pane will open to the right of the document when activated. The keyboard command is Alt + H, F, Y. There is an icon for it on the Home Ribbon but it is so small that you can have it open and working with the styles using the keyboard before you'll target it with the mouse.

There is an ability in the Styles Pane to clear all formatting, which works the same way the previously identified Alt + H, E to Erase formatting works.

The Styles Pane can show you all styles or styles in use. You can choose to see what the style looks like in the Styles Pane so it is easier to find in the document.

If you want your Styles to be displayed alphabetically, go into the Options link in the Styles Pane and choose Alphabetical in the display options.

If you press the AppKey or use the right mouse button on any style in the Styles Pane, you can modify it or you can find all instances of the style in the document and select them.

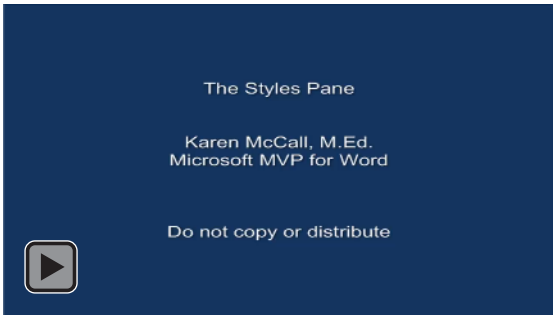
You can remove styles from the document, however, I find that sometimes you need to use the Manage Styles tools to do this, especially with legacy documents from other versions of Word.



Figure 32 Styles Pane

To close this pane , press Shift + F6 until it is in focus. Press Ctrl + Spacebar and then the letter C for Close.

Styles Pane video.



Reveal Formatting Pane

To show the Reveal Formatting Pane, press Shift + F1. The Reveal Formatting tool is not on any of the Ribbons. With Word 2010 you can create your own Ribbon and add it. The Reveal Formatting item can be found in the Customize Ribbon category in Word Options under All Commands.

I find it easier to use the keyboard command.

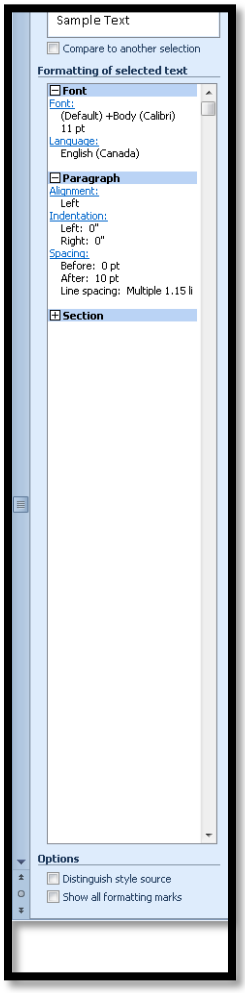


Figure 33 Reveal Formatting Pane.

There are two options in this pane: a check box to distinguish Style source and a check box to show all formatting marks.

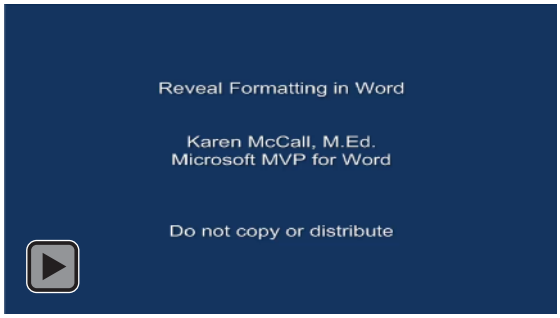
The checkbox to Distinguish Style source shows the name of the Style and the type of Style in the Reveal Formatting Pane.

The Show All Formatting Marks check box is the same as pressing Ctrl + Shift + 8 on the number row to show the paragraph marks in the document.

To close this pane , either press Shift + F1 again or press Shift + F6 until it is in focus. Press Ctrl + Spacebar and then the letter C for Close.

Reveal Formatting can be found in the All Commands category in the Quick Access Toolbar category in Word Options, if you want to add it to the Quick Access Toolbar.

Reveal Formatting video.



Style Inspector

The Style Inspector is another way to get a snapshot of content formatted at the cursor point. The Style Inspector is a floating pane that changes as you move through a document, depending on where the cursor is.

For example, if I were in Word, in this document, at the current cursor position the Style Inspector would show the attributes for normal body text.

If I were to move the cursor to the next heading in the document, the information in the Style Inspector would change to show the attributes for that heading.

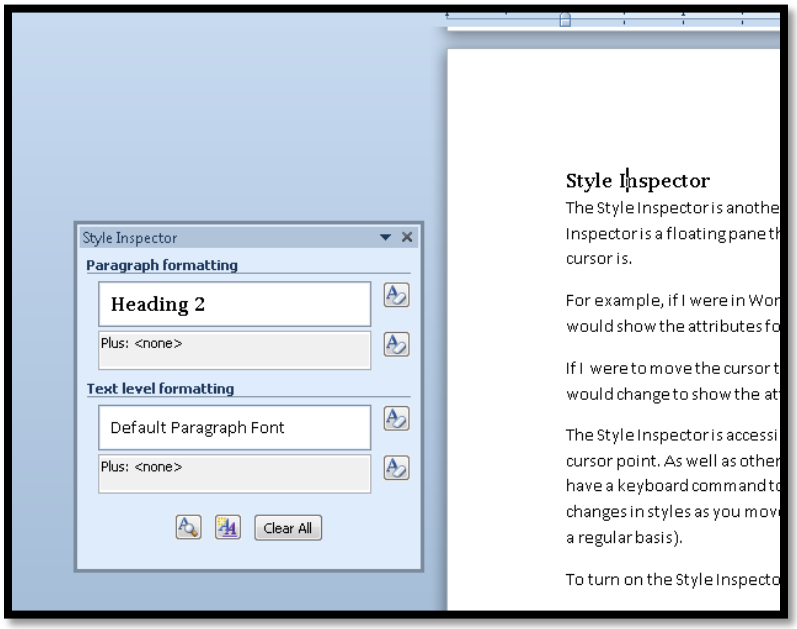


Figure 34 Style Inspector.

The Style Inspector is accessible, however there are more efficient ways to examine formatting at your cursor point. As well as other tools in Word, some adaptive technologies such as the JAWS screen reader have a keyboard command to identify formatting: JawsKey + F and a verbosity setting to identify changes in styles as you move through a document (although this can be terribly annoying to listen to on a regular basis).

To turn on the Style Inspector:

1. Press Alt + H, F, Y to open the Styles Pane.
2. At the bottom of the Styles Pane there are three buttons.
3. The middle button is the one for the Styles Inspector.
4. Activate the Style Inspector button by pressing Enter.
5. The Style Inspector Pane opens and floats over the document.

The Style Inspector has several useful tools along the right side of the Pane.

From Top to bottom they are:

- Reset to Normal Paragraph Style.
- Clear Paragraph formatting. This is the same as pressing Alt + H, E.
- Clear Character Style.
- Clear Character formatting.

There are also three buttons along the bottom of the Style Inspector:

- Reveal Formatting which is the same as pressing Shift + F1.
- New Style.
- Clear All.

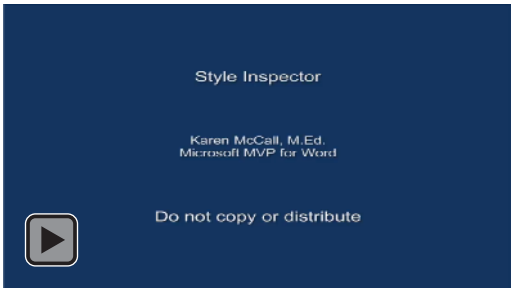
All of these items can be tabbed to and will be identified if you are using a screen reader. Note that some tools remove formatting while others reset or remove Styles.

This is a handy tool to clean up legacy documents. Use a combination of tools to work with legacy documents or non-structured current documents.

To close this pane, press Shift + F6 until it is in focus. Press Ctrl + Spacebar and then the letter C for Close.

The Style Inspector can be found in the All Commands category in the Quick Access Toolbar category in Word Options if you want to add it to the Quick Access Toolbar.

Style Inspector video.



Manage Styles

To the immediate right of the Style Inspector button in the Styles Pane is the Manage Styles button. This tool lets you remove unwanted styles from documents, and import or export styles from one document to another. This is also where you can experiment with protecting styles from being corrupted in a template.

The Manage Styles dialog has several tabs with different functions:

- Edit lets you modify or remove styles.
- Recommend lets you organize styles by priority and whether they are "recommended" styles in a document.
- Protection lets you identify styles that cannot be changed. I find this tool a bit awkward to work with as it seems to remove those styles from my documents as I add content. I'm still experimenting with this to work with an accessible template so that the accessibility can't be broken.
- The Set Defaults tab lets you make changes to inherent styles which then become the default. This seems to be the same as working with the Modify Styles dialog.
- In all tables you have access to the Import/Export button and can choose to apply the changes to the current document or new documents based on this template.

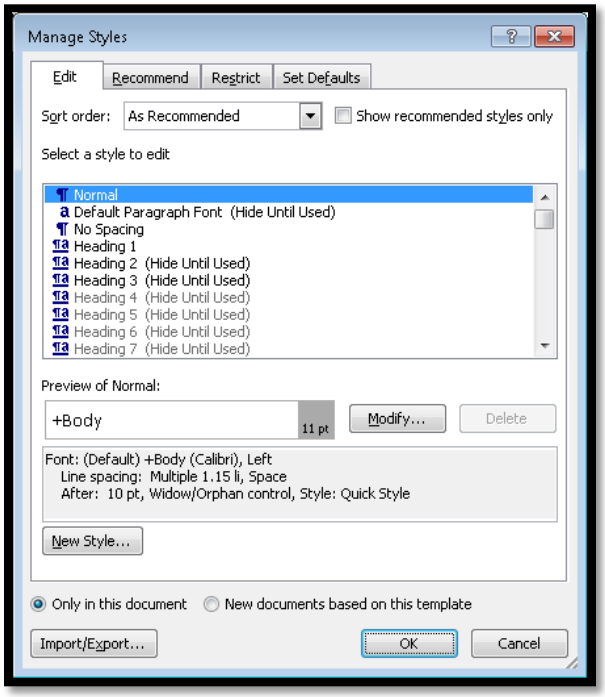
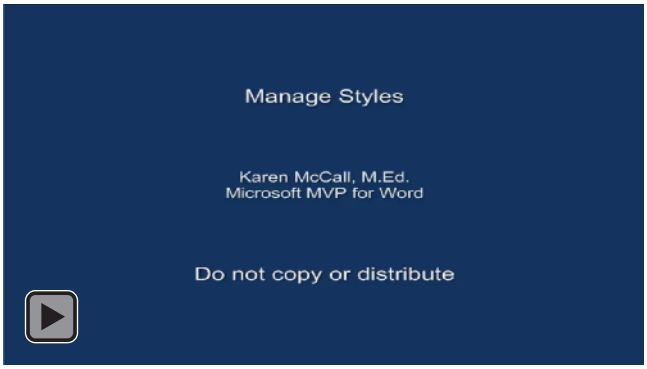


Figure 35 Manage Styles dialog.

With some legacy documents, documents created in other versions of Word or other word processors, using Manage Styles to delete unwanted styles may be the only method that works.

Manage Styles can be found in the All Commands category in the Quick Access Toolbar category in Word Options if you want to add it to the Quick Access Toolbar.

Manage Styles video.



Import/Export Styles

With Word 2010 you have the capability to create Styles in one document and use them in another document. This is leveraging the XML based formatting of Office 2007.

It is also similar to CSS or Cascading Style Sheets used in web based content or other XML based formats.

The Styles Organizer or Import/Export is found in the Manage Styles dialog.

To import or export Styles from one document to another:

1. Press Alt + H, F, Y to open the Styles Pane.
2. Tab to the bottom of the Styles Pane and activate the Manage Styles button. It is the button to the right of the three buttons at the bottom of the Styles Pane.
3. The Manage Styles dialog opens.
4. Choose Import/Export – Alt + X which is in the lower left corner of the Manage Styles dialog.
5. The Styles organizer dialog opens.
6. By default, the Styles for the document you have opened is on the left and the Styles in the Normal template are on the right. There are buttons between these views that will let you copy Styles from one document to the other.
7. Word assumes you want to copy Styles from one document into a template, but you can choose a "regular" Word document to copy the files into.
8. On the right side of the Styles Organizer dialog, just under the list box containing the Normal template filename, the button says "Close File."
9. If you do not want to copy Styles into the Normal template, activate this button by pressing Alt + E.
10. The "Close File" button is now the "Open File button.
11. Activate the Open File button by pressing Alt + E.
12. A dialog opens with focus on the Word Templates folder so you can choose a template to copy the Styles to.
13. Once you choose a file or template and activate the Open button, the Styles for that document are displayed on the right side of the Styles Organizer dialog.
14. When you are finished working with the Styles, copying, deleting or renaming them, move to and activate the Close button.

If you select a Style in the current document displayed on the left, the copy button between the list of Styles in both documents points to the document on the right.

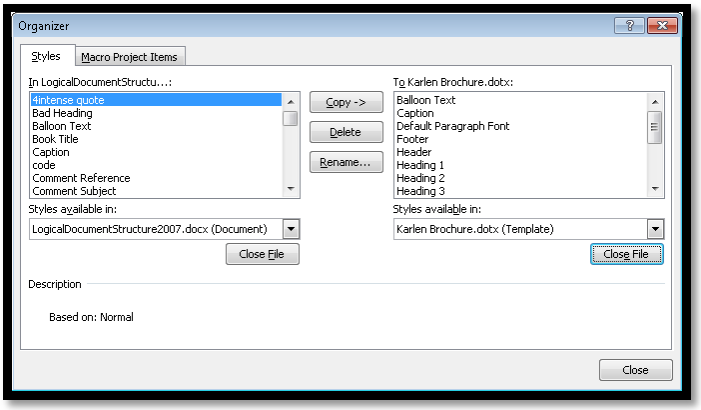


Figure 36 Import Export Styles dialog.

If you select a Style or Styles in the document or template on the right, the arrows change so that you can copy the Style to the document you have open, which is displayed on the left of the Styles Organizer dialog.

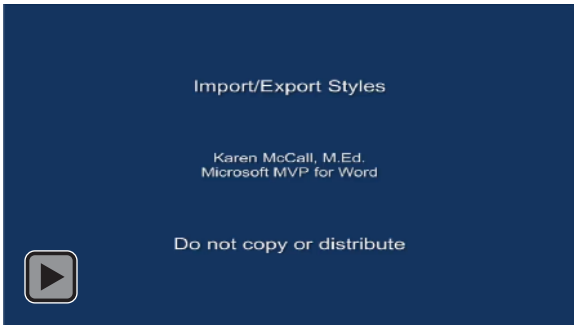
You can use the Shift key to select contiguous Styles, or Ctrl + A to select all Styles you want to copy or delete.

You can also use the standard keyboard command to select non-contiguous Styles, or hold down the Ctrl key and click the Styles you want to copy or delete.

This is a powerful tool that you can use to ensure consistent look and feel for documents that might not have or need Themes.

There is no Import/Export option for the Quick Access Toolbar. Under All Commands there is an item called “Import” but this will add “Theme Effects” to the Quick Access Toolbar, not any tool related to import or export. At other times, trying to add “Import” to the Quick Access Toolbar results in a tool that either does nothing or is unavailable.

Import/Export Styles video.



Content Tools

There are two tools in this topic: Readability Statistics and Building Blocks. Although there is some discussion around the accuracy of the readability statistics, it is a place to start when you look at the grade level of the text you write. It can, in a very basic way, let you know what grade level someone reading your document should be at. If you are tasked with writing "easy to read" plain language content, you would want to try to achieve a grade 8 or 9 reading level rather than grade 12 or 13.

Building Blocks, on the other hand let you create blocks of static content you use in several documents but might not want to include in the template. This replaces the "AutoText" tool in Word 2003 and is more powerful. One of my building blocks contains four pages of text that I use in several documents to describe the inaccessibility of text boxes. The building block includes images, Alt Text and captions…everything I need to illustrate my point. I don't have to remember which document the text is in, I can simply go to my Building Blocks and insert the content.

Readability Statistics

One of the nifty tools available when you turn on the "check grammar with spelling" option in the Word Options, under Proofing is to have readability statistics for your document presented to you. This is useful because you can see the grade level of content for your document. The grade level is based on the Flesch-Kincaid Grade Level.

To turn on Readability Statistics:

1. Press Alt + F, Letter T.
2. Choose the Proofing category by pressing the letter P.
3. Tab to the settings for the proofing tools.
4. Press Alt + H to Check Grammar with Spelling.
5. Press Alt + L to Show Readability Statistics. You can only choose Readability Statistics with the Check Grammar with Spelling option.

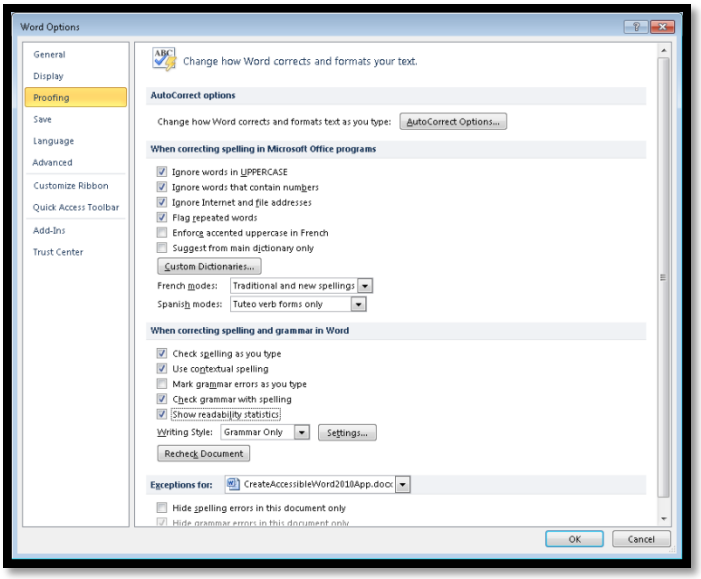


Figure 37 Proofing options in Word 2010.

The readability statistics will provide information about reading levels of the language you use, summaries of counts, averages of sentences per paragraph and words per sentence, and the readability of the document based on passive sentences, Flesch Reading Ease, and the Flesch-Kincaid Grade Level.

This dialog has a similar set up to the Word Count dialog, so if you are using a screen reader, you will have to use the mouse equivalent cursor to go through the dialog item by item if you don't hear it the first time.

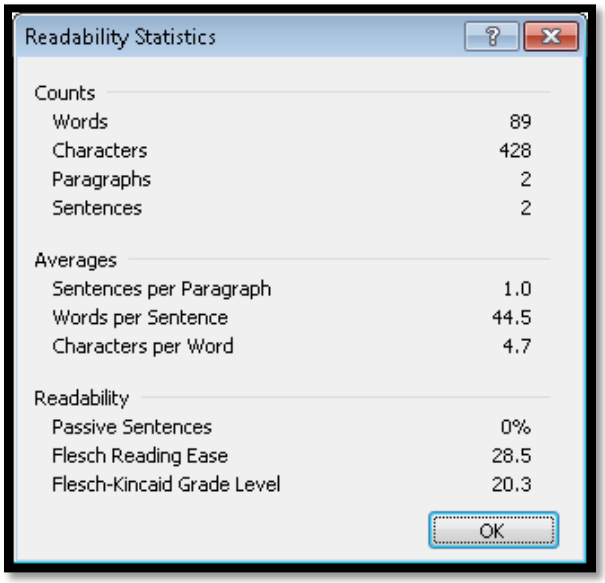


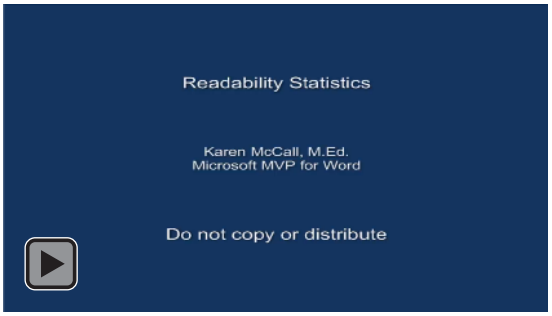
Figure 38 Readability Statistics dialog.

The Readability Statistics dialog appears after the spell check is complete, even if you spell check a word or paragraph. You can press the Escape key to dismiss it or activate the OK button.

If you use the Word tool to insert random text from the Help documentation into a blank document and then do a spell check, the resulting grade level in the Readability Statistics dialog is 10.2.

This is a useful tool to keep track of plain language content.

Readability Statistics video.



Building Blocks

Quick Parts or Building Blocks replace “AutoText” for those who have used previous versions of Microsoft Word. Building Blocks come with Microsoft Office for most applications. The Header and Footer Galleries are built from Building Blocks, as are the Cover Page Gallery and the Page Number Gallery. You can also create items to add to an existing Gallery or even create categories of galleries, for example, you might want to create an “Accessible” Gallery with pieces of text, images, and other document parts that you will use frequently.

Building Blocks are all of the pre-formatted parts of a document, such as cover pages, headers, footers, page numbers, bibliography, text boxes, and so forth.

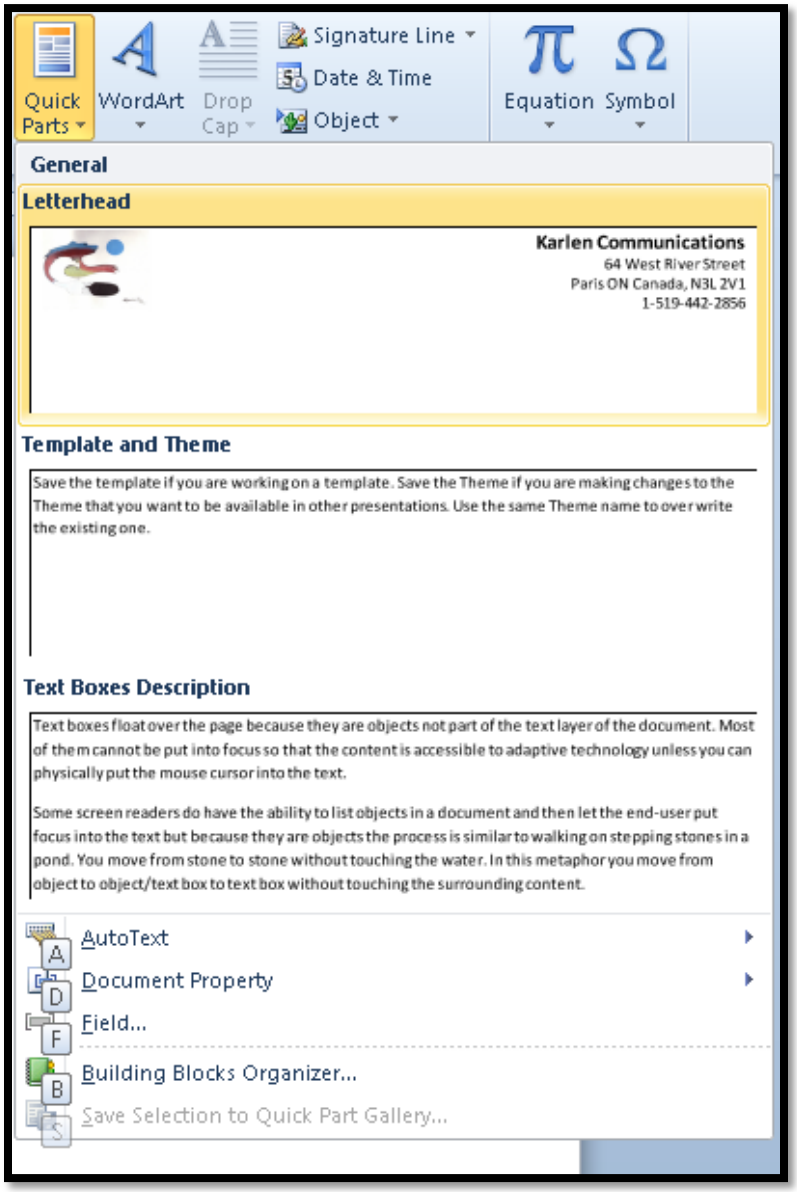


Figure 39 Building Blocks.

Again, a caution that some components of the built-in Building Blocks may not be accessible. For example, any Building Blocks that contain Content Controls.

To insert a Building Block into the document at the cursor point:

1. Press Alt + N, Q, B which opens the Building Blocks dialog.
2. On the left side of the dialog is a list of the various Building Blocks and which Gallery or category they belong to. On the right is a visual representation of what they will look like in the document.
    a. You can use first character navigation in this list, but I recommend that you use the Up and Down Arrows to explore it first to get a feel for what is listed.
3. Once you find the Building Block you want to insert, press Alt + Letter I or Tab to the Insert button and press Enter.
4. The Building Block is inserted at the cursor point.

Create Building Blocks

You can create your own Building Blocks for repetitive content in the current document or for any document you create.

To create a Building Block:

1. Type in some text and format it the way you want.
2. Select the text. It can be one line, one word, one paragraph, or anything you want to use repeatedly in other documents.
3. Press Alt + N, Q, S to save the selection as a Building Block. This opens a dialog.
4. Fill in the necessary information using Tab and Shift + Tab to move through the dialog.
5. Tab to and activate the OK button by pressing Enter, once the information about the Building Block is entered.

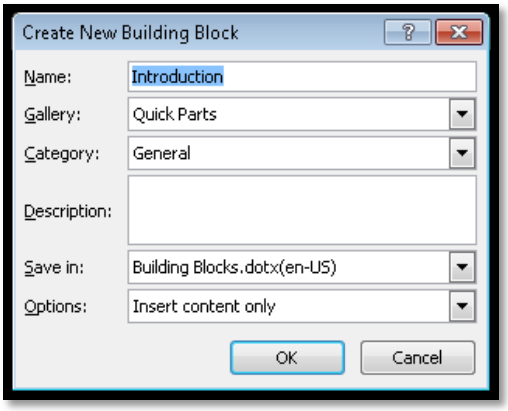


Figure 40 Create Building Block dialog.

You can now use Alt + N, Q, B and first character navigation to find the new Building Block, and Alt + Letter I to insert it.

You can use either the Quick Parts/Building Block Gallery to insert a building block, or use the Building Blocks Organizer which can also be opened from the Quick Parts icon on the Insert Ribbon.

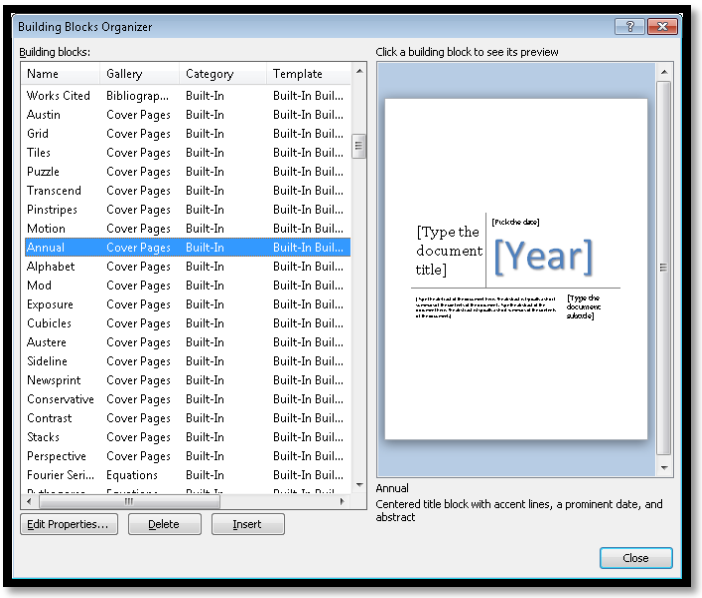
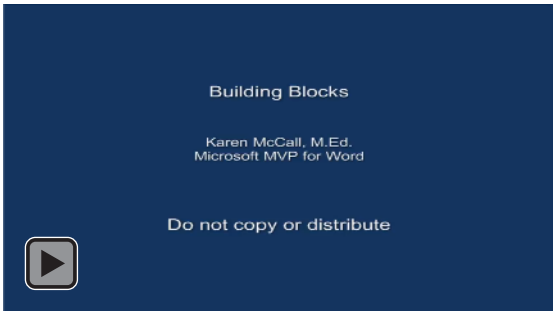


Figure 41 Building Blocks Organizer.

Building Blocks video.



Tables of Content

We briefly talked about how using a Heading Style or Custom Heading Style helps when you want to create a Table of Contents, or when you want to repurpose your word processed document as a tagged PDF document with bookmarks.

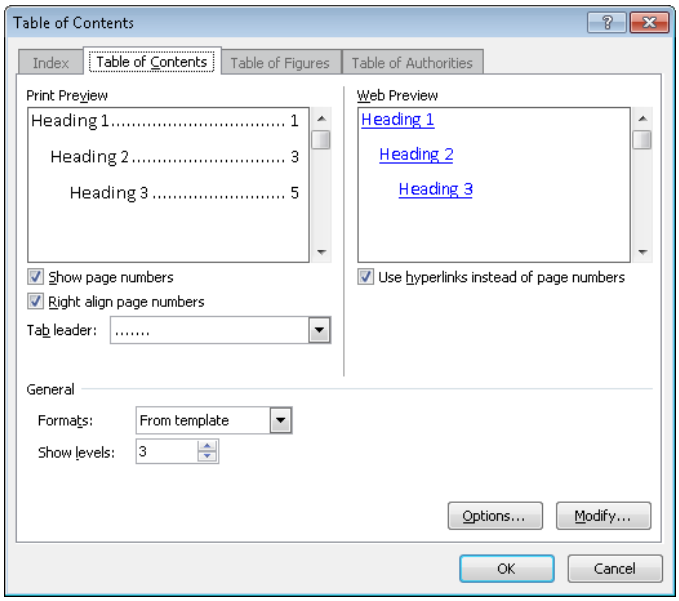
When creating a Table of Contents, Table of Figures, or Indexes, it's a good idea to build the structure of the page before you actually generate the Table or Index. This means choosing the location for the Table of Contents and inserting a couple of blank lines for visual spacing under the title "Table of Contents." With Indexes and a Table of Contents, if you don't create the framework, you will run into formatting issues once the Index or Table of Contents is generated.

Inserting a Table of Contents

It is relatively easy to create a Table of Contents or a TOC. A Table of Contents is based on the use of the Heading Styles in Word. If you create a Custom Heading based on an existing Heading, it can be added when you generate your Table of Contents.

To add a Table of Contents to your document:

1. Position the cursor where you want the Table of Contents to start.
2. Press Alt + S, T.
    a. This opens the Tables of Content gallery.
3. Use your arrow keys to view the pre-formatted Tables of Contents. Once you have chosen the style that you like you can either press Enter or press Alt + I to choose "Insert Table of Contents." I always choose to Insert Table of Contents as it gives me more flexibility and accessibility options.
    a. The difference is that by choosing to insert a Table of Contents you can modify its look and feel easier.
4. Make sure that the check box to create a linked Table of Contents is checked.
5. Make sure that the Dot Leaders are being used for the TOC. This will give you the dots from the topic to the page number which helps the readability of the TOC.
6. If you need to add other Styles, such as the Title or Custom Styles, activate the Customize button and add the hierarchical level. We'll do this in the next topic.
7. Tab to and activate the OK button in the Table of Contents dialog.
8. The Table of Contents appears at the cursor point.



I generally create a Table of Contents after I've added a couple of topics to the document I am working on. I use the Table of Contents as a visual aid to ensure that content is in its proper hierarchical order. You can also use the Outline view of the document, but if you are not familiar with working in Outline view, using the TOC as a guide is a good strategy. Of course, you can also use the Navigation Pane [Alt + W, K].

Updating a Table of Contents

To update a table of contents, place the cursor in the table of contents and press the AppKey or right mouse button. Press the letter U for Update Field. You may be prompted to update just the page numbers or the entire table. I always choose to update the entire table of contents.

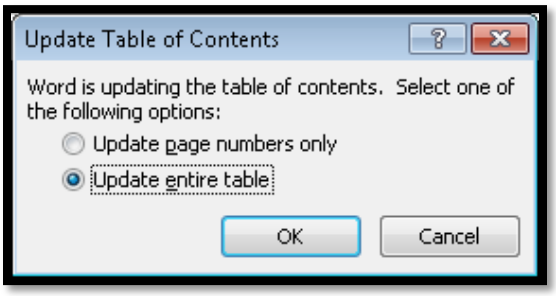
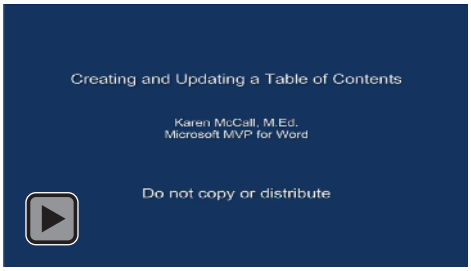


Figure 42 Update Table of Contents dialog.

Inserting and Updating a Table of Contents video.



Customizing a Table of Contents

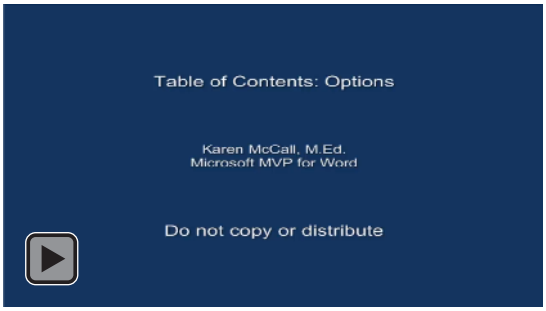
We created a custom style called Heading 1A in a previous topic. We now need to make sure that this is added to a Table of Contents.

To customize the Table of Contents for a document or template:

1. Position your cursor where you want the TOC to be placed.
2. Press Alt + S, T to open the Table of Contents gallery.
3. Choose "Insert Table of Contents" by pressing the letter I
4. This opens a dialog.
5. In the Table of Contents dialog, move to and activate the Option button by pressing Alt + letter O.
6. This opens another dialog with the Style and corresponding level in the Table of Contents visible. We can edit the level for the Styles.
7. Make the following edits if you have appropriate heading levels:
    a. Heading 1A = 1.
8. We do not have anything more than a Heading 3 in the document.
9. Tab to and activate the OK button which will close this dialog.

The Heading 1A style is now included in the TOC and the hierarchy of content is clear.

Table of Contents Options video.



Modifying a Table of Contents Style

We've looked at some of the accessibility issues related to bold, uppercase and italic font. What do we do if we don't like the default template for the Tables of Figures, Contents or Tables? In each of the dialogs, there is a Modify button.

To modify the font and font size of a Table of Contents:

1. With the Table of Contents dialog open, activate the Modify button.
2. This opens a dialog with all of the TOC formats listed. You can change one of them, for example, if you want all Heading 1 items bolded, you can do that. You can modify all of them individually. Changing one does not replicate the changes in the other TOC items.
3. Once you choose the TOC level to modify, move to and activate the Modify button in this dialog.
4. The Modify Style dialog opens.
5. Make the changes you want and Tab to and activate the OK button.
    a. You do have the choice of having this change in the current document or in all documents based on this template.
6. Tab to and activate the OK Button.
7. Generate the Table of Contents by moving to and activating the OK button in the Table of Contents dialog.
8. You might be asked if you want to replace the existing TOC. Say "yes."

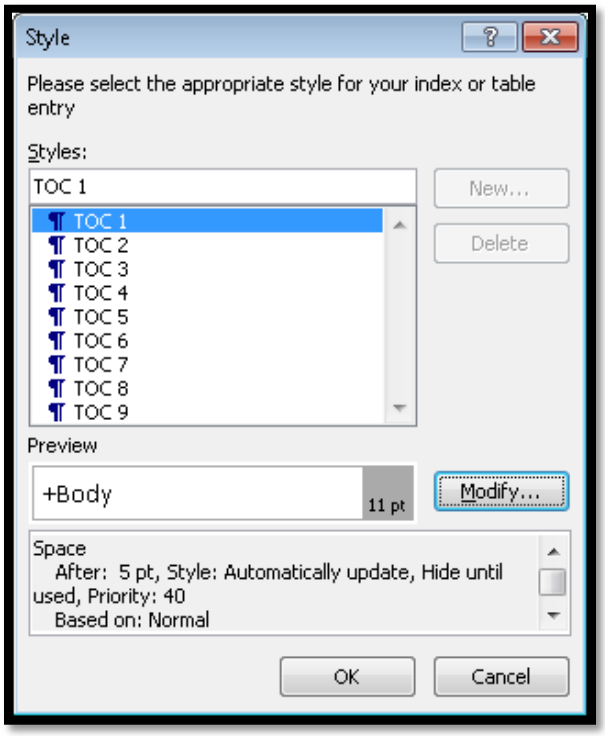
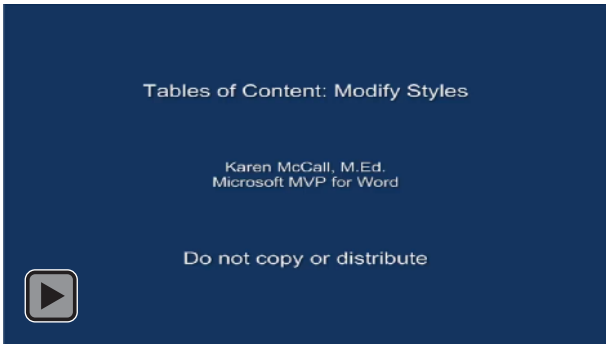


Figure 43 Modify fonts in Table of Contents.

Modifying a Table of Contents Style video.



Accessible Tables

Data tables are used to display comparative data, either simple or complex. The key to creating an accessible Table is to ensure that no matter where in the table someone who can't see is, they can get the information they need to determine what it is they are reading.

The option to repeat the Header rows is also a flag to the Adobe or Microsoft conversion tools so that the <TH> or Table Header Tag is used for that row. Unfortunately, at the present time there is no mechanism for identifying the row titles in a table created in Word. This repair too will need to be done manually in a tagged PDF document.

On the other hand, in Word 2010 you can select more than one consecutive header row in a table. Accessibility is always evolving.

In Word, most of the high level screen readers, such as JAWS provide tools for someone selecting the column to use for row titles. This type of "meeting halfway" by both Microsoft and the adaptive technology developers facilitate better access to document parts in transition.

Inserting a Table

Insert a table by pressing Alt + N, T. You can either use the visual grid which will be read by the JAWS screen reader or by using the Insert Table dialog. Both will create a uniform table.

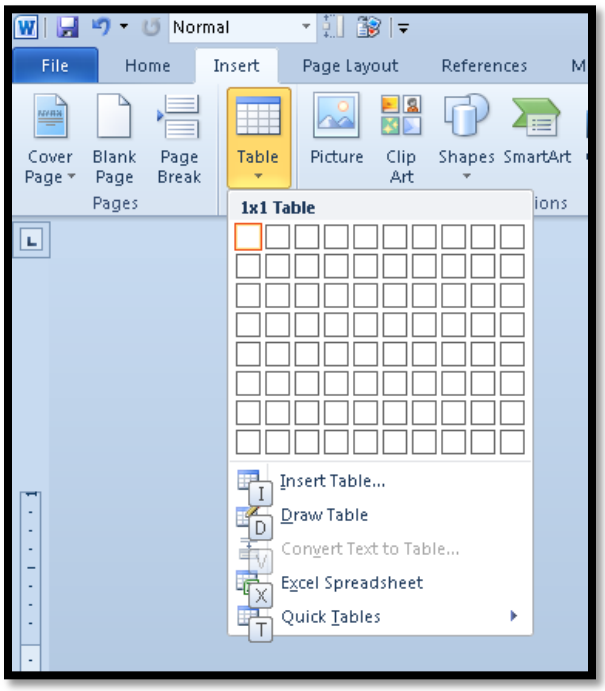


Figure 44 Insert Table Gallery.

Do not use tables for design layout!

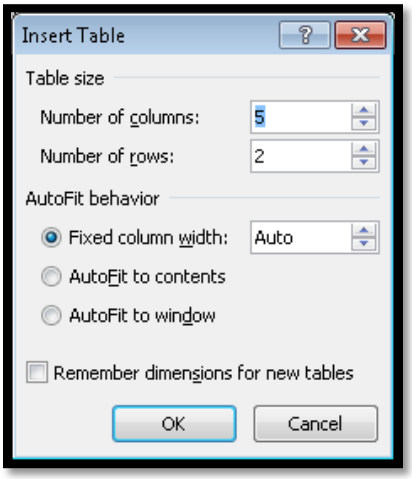
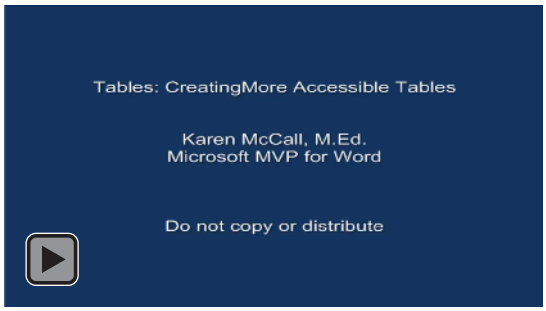


Figure 45 Insert Table dialog.

If you cannot provide answers and implement them for both of the following questions, a table is not the best way to structure the document.

1. What are the table header rows that will repeat at the top of each page if the table spills onto a second or third page?
2. What is the caption for this table?

Inserting a Table video.



Header Rows Repeat

First, select the column title/titles or first row of the table. You can wait until you've entered the column title information if you like.

Choose Table Tools, Layout, Header Rows Repeat. The keyboard commands are Alt + J, L, J.

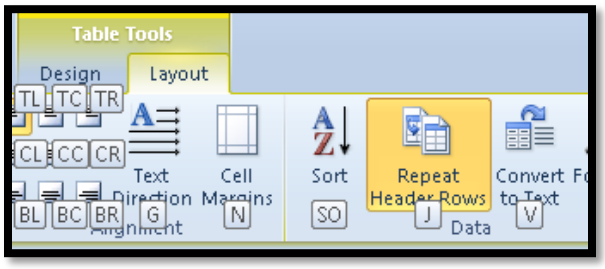


Figure 46 Header Row Repeat from Table Tools Layout Sub-Ribbon.

If you want to work within the table you can select the first row, press the AppKey and choose Table Properties and move to the Row tab. There is a check box to have the header row repeat.

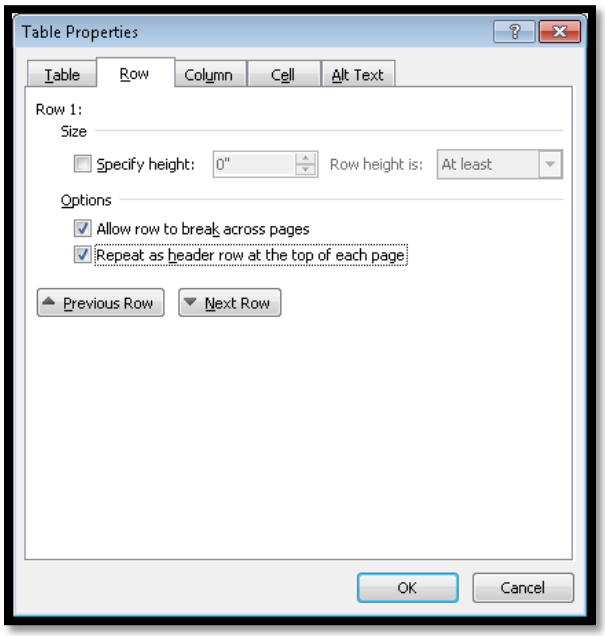


Figure 47 Table Properties dialog, Row tab showing Header Row Repeat check box.

Having the Header rows repeat not only helps people using adaptive technology such as screen magnification or Text-to-Speech software, it also helps everyone keep track of the relationships between information if your table spans two pages. Even if your table will not span pages, using the Header Row Repeat is what the Adobe and Microsoft PDF conversion tools used to identify and create the TH or Table Header Tags.

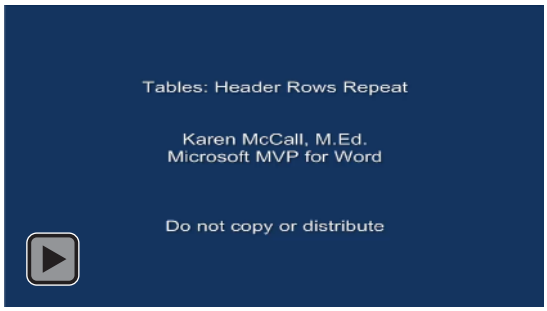
On the Table Tools Design Ribbon there are some check boxes for column or row title.

These check boxes are for internal Word use only and are not used by screen readers at this time to determine a column or row title. They are checked by default when you create a table.

The important setting is to have the header rows repeat in the table. There is no tool at this time to identify row titles for repurposing Word table content to tagged PDF or other formats.

Do not use headings in a table. Table headers are not the same as document headings.

Header Rows Repeat video.



Rows Braking Across Pages

The second thing you need to remember to do is to not let the rows break across pages. I know, several of you are cranky about this at the moment.

Put your focus in the table and select it by pressing Alt + J, L, K, T. I put the Select Table tool in the QAT or Quick Access Toolbar because it is a tool I use often.

With the table selected, press the AppKey.

From the context list, choose Table Properties at the bottom of the list. You can also get to Table Properties once the table is selected by pressing Alt + J, L, letter O.

On the Row tab, make sure the check box allowing rows to break across pages is unchecked.

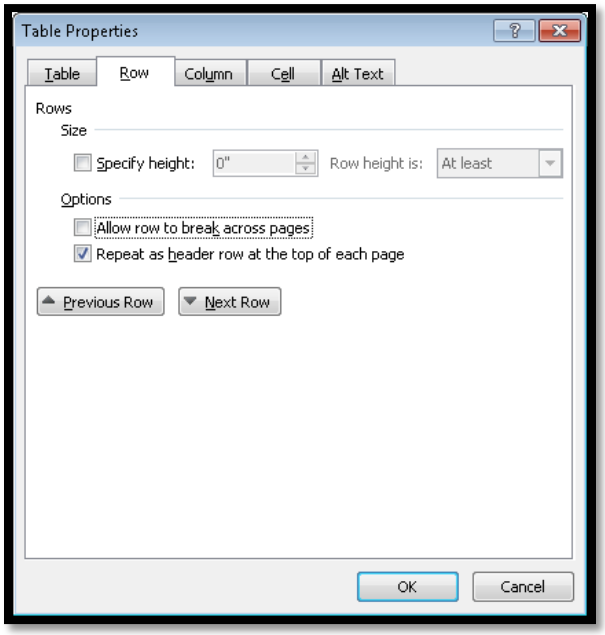
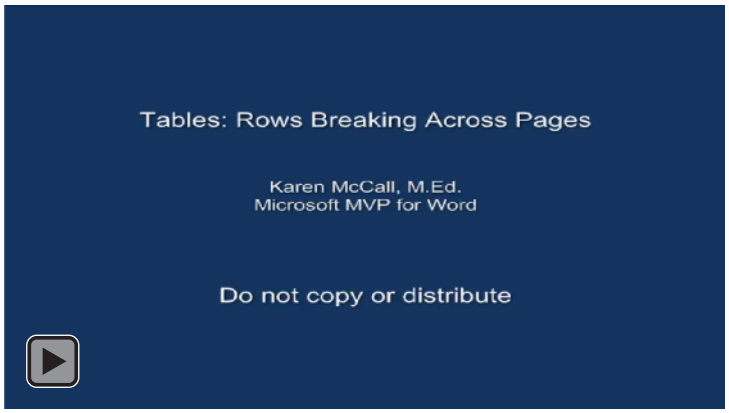


Figure 48 Don't allow rows to break across pages - Table Properties, Row tab..

This does two things: first, it keeps you honest in only having short pieces of information in a table cell; second, it makes it easier for your readers using adaptive technology when you keep all information in one cell together.

If your document is printed, it is easier for people with visual or learning disabilities to read the content of a cell if it isn't broken over pages.

Don’t Allow Rows to Break Across Pages video.



Cell Margins/Padding

Use the Cell Margins option to create space around cell content, not blank lines. If someone using a screen reader hears “blank” when they enter each cell, they might not listen to hear the content that follows. It is also quite annoying to hear “blank” before and/or after every piece of content in a table.

The Cell Margin tool is accessed through Table Properties > Cell. If you have Table Properties open, press Ctrl + Tab until you reach the Cell tab at the top.

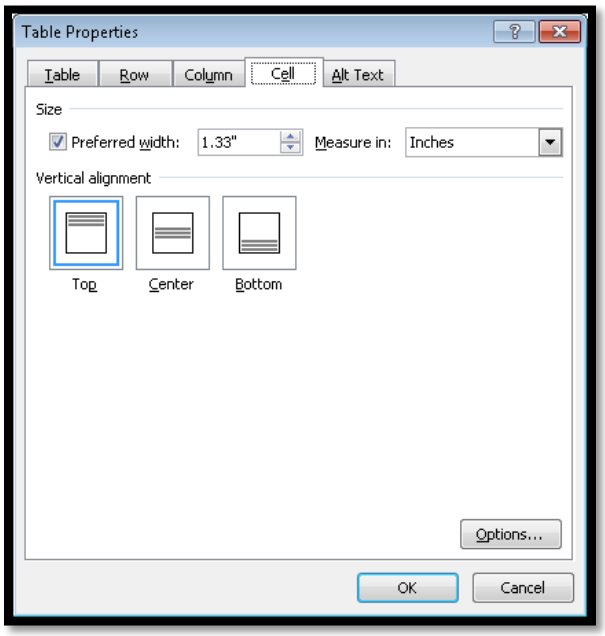


Figure 49 Table Properties, Cell tab.

Tab to and press Enter on the Options button. The first topic in this dialog is Cell margins. You can adjust all four margins in a single cell or series of selected cells. Make sure to un-check the “Same as the whole table” check box. Your focus is on this check box when you enter the Cell Options dialog.

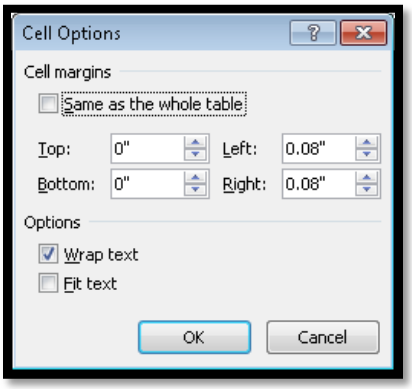


Figure 50 Cell Margins dialog.

You can then tab to each side of a cell: top, bottom, left and right. Make the changes you need to in order to get the spacing effect you want. Make any other changes you want, Tab to the OK button and press Enter.

A caution here is not to use whole numbers. A cell margin of .10 or .20 is more than enough for visual separation. Using whole numbers creates havoc.

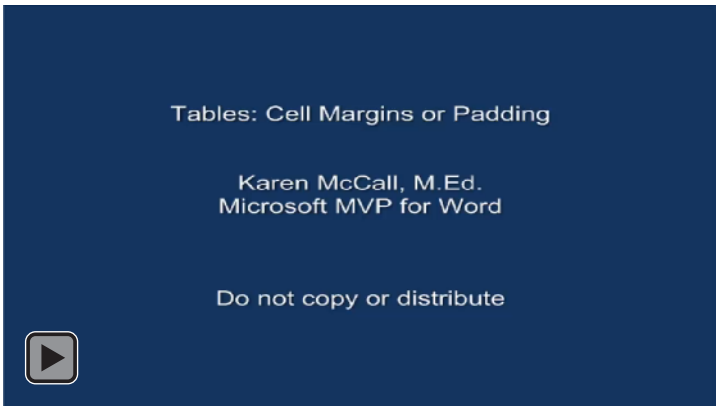
You are returned to the Cell Tab in the Table Properties dialog. Tab to the OK button and press Enter.

The cells you've assigned new margins to are now showing these new margin settings.

Try to maintain a uniform table structure as much as possible. Do not have a blank row with another table after the first– make it two tables. Design your table with care before you begin constructing it.

Nesting tables is not good form or document structure. If you find yourself thinking of nesting information, perhaps a table isn't the right structure for your content!

Cell Margins/Padding video.



Captions for Tables

Just as you should add a caption for an image or equation, you should add a caption for tables used in your documents. This will also help you remain honest in the use of tables within a document. Many people won't want to put a caption on a table used for design layout.

To provide a caption for a table, select the table and then press the AppKey. The context menu appears, then use your down arrow key to move to Insert Caption or press the letter C. The Caption dialog box appears. The Caption should begin with "Table #" and your cursor should be just past this text at the point where you can type the caption. As with the image and equation captions, I generally insert a space before I begin typing just to provide some separation between the table identifier and the caption text.

The Insert Caption dialog opens, and your focus is where you can type or paste the text for the caption.

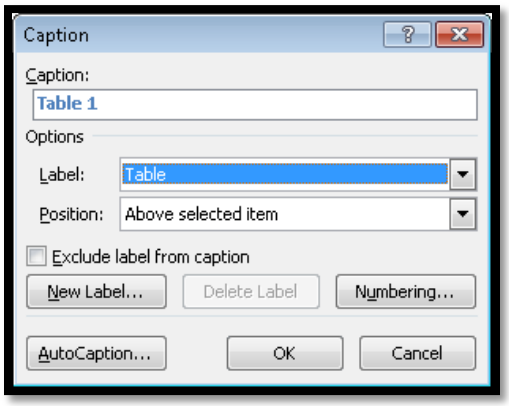
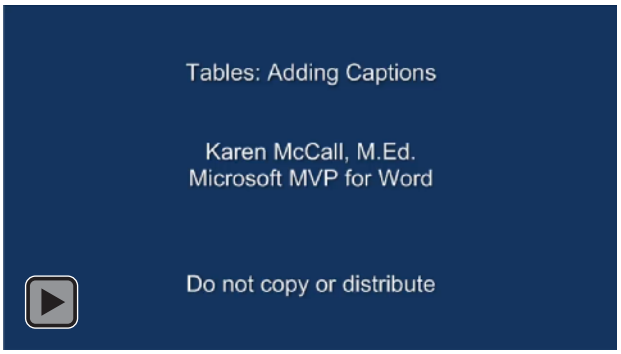


Figure 51 Caption dialog for table.

Make sure the label is changed from Figure or Equation to Table. A table caption traditionally goes before the table. This lets people know what to expect when reading through the table.

Captions for Tables video.



Text Boxes

Text boxes float over the page because they are objects not part of the text layer of the document. Most of them cannot be put into focus so that the content is accessible to adaptive technology unless you can physically put the mouse cursor into the text.

Some screen readers do have the ability to list objects in a document and then let the end-user put focus into the text, but because they are objects the process is similar to walking on stepping stones in a pond. You move from stone to stone without touching the water. In this metaphor you move from object to object/text box to text box without touching the surrounding content.

Why are text boxes inherently inaccessible?

Text boxes are not part of the main document text layer. They are objects that float above the text layer. Because they are not part of the text layer of documents, adaptive technology doesn't see them.

Imagine walking along the trail looking left, right and in front of you. Your feet touch the area you are walking on, which means you "have access" to these parts of your surroundings.



Figure 52Photo of Jackson Trail Alberta copyright Karen McCall.

The clouds float above the area you are walking in, as do birds and insects. The clouds, birds, insects, planes and other elements that you don't have access to would be comparable to the objects that are not in the text layer of a document. The "text layer" would be comparable to the area around you that you have access to as you walk.

Some adaptive technology, such as the JAWS screen reader have keyboard commands for getting a list of objects in a document. You can navigate to an object such as a text box and sometimes read the contents.

But here is the problem.

If you are moving from object to object it is like being in an airplane skimming along the clouds. You can see the clouds and go in and out of them but you have no idea from looking at the clouds where you are. You don't have the ability to look down to see what might be below the clouds.



Figure 53 Photo of clouds taken from plane copyright Karen McCall.



Figure 54 Photo of clouds taken from plane to illustrate objects and layers.

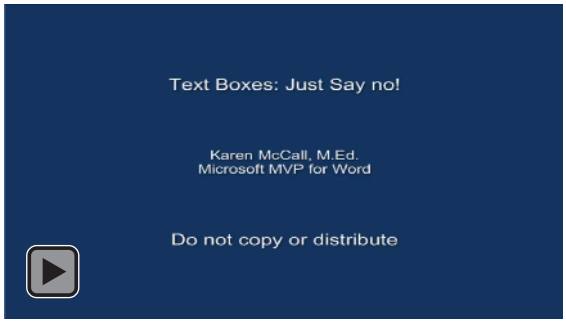
This is compounded with layered documents. It is like gliding between layers of clouds without knowing where you are or what you are “touching.” In some cases it is difficult to separate one layer of cloud from another. Similarly, with layered documents it becomes difficult separating one layer of “content” from another.

So while you may be able to read the content in a text box, you have no mechanism to help you view what is under it or around it. Each "layer” of the document lives in isolation of each other as experienced by adaptive technology.

Text boxes are often used for quotations and other text that document authors want people to really notice and read.

Paragraph formatting is simple and easy, yet we often use the tools someone showed us during a “marketing of the software seminar” or a tool we found that “did the trick” when we needed a fabulous document done in five minutes.

Text Boxes video.



Columns

Columns do not have an inherent “structure” at this time and are considered formatting rather than structure. Whether parallel or newspaper columns are used, their purpose is to reflow the content, not to provide any associative structure. If columns are not implemented correctly, repairs will need to be done on repurposed documents where parallel columns have been used to show a heading in one column and the associated text in the other.

Text in columns or text in general should not be fully justified because when text is justified it becomes harder to read, and this limits the readability and usability of the information. Fully justified text creates a lot of white space between words, especially when only one or two words will fit in a column. Think of newspaper or magazine articles you’ve read where, in four or five columns, two words are on a line, or worse, the letters in a word are spread out to span the line, making it even harder to read and continue the author’s thought or the article itself.

Fully justifying text, whether it is in a single column or multiple columns, creates distracting rivers of white throughout your text. Even for people without visual or print disabilities, it is often difficult to follow the context of what they are reading. Because digital documents use proportional fonts, there is no need for full justification; it is a holdover from old typewriter days when the fonts were fixed [which meant that the letter “o” took up the same space as the letter “i”]. Body text should be left justified.

Parallel Columns

To create columns in Microsoft Word, type the text that you want to be displayed in parallel or newspaper columns, then perform a spell check on your work and make sure it is left aligned. Remember that fully justified text can create readability problems.

1. Select the text you want to be a parallel or newspaper column.
2. Choose Page Layout > Column or press Alt + P, J to open the Column Gallery.
3. The Column Gallery has one, two or three newspaper columns and left or right parallel columns, as well as an option for more column choices.
4. Choose More Columns by pressing Alt + P, J, letter C, and the standard Column dialog opens.
5. Your focus is in the number of columns in the columns dialog. If you are creating newspaper columns, you can choose the number of columns here. Remember that when you create a lot of columns, more text gets squeezed onto the page and this makes it more difficult to hold the reader’s interest. A good rule to follow is to limit your columns to three, preferably two.

6. For parallel columns, Press Shift + Tab and move to Pre-sets then use the arrow keys to choose either Left or Right to indicate where you want the smaller column, on the left or the right of the page.
7. Press Alt + B to insert a line between your columns, whether they are newspaper or parallel. This will assist the reader in defining the column boundaries across the page.
8. Tab to and activate the OK button. The selected text is now displayed in columns.

You can use column breaks to force the columns to look the way you want [Choose Insert > Break > Column Break]. The column break will be inserted at the cursor point. You need to be in a column to use this. If you are not in a column a page break may be inserted instead.

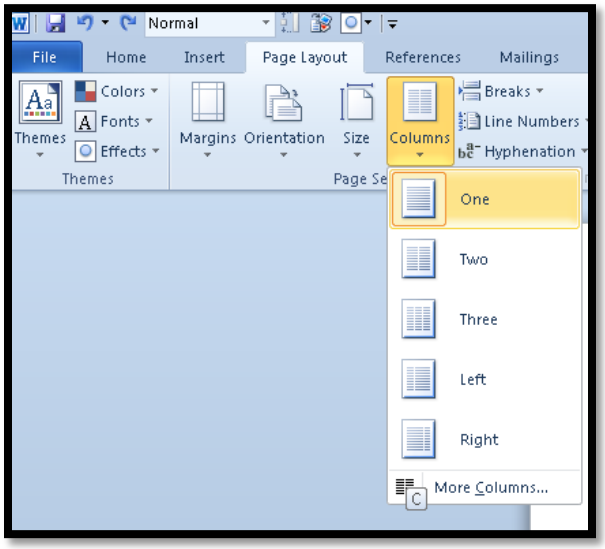
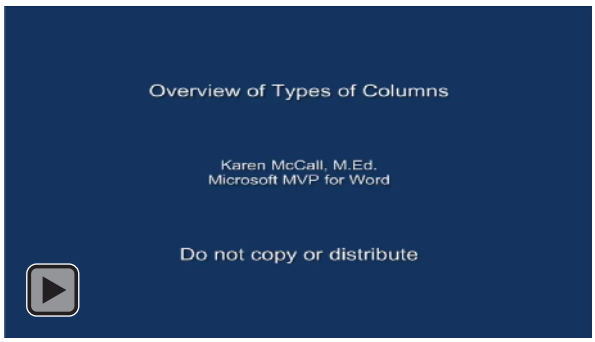


Figure 55 Columns from the Insert Ribbon.

Creating columns by selecting text will ensure that your columns are balanced. This means that within one or two lines, both columns will end on the same visual line on the screen. You won't end up with one column filling a page from top to bottom and the overflow text being displayed at the top of the next page. It will also ensure that the text that you don't want in columns will remain outside of the column structure.

Columns video.



Parallel Columns, Section and Column Breaks

The first step is to insert the Section Break at the cursor point just before the place where you want the columns to begin.

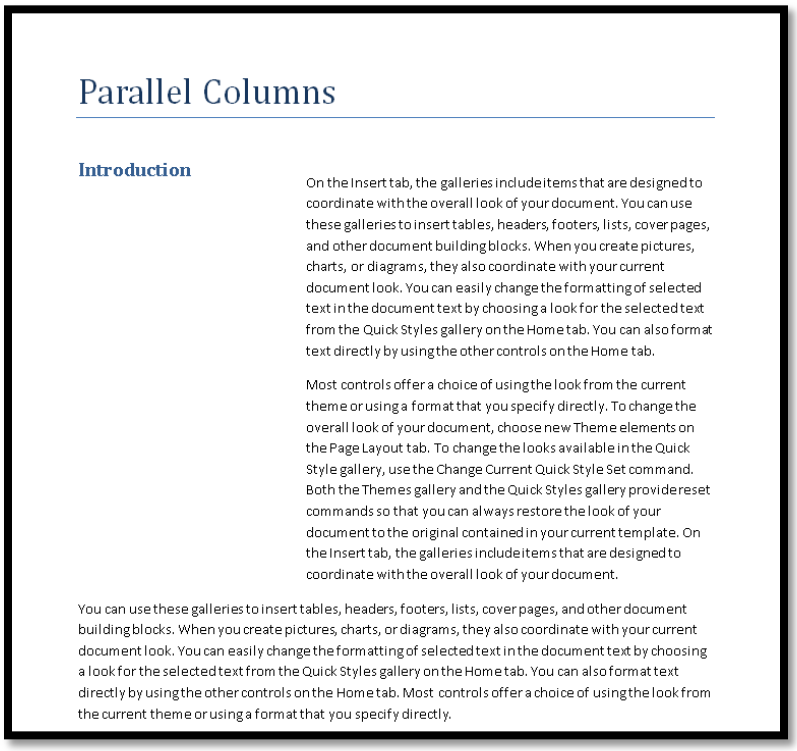


Figure 56 Parallel columns in document.

You can choose to have a Continuous section break, which I've used in this document. This lets you just continue with the document content.

The other option is to have the section begin on the next page. This gives you the flexibility in your documents to make choices about breaking up and formatting content.

In our sample, we will choose "Continuous."

If you want to see if your section break has been added to the document, switch to Normal view in the View menu of Word 2003, or Draft view from the View Ribbon in Word 2007 and 2010.

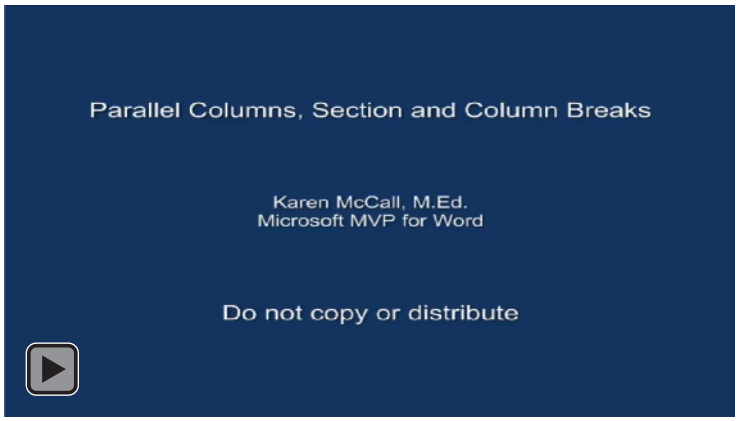
With your cursor just after the section break, Type the text you want to be displayed in parallel or newspaper columns. Perform a Spell check on your work and make sure it is left aligned. Fully justifying text, whether it is in a single column or multiple columns creates distracting rivers of white throughout your text. Even for people without visual or print disabilities, it is often difficult to follow the context of what they are reading. Because digital documents use proportional fonts, there is no need for full justification, it is a holdover from old typewriter days when the fonts were fixed [which meant that the letter "o" took up the same space as the letter "i"].

To add columns in Word 2007 or 2010:

1. Select the text you want to be a parallel or newspaper column.
2. Press Alt + P, J to open the Columns Gallery.
3. You can choose the type of columns using the Columns Gallery or by opening the traditional columns dialog.
4. Use the traditional Columns dialog if you want to insert a horizontal line between columns.
5. To create the effect shown in the sample, I positioned my cursor at the first character of the first parallel column. I inserted a column break so that I could control the amount of page used by this text. In Word 2003, column breaks are found under Insert > Break. In Word 2007, column breaks are found under Page Layout, Breaks.
6. Once you have your columns added to the document, go back to the Insert menu or Page Layout Ribbon and choose to add another continuous section break. This confines the columns to the area between the section breaks so you don't have to worry about subsequent text being put into columns.

Creating columns by selecting text will help you balance your columns. This means that within one or two lines, both columns will end on the same visual line on the screen. You won't end up with one column filling a page top to bottom and the overflow text being displayed at the top of the next page.

Parallel Columns, Section and Column Breaks video.



Newspaper Columns

To create newspaper columns you use the same steps as in the previous topic, but instead of choosing either left or right columns you would choose either two or three columns for your document. I wouldn't recommend more than three on a portrait oriented page because more than that leads to readability issues and an unprofessional looking document.



Newspaper Columns

On the Insert tab, the galleries include items that are designed to coordinate with the overall look of your document. You can use these galleries to insert tables, headers, footers, lists, cover pages, and other document building blocks. When you create pictures, charts, or diagrams, they also coordinate with your current document look. You can easily change the formatting of selected text in the document text by choosing a look for the selected text from the Quick Styles gallery on the Home tab. You can also format text directly by using the other controls on the Home tab.

Most controls offer a choice of using the look from the current theme or using a format that you specify directly. To change the overall look of your document, choose new Theme elements on the Page Layout tab. To change the looks available in the Quick Style gallery, use the Change Current Quick Style Set command. Both the Themes gallery and the Quick Styles gallery provide reset commands so that you can always restore the look of your document to the original contained in your current template. On the Insert tab, the galleries include items that are designed to coordinate with the overall look of your document.

You can use these galleries to insert tables, headers, footers, lists, cover pages, and other document building blocks. When you create pictures, charts, or diagrams, they also coordinate with your current document look. You can easily change the formatting of selected text in the document text by choosing a look for the selected text from the Quick Styles gallery on the Home tab. You can also format text directly by using the other controls on the Home tab. Most controls offer a choice of using the look from the current theme or using a format that you specify directly.

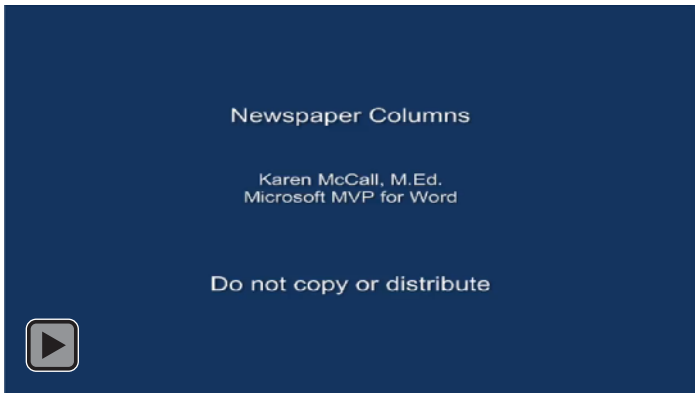
To change the overall look of your document, choose new Theme elements on the Page Layout tab. To change the looks available in the Quick Style gallery, use the Change Current Quick Style Set command. Both the Themes gallery and the Quick Styles gallery provide reset commands so that you can always restore the look of your document to the original contained in your current template. On the Insert tab, the galleries include items that are designed to coordinate with the overall look of your document. You can use these galleries to insert tables, headers, footers, lists, cover pages, and other document building blocks.

When you create pictures, charts, or diagrams, they also coordinate with your current document look. You can easily change the formatting of selected text in the document text by choosing a look for the selected text from the Quick Styles gallery on the Home tab. You can also format text directly by using the other controls on the Home tab. Most controls offer a choice of using the look from the current theme or using a format that you specify directly. To change the overall look of your document, choose new Theme elements on the Page Layout tab.

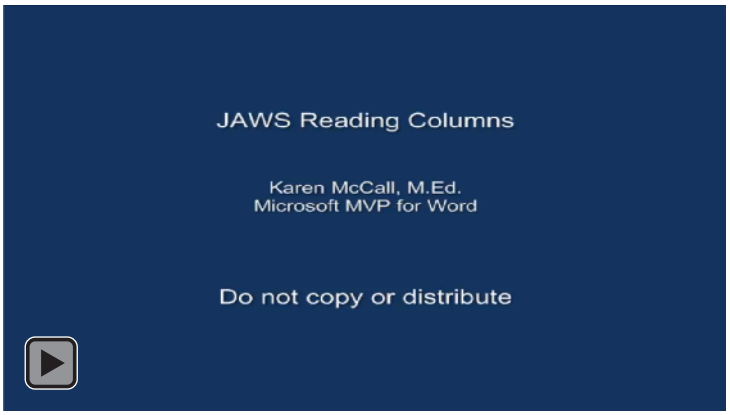
Figure 57 Newspaper columns in document.

If the newspaper columns are going to be for specific text in a document, use the section and column breaks to ensure that only the text you want in columns is structured as columns. You can also use the horizontal line to visually separate the columns to optimize readability.

Newspaper Columns video.



JAWS Reading Text in Columns.



Alt Text and Captions for Pictures

If you use an image in a document, it should have Alt Text and a caption. Providing Alt Text or "alternative text" will let people who are reading the document in digital format, and people with learning disabilities, know why you used the image and what it is if they find it visually confusing. Providing a caption for an image will let people who prefer to print the document know why you used the image. This is especially important if that person is using a printer that will not let them print in colour or a sufficient resolution to make the image clear in print.

It is also important that images a document author uses support surrounding content and are not "the entire content" themselves. The following is an example from a handout I created for web- based content, but I think the general concept transfers nicely to other document formats.

Adding Alt text for Pictures or Objects

Here is how you add Alt Text to images while creating documents in Microsoft Word 2010.

1. Select the image you want to add Alt Text to.
    a. If you are using JAWS, you can press Ctrl + Shift + the letter O for a list of inline objects and move directly to the image or object. Inline objects are objects inserted into documents. These can be part of an Excel worksheet, a PowerPoint slide, linked OLE [object linking and embedding] objects that update when the original text is modified, or icons linking to other content.
2. Press the AppKey.
3. Choose Format Picture.
4. Press Tab to move to the categories list and then the End key to move to the Alt Text category.
5. Press Tab to move to the Title edit area where you can add a title to the image.
6. Press Tab to move to the Description area where you can add a bit more description [not an essay].
7. Tab to the OK button and press Enter.

If you press Enter while in the Description edit area, you will move to the next line.

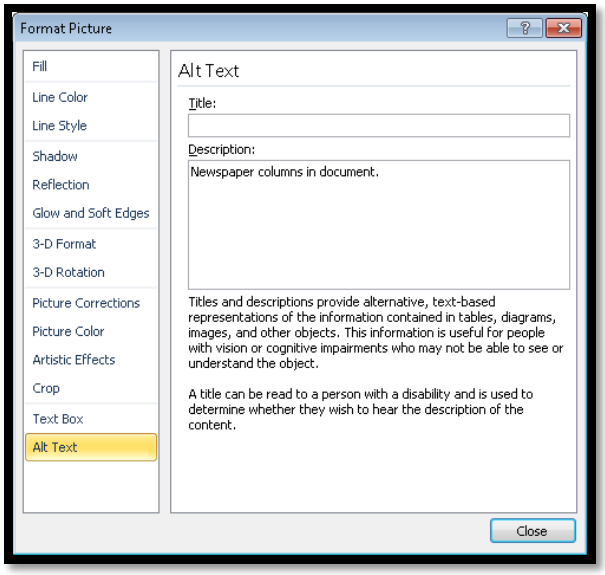
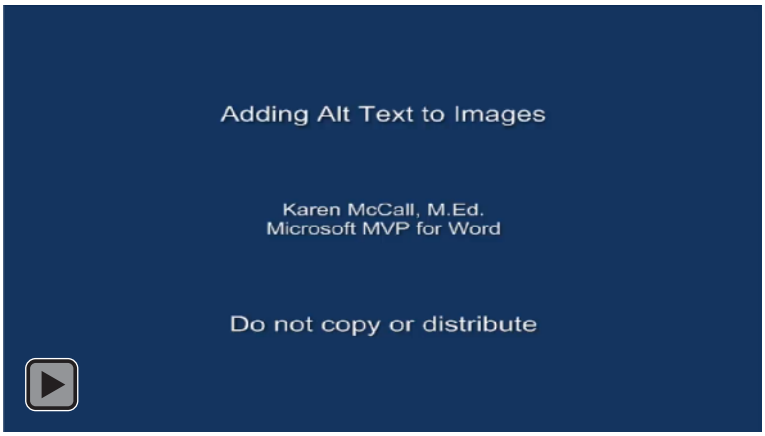


Figure 58 Alt Text category in Format Picture dialog.

You can copy and paste the text from the Alt Text dialog to the Caption dialog. This can be done using either the keyboard or a mouse. Some people ask about the redundancy of content. Keep in mind that you may have to create Artifacts from these images, that someone using a screen reader cannot go through Alt Text letter by letter or word by word, and that the document might be printed. Someone using a screen reader can also skip or navigate away from repetitive content. The caption doesn't have to be different from the Alt text.

Document authors should provide captions for images. This helps people with learning disabilities, as well as other readers in general, to figure out the context for the image within the document.

Adding Alt Text to Pictures or Objects video.



Captions for Images, Tables and Equations

A caption can be placed above or below an image. Generally, captions are identified as “Figure #” and can also appear as a Table of Figures at the beginning or end of a document, as with this document.

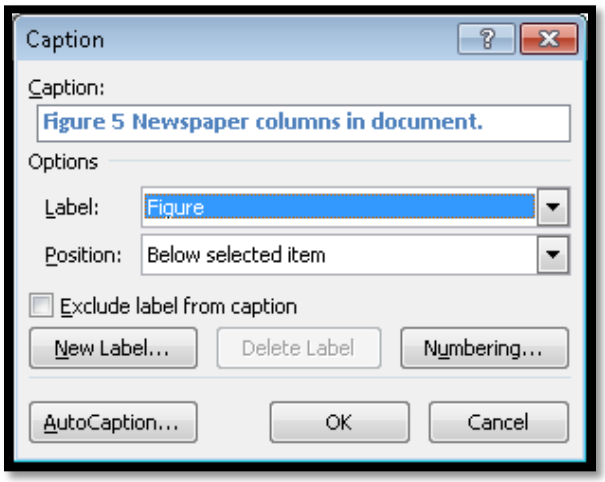


Figure 59 Insert Caption dialog.

To add a caption to an image, select the image and press the AppKey. Choose Insert Caption, which will open a dialog. By default, the caption will be at the bottom of the image; however, you can choose to put it at the top.

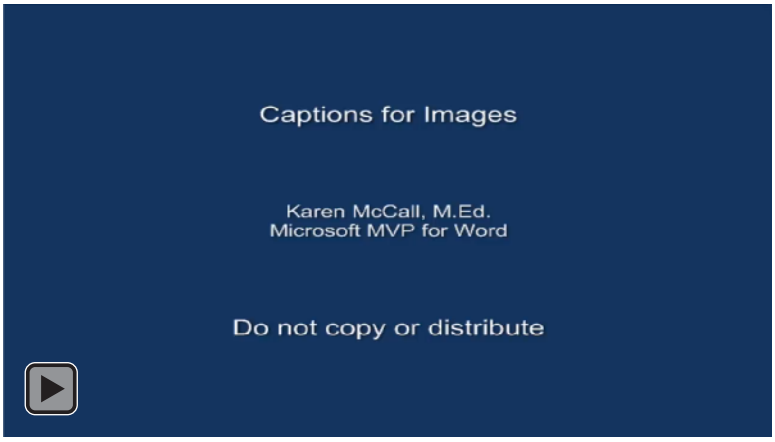
Your cursor is flush against the colon after the number one. I generally press the Spacebar before typing just to provide some distance between the “figure #” and the caption itself.



Figure 60 Photo in a document with a caption.

Tables and equations should also have captions. For equations, there is currently no Word based mechanism to make them accessible; however, if you use Scientific Notebook by Design science with Word, you can have accessible equations.

Adding Captions to Images, Tables and Equations video.



SmartArt

SmartArt has been designed to be accessible for people who are using adaptive technology. Having said that, there are, of course, caveats.

When you insert a SmartArt Object there is the choice to have the Text Pane show or be hidden. People who are using screen readers can use the Text Pane to enter information into each of the SmartArt components…except images.

There are, however, pieces of SmartArt objects that cannot have Alt text and are simply read to someone as arrow or shape. It is recommended that you create the SmartArt image in your document so that the colours and look and feel are the same, and then create a single image of the SmartArt object using the Windows Snipping Tool or the OneNote Screen Clipping tool. There are instructions on creating accessible images from SmartArt[4] on the Karlen Communications web site.

Text as Images

There are tools in Word that will let you create images of text. These tools can create accessibility barriers. While decorative, they should not be used for headings and should be used sparingly. Understanding the accessibility problems will help you make decisions about using them in documents. The two main tools in this category are Drop Caps and WordArt.

Drop Caps

One of the components to documents might be the addition of a "Drop Cap" to begin a chapter or section heading. This technique is most often found in books or textbooks.

When a screen reader encounters a Drop Cap, the paragraph begins "graphic I, n this paragraph…" or the letter "I" is ignored. This might not seem critical for the word "in;" however, with the word "the" the person using the screen reader would hear "he this paragraph…." And with the word "this" would hear "his this paragraph…" which disrupts readability and comprehension.

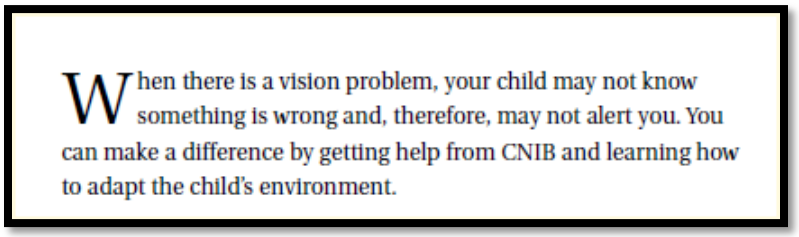


Figure 61 Sample of Drop Cap in a paragraph.

[4] Adding Accessible Images to Your Documents on the Karlen Communications web site: http://www.karlencommunications.com/adobe/AddImagesToTrainingMaterialCourse.pdf

The Drop Cap used above is set to display in line with the text. The same results occur when the Drop Cap is placed in the margin. The following image is of the Drop Cap dialog, which can be found through the Insert Ribbon.

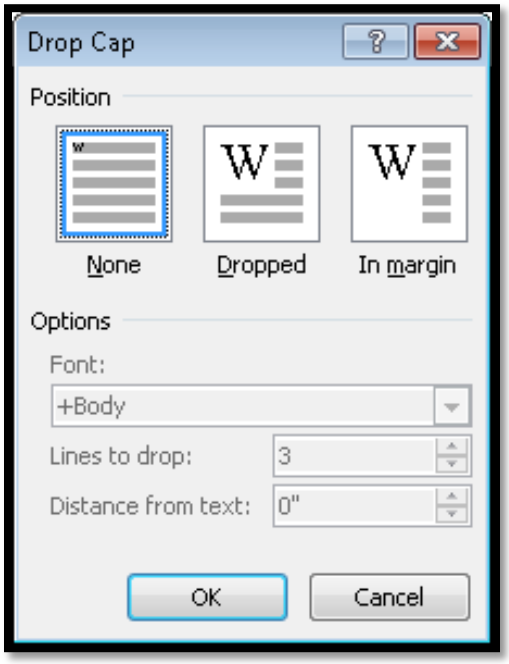


Figure 62 Drop Cap dialog.

One solution is to insert a white letter replacing the Drop Cap at the beginning of the paragraph. For example, if the word “this” were in Drop Caps, you could add the word “This” in a size 4 font and match the text to the background just before the first word in black text. The screen reader would hear the graphic of the word, but when they read the paragraph the first sentence would make sense. If the document were converted to tagged PDF, the “image” containing the Drop Cap could be converted to an Artifact and a screen reader would still have access to the full text that begins the paragraph. The spacing might be slightly off, but who can tell if this is an editorial or creative decision or not, especially if all instances of Drop Cap have similar spacing.

The Drop Cap tools can be found on the Insert Ribbon. The keyboard command to open the Drop Cap Gallery is Alt + N, R, C.

Some of the PDF tagging tools are becoming sophisticated enough to know that a Drop Cap is part of a word and will render proper pronunciation; however, repairs will need to be made for other formats. Even with a tagged PDF document, this type of document element needs to be verified as being accessible.

WordArt

The ability to add WordArt to documents is another way of formatting text. WordArt is not a document structure; it is a partially accessible document format. When you create WordArt, as with a drop cap, the Alt Text is created which helps when tagging PDF. For Word documents and other formats such as Braille, WordArt is an object in the document and is not accessible.

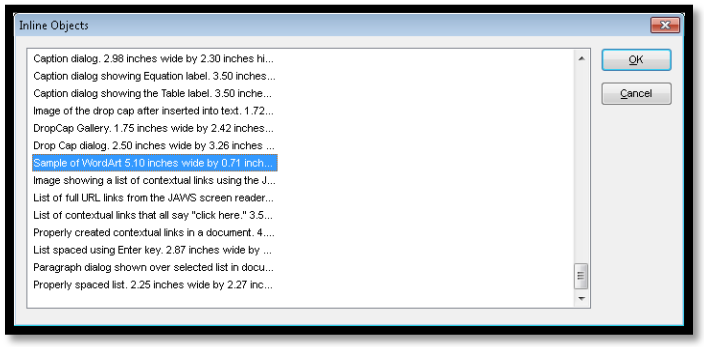


Figure 63 Word Art listed in a list of objects from the JAWS screen reader.

In a Word document, the text is not seen by screen readers and therefore does not exist to them. The person using a screen reader can get a list of objects as shown in the preceding image, but unless they know to look for specific objects, they will not find them.

When the document is converted to tagged PDF, the WordArt is tagged as an image of text which will then require Actual Text. If the WordArt is being used as a heading in the document, it will also need to be put within a <H1> Tag or a Tag representing the appropriate heading level. If this isn't done it affects the ability to navigate the document.

Accessible Links

Creating accessible links and hyperlinks in word processed documents follows the same rules as in web-based documents. The links should be contextual and concise and not be the entire URL plunked in the middle of the text. Instead they should take the form of a few key words or a short phrase that a person can click on to take them to that link. People using adaptive technology can get a list of links in a word document in the same way they can get a list of links in a web-based document. The lines are rapidly blurring and the "genre" of documents is moving to a more global XML structure and format.

Contextual Links

As you create documents using contextual links, two issues are raised:

1. What if I am working on a document that people might print?
2. What if the link doesn't work? How can people know the entire URL or web address?

The answer to both of these questions is one simple solution. Use the context links within the document and then use either footnotes or endnotes to provide the long web addresses. This technique has been used in publications by Karen McCall to optimize accessibility.

If you are considering that the document will be printed, it is reasonable to expect that people can't point their finger at a link and go to another document. So, as they read, the flow of content isn't disrupted by visually skipping over long URL's; yet, if they are taking the document with them and are at another computer, they can type in the URL from the footnotes or endnotes.

To add a footnote or endnote to your document:

1. Place your cursor at the end of the word you want to note. In this case it would be at the end of the link.
2. For Footnotes press Alt + S, F. This moves your focus to the bottom of the page and the number of the current footnote is entered automatically. Type the information for the footnote and return to your document. Usually the Up Arrow will accomplish this, but you might have to use Ctrl + Up Arrow.
3. For Endnotes, press Alt + S, E which moves your focus to the end of the document where you can enter the information next to the automatically numbered endnote.

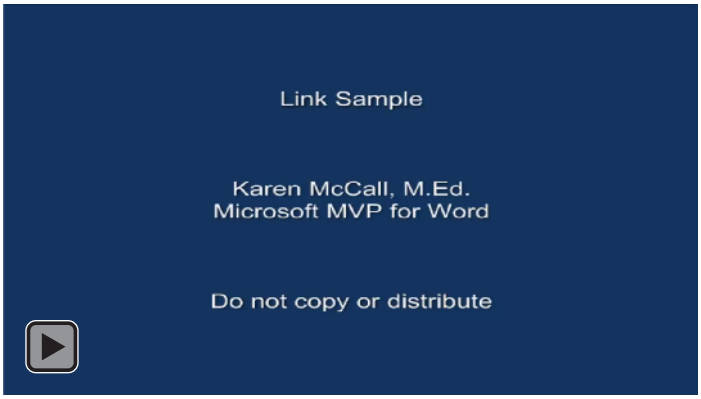
What I would do for this is to copy and paste the URL so that when I selected the text in the document and pressed Ctrl + K to open the Insert Link dialog, I could paste the link there, but also paste it to the footnote or endnote. Before I paste the web address I would type the text so that the person reading the document would know which web address it is.

Here are a few other things to keep in mind when creating contextual links.

Don't start every link with "select this link to go to…" People using adaptive technology can use first character navigation to move through lists of links and headings. If every link begins with the same character, this can't be done and every link in a document has to be listened to in order to get that last crumb of vital information that tells us where the link will take us.

Other contextual issues are using "click" or "click here" as links. If I get a list of links in a document, why would I want to "click," or where will "click here" take me?

Contextual Links video.



Creating Links

To create a link:

1. Select the text you want to be a link.
2. Press Ctrl + K to open the create Hyperlink dialog.
3. Either copy and paste or type the web address of the page you want to open. You can also link to other documents if they are going to be available to all people reading the document from your server or network.

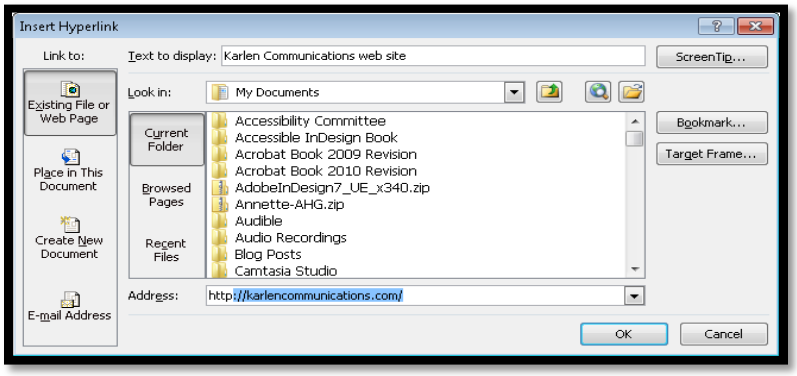
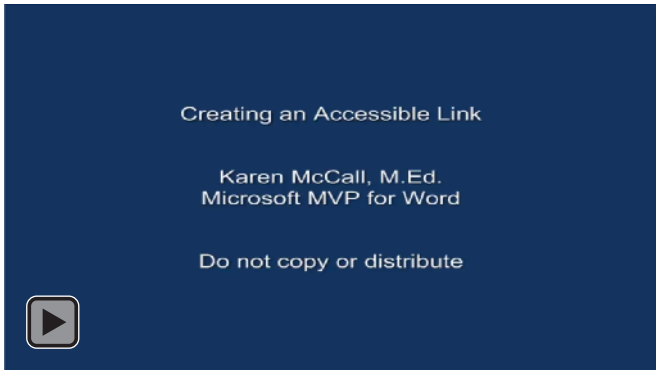


Figure 64 Create Link dialog.

Creating Links video.



Bullets and Numbering

Bullets and numbering can make a document more readable and understandable, or it can be a readability nightmare. Often bullets are used as "decorative elements" rather than to link like items in a list.

When text is formatted as bulleted or numbered items, there is a visual relationship that let's someone reading the document know that bullet point one is related to bullet point two and so forth. For numbered steps, keeping that relationship is critical in understanding what to do first, second, third and so on so that a step in a process is not overlooked.

This relationship is provided to someone who can't see the bulleted or numbered list if the bulleted or numbered list is formatted properly.

Properly formatted bulleted or numbered lists:

- Use standard bullets or numbering, not images, non-Unicode symbols or other inaccessible elements.
- Are not single bullet or numbered items.
- Have proper spacing as opposed to pressing the Enter key to space bulleted or list items.

In the list above, the three items describe the characteristics of a well-structured bulleted or numbered list.

A list, by its very use implies more than one item.

When someone using a screen reader comes upon the list above in the document, they are told they are entering a list of three bulleted items. There are settings in some screen readers to notify the person when they are moving from a first level bullet or number to a sub-bullet or number [a second level bullet or number]. Does this sound familiar? Think back to the use of Heading Styles, and the moving from Heading 1 to Heading 2 and so forth. The key is that people using screen readers have access to the same visual representation of the document "but" only if the underlying structure is there for each document element.

Working with Lists

Always use the Bulleted or Numbered list tools from the Home Ribbon to create your lists. If you type a number followed by a period and a space, then type text and press Enter, you will start a standard list structure. Some people turn this ability off in Word but I have always liked using it I am so used to adding and removing formatting and working with "wonky" documents that removing any unwanted formatting is just part of reading or editing a document.

To apply bullets or numbers to selected items:

- Press Alt + H, U to open the Bullets Gallery.
- Press Alt + H, N to open the Numbering Gallery.

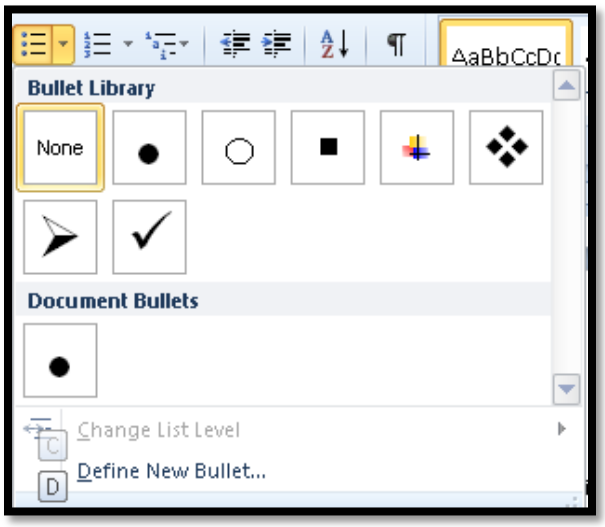


Figure 65 Bullet Gallery from the Home Ribbon.

Use the Arrow keys to locate the bullet or number style you want and press Enter. If you are using a screen reader, the options will be read to you.

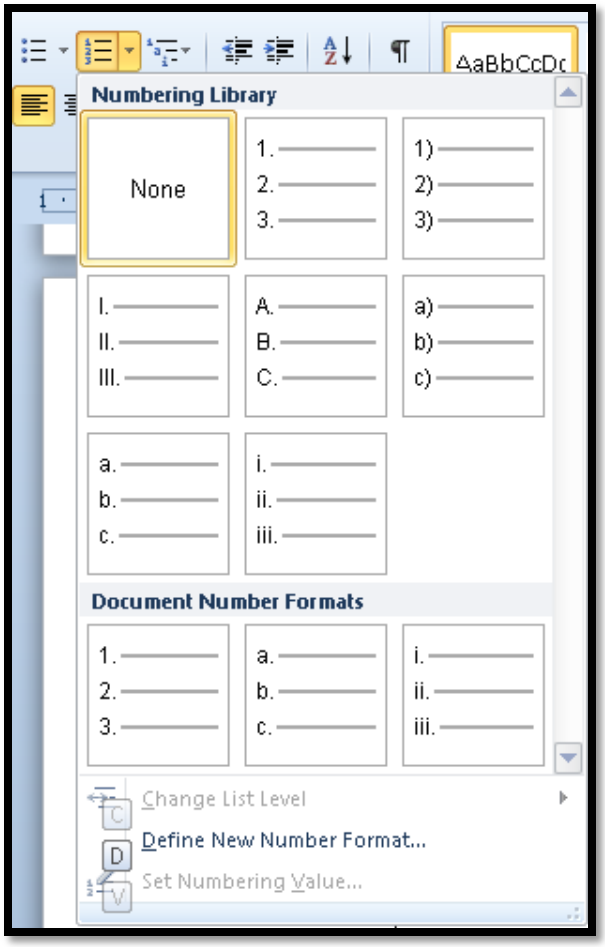
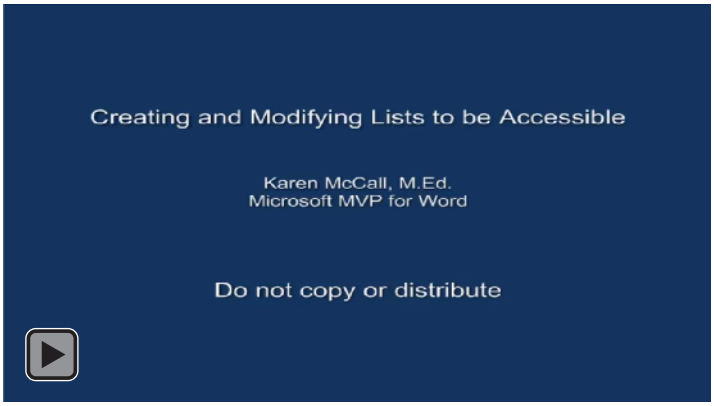


Figure 66 Numbering Gallery from the Home Ribbon.

Creating Lists video.



Adjusting Spacing for Lists

Once you apply the bulleted or numbered list format that you want for a group of related items, you may want or need to make some adjustments for spacing or indentation. There are two ways to do this, both using the same Paragraph dialog tool. However, one method only affects the currently selected list and the other affects all lists in the document.

Method 1 to format a single list in the document:

1. Select a list of items you've formatted using the Bullets, Numbering or Outline tools.
2. Press Alt + H, P, G to open the Paragraph dialog.
3. Adjust the spacing or indentation for the selected list.
4. Tab to and activate the OK button to confirm the changes for this list only.

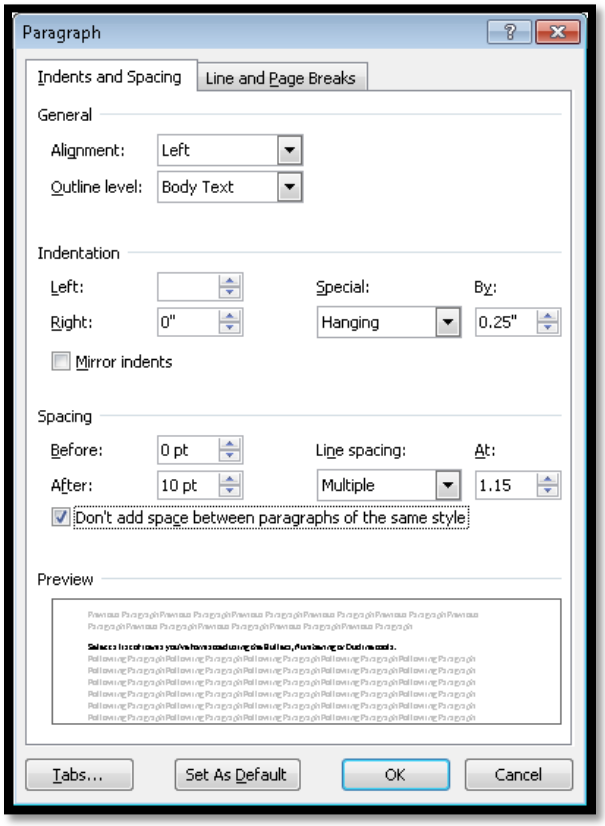


Figure 67 Paragraph dialog showing default spacing between bulleted or numbered list.

Method 2 to format all lists in the document:

1. From the Quick Styles Gallery select the List Paragraph Style. Press Alt + H, L to open the Quick Styles Gallery and then Arrow around until you find List Paragraph. You can't use first character navigation in the Quick Styles Gallery.
2. Press the AppKey and choose to Modify the Style.
3. When the Modify Style dialog opens press Alt + letter O to open the Format options.
4. Choose Paragraph from the list which opens the Paragraph dialog.

5. Adjust the spacing and indentation for all lists in the document.
6. Tab to and activate the OK button to confirm the changes to the Paragraph formatting for the List Paragraph Style.
7. Choose whether to apply the changes to this document only or to the document template so that other documents you will create based on this template will have the same List Paragraph formatting.
8. Tab to and activate the OK button to confirm the changes to the List Paragraph Style.

If you choose to modify the List Paragraph Style you can also change the font, font size, text colour and other formatting for all lists in the document.

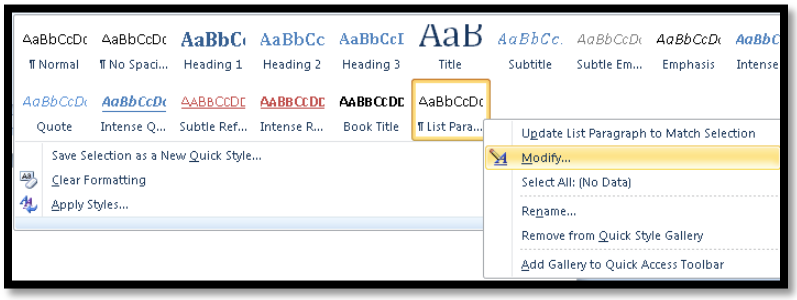
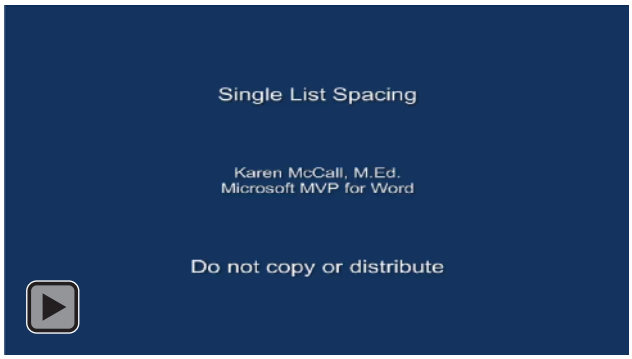


Figure 68 Modify the List Paragraph Style from the Quick Styles Gallery.

Each time you create a list, the List Paragraph Style is applied to the text. The two tools are connected however you can apply the list Paragraph Style to text on its own. It will not associate a bullet or numbering Style with the text, but it is a valid Style to apply.

Adjusting Spacing for a Single List video.



Accessibility Checker in Word

Microsoft Office 2010 has a built-in "Accessibility Checker"[5] to help you identify problems with your documents. The accessibility checker is available in Excel, PowerPoint and Word.

The accessibility checker is a mechanical tool and is not a substitute for a thorough review of the document, or learning how to create more accessible and well-structured documents. It will however, identify images with no Alt Text. It won't identify visual representations of headings that do not have the underlying heading level structure.

The article on the Microsoft site indicates that there are three key areas that the accessibility checker looks at:

- Images missing Alt text.
- Unreadable content such as a table that has several blank cells and/or complex formatting.
- Unreadable content due to an illogical reading order [for example, the order of objects on a slide].

The accessibility details of the document you are working on are always available to you through the File/Backstage area, under the Info category and the Prepare for Sharing options.

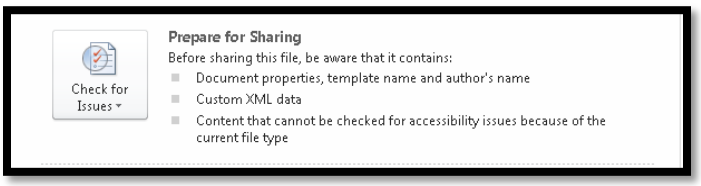


Figure 69 Accessibility results at a glance in the Prepare for Sharing area of the Info category.

At that point you, as the document author, can run the accessibility checker. Remember that the elements the mechanical checker finds may be OK and accessible. When reviewing the results of an

[5] Microsoft 2010 Accessibility Investment and Document Accessibility article: http://blogs.technet.com/b/office2010/archive/2010/01/07/office-2010-accessibility-investments-document-accessibility.aspx

accessibility check, you will need to make decisions about document structure and content, and either make repairs or continue along the publishing stream.

Note: The Accessibility Check seems to only work on documents in the 2010 DOCX document format. I had documents in the 2007 DOCX format and got the result that the checker couldn't check the document.

To perform an accessibility check in Word:

Press Alt + F, letter I, letter I for File/Backstage, Info and Check for Issues in the Prepare for Sharing options.

When the sub-menu opens use the Down Arrow once to find "Check Accessibility."

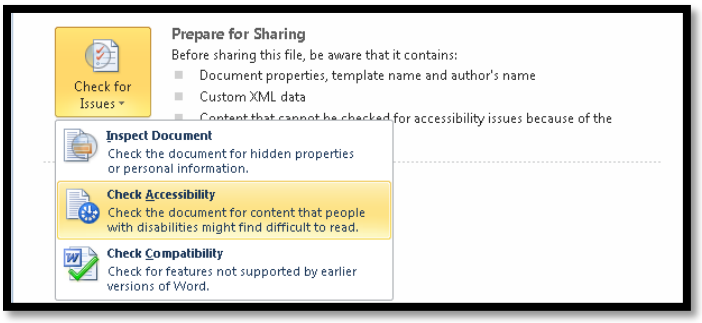


Figure 70 Check Accessibility item in the sub-menu of Prepare for Sharing.

When the Accessibility Pane opens to the right of your document there are a few areas of problems that you can navigate through.

You can use the arrow keys to move through the items in the Accessibility check results. Press F6 to move into the results if you lose focus.

If you press Enter on any item listed in the accessibility check results you will be taken to that element in the document. Review the element for accessibility and make a decision as to whether it is an accessible element or not. Then move on to the next element in the Accessibility Check Pane results.

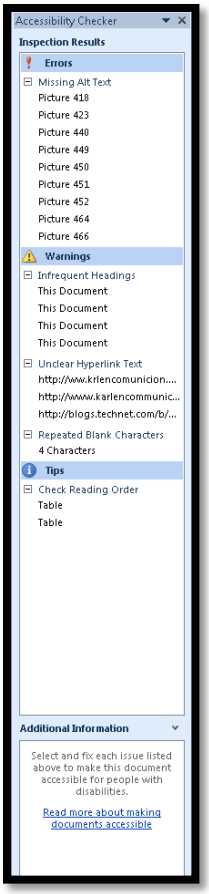
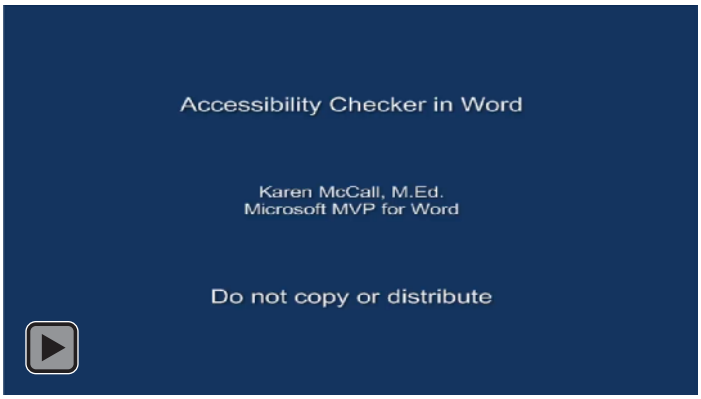


Figure 71 Figure 182

Accessibility Checker video.



Converting Word Documents to Tagged PDF

What do we mean by a basic tagged and accessible PDF document? At its very core, an accessible tagged document has to have the following elements:

- A Tags Tree.
- Logical Reading Order.
- Tags are appropriate for the corresponding content.
- Core language for the document and changes in language identified for multilingual documents.
- Correct Tab Order.

The "Tag is appropriate for the corresponding content" ensures that all elements of a PDF document are tagged properly. It would get the Tags as close to the visual representation of the document as is currently possible.

This can be delineated by identifying such document elements and components correctly as:

- Headings are tagged correctly. This means that headings are identified and that they present a hierarchical order to the content.
- Tables are tagged correctly. This means all cells are properly tagged and TH Tags are correct
- Lists are tagged correctly. This means that a bulleted or numbered list has the <L> and <LI> Tags respectively.
- Paragraphs are tagged correctly. This means that each paragraph has its own <P> Tag.
- Alt Text is present for Images and diagrams or formula and scientific notation.
- Bookmarks have been created.
- Links can be activated by the keyboard.
- Links have Alt text.
- Each element that we can properly Tag [For example, Footnotes] is properly tagged.

At its very core, an accessible PDF document is defined by having Tags. However, if those Tags do not encompass all relevant content in a document and present it to someone in a logical and coherent manner, it is as useful as having a PDF document that isn't tagged.

If there is no ability to navigate through the document, activate links or access information conveyed in images, formula, scientific notation, lists, or tables, then it is also not usable or useful.

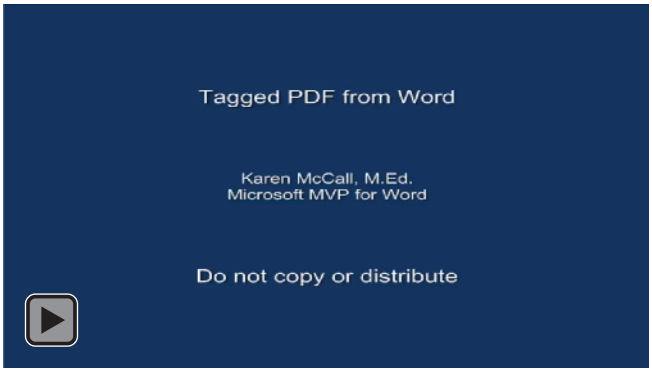
Consider any book that you've recently read. Remove any visual cues for topic changes, bulleted or numbered list items, a linked table of contents, or even an index. How would you find the information you need when you need it?

A few years ago I received a 250 page document of conference proceedings that were tagged. However, there were no page numbers because the proceedings were a compilation of all submitted abstracts, there were no headings, no table of contents, no Bookmarks, absolutely no way of knowing what was in the proceedings without reading through EVERY page, and taking my own notes on what to use the "Find tool" for in the future if I ever wanted to find information again.

It was like looking at a pile of papers on the floor that has no page numbers and only paragraph text. How would you figure out what is in the document and where it is or where it should go?

> **Note:** You will have to save documents, close them and open them again for a screen reader to "see" the repairs. You MUST start the screen reader BEFORE you launch the application, which might require you to exit Acrobat, start the screen reader then launch Acrobat and the document again.

Tagged PDF from Word video.



Tagging Word Documents Using Adobe Acrobat

All PDF documents come through Adobe Acrobat Distiller. The “MakeAccessible” plug-in is part of this tool. Although we don’t refer specifically to Distiller or the MakeAccessible tools by name, they are in the background when a PDF document or tagged PDF document is created.

You can use Distiller on its own to create tagged PDF documents. When you launch Distiller, a dialog opens with your options. We will not be using Distiller directly, this is meant to let you know where all “the magic” happens.

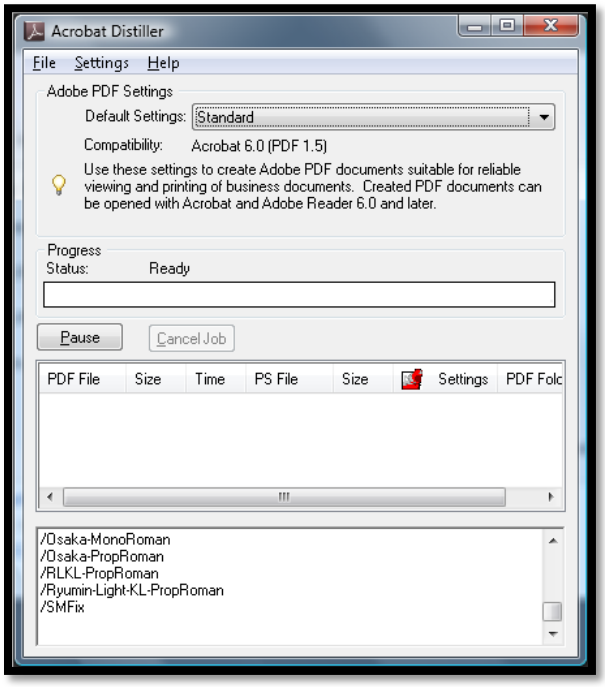


Figure 72 Adobe Distiller X dialog.

Adobe Acrobat Add-in for Microsoft Office

When you install Adobe Acrobat, an add-in for Microsoft Office applications is also installed. This topic explores where to find the conversion settings for your documents if you have access to the Adobe add-in.

> **Note:** You must install Microsoft Office before you install Adobe Acrobat Professional. If you've had to do repairs to or reinstall Microsoft Office, check the communication between Office and Acrobat. You may have to repair or reinstall Acrobat to have PDF capabilities.

Adobe PDF Maker

In Office 2007 and 2010 the Adobe add-in can be found under the Acrobat Ribbon.

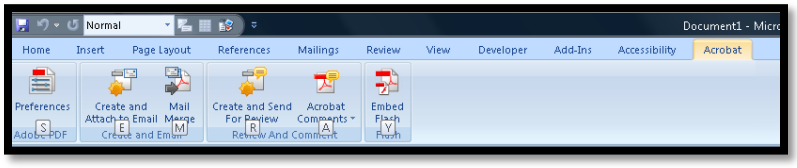


Figure 73 Adobe Ribbon in Word 2007.

You will want to take a look at the conversion settings, which can be found under "Change Conversion Settings."

The keyboard commands for accessing the Acrobat tools from the Ribbon are Alt + B followed by the character for the individual task.

If you go to the Word tab you'll see a check box for advanced tagging in Word. This will allow access to more granular formatting such as italic, bold, strong and emphasis once there is support from both Adobe and the adaptive technology developers. I always check this to ensure that what will become legacy documents remain optimized for accessibility.

> **Note:** If you are using the Nuance PDF Creator, the PDF Creator tool also installs a Microsoft Office conversion option on the Menu bar. It is called "PDF Create." Make sure you have the right tool available. PDF Creator from ScanSoft does not create tagged PDF and does not have this capability.

This is a review of the settings and how they impact the accessibility of a tagged PDF document.

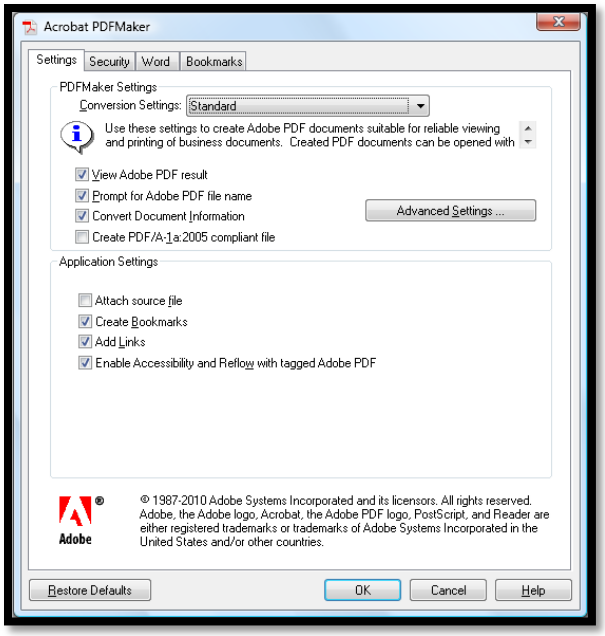


Figure 74 Settings tab in the Adobe PDF Maker dialog.

On the first tab in the PDF Maker dialog the important check boxes are:

- Create Bookmarks which is checked by default.
- Add Links which is checked by default.
- Create accessibility and Reflow with tagged Adobe PDF which is checked by default.

The next tab is one that confuses many people who want or need secure documents.

The Security tab shows you what versions of Adobe Reader the document will be “compatible” with. This means “whichversion of Adobe Reader can open the document.” You don’t generally want to go backward past version 6 or 7. Allowing for adaptive technology access, access improvements evolved dramatically with versions 6 and 7.

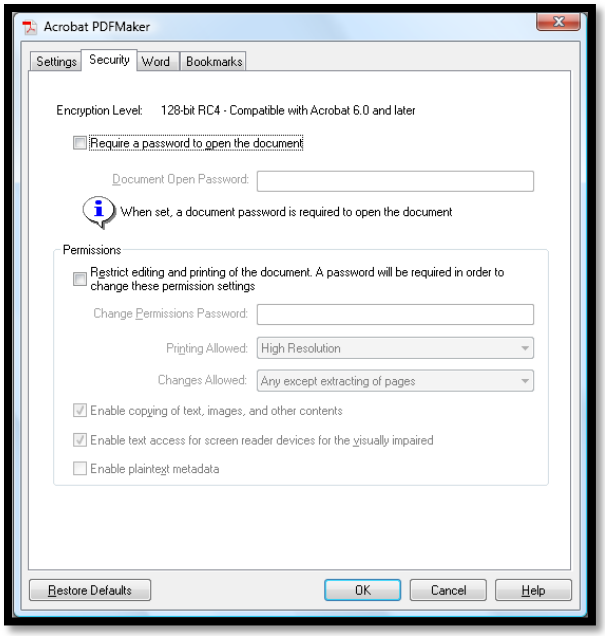


Figure 75 Security tab of the Adobe PDF Maker dialog.

You need to keep in mind that not everyone can afford to upgrade their adaptive technology. As an organization and part of the process you went through to develop standards, the versions of Adobe Reader and their corresponding adaptive technology would have been part of the discussion. For example, if a document is only available to anyone with Adobe Reader 9 and JAWS 9 or Window-Eyes 6 you are creating documents that are not accessible to anyone using Adobe Reader 8 with JAWS 8 or Window-Eyes 5.5. When developing standards and guidelines for your organization, know your audience. You can plan to incrementally drop a version off when a new version is released, but you need to recognize that not everyone has the latest and greatest adaptive technology.

If you want to change the encryption level you can do this in Adobe Distiller.

The remainder of this dialog is important for an accessible PDF document.

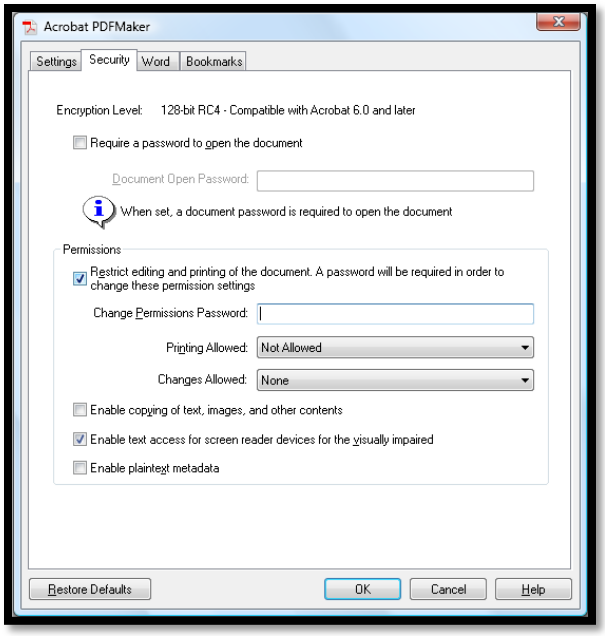


Figure 76 Security settings for modifying the PDF document.

While you can set a password to open a document, this isn't generally done unless the documents are sensitive or classified. It is one more password to remember.

Most people do, however, look at the security settings to change or modify the PDF document. Document authors get nervous when they see the options under this password protected security. "I don't want people to print, comment, edit, copy or extract information from my documents!"

At one time, copying and extracting was linked to the accessibility of a document. Document authors had to let people copy and extract because the two were one check box.

This began to change with Acrobat 7. Now you can prevent copying and extracting of content but still let people using adaptive technology read your documents. In effect, you can turn off the ability to print, make changes, copy and extract information or leave the ability to plant metadata turned off and, as long as you allow access for the adaptive technology which is checked by default [and your document is tagged], people using adaptive technology will be able to read the document.

At one time, we could use the keyboard to copy and paste information from a document when we couldn't use a mouse to do so, but this leak has been fixed and this is no longer possible.

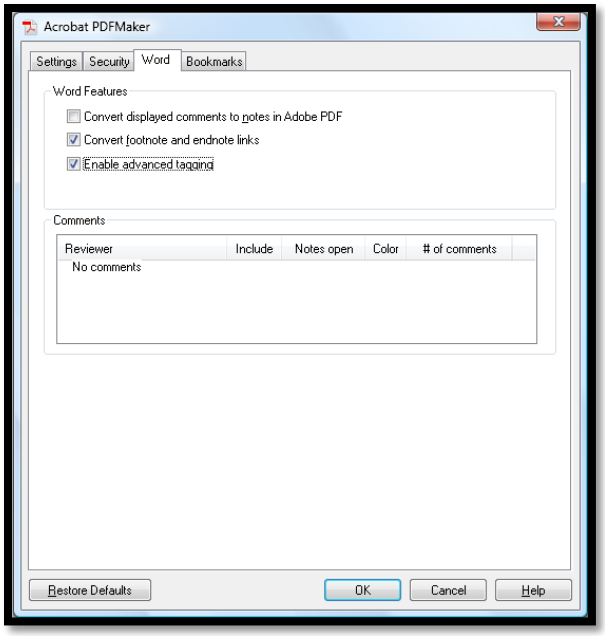


Figure 77 Word settings tab in Conversion Settings dialog.

The next tab in the Adobe PDF Maker dialog is for Word specific settings. You will want to check the advanced tagging. I can't find any references as to what this setting really does, but since we are creating accessible and usable PDF documents and the accessibility of a PDF document depends on Tags, any setting that says it will enhance tagging is one that we need to choose.

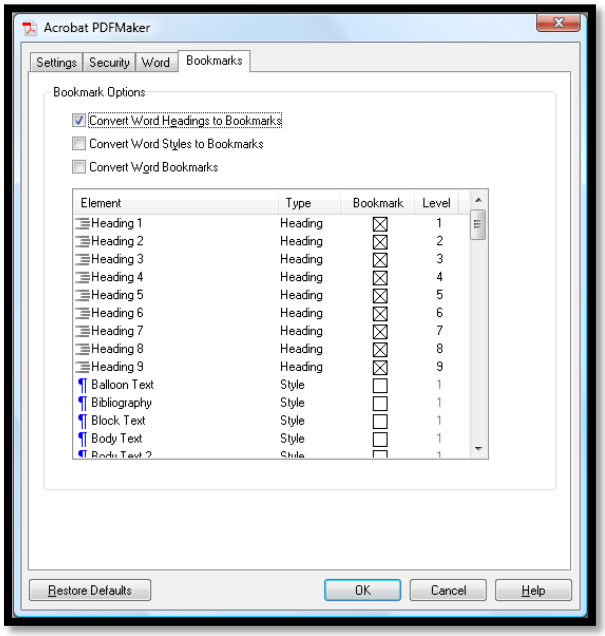


Figure 78 Bookmarks tab in Conversion Settings.

The next tab is important as it lets you create Bookmarks in the PDF documents you create based on your use of styles in Word documents.

I've discovered that in Word 2007 and 2010 this mapping is not reliable when trying to add bookmarks to the tagged PDF. You may have to add some of the Bookmarks manually once you switch to Acrobat.

Despite this, you always want to use heading styles in an appropriate hierarchical order because this lets people who aren't using adaptive technology find their way around your documents. Since headings are used to create a table of contents, as navigational structures themselves, and to create Bookmarks, implementing this one structural element will save you time and add to the accessibility and usability of your PDF documents generated from Word.

If you have created custom styles based on the existing heading styles, you will be able to add these to the list of heading styles used to create Bookmarks. If you have used a custom template, each time you use the template the custom headings will be found and Bookmarks will be created. Do it once and benefit always!

Finally…Converting Word Documents!

Once you've reviewed the Adobe PDF Maker settings and have modified them for your needs, converting PDF documents is as simple as accessing the Acrobat menu or Ribbon and choosing "Convert to PDF."

You will only need to modify settings once and they will remain for all documents produced, even the security settings.

If you reinstall or have to repair Acrobat, you will need to review your settings and, only then, may have to modify them again.

Save as PDF or XPS

Microsoft Office 2007 has an add-in from Microsoft that lets you create tagged PDF without having Adobe Acrobat on your computer. This tool uses the PDF 1.7 specifications, which are the most current.

The Save as PDF or XPS6 is a free download from the Microsoft site. There are some quirky things about it, such as putting all images in the document at the top of the Tags Tree, but for simple documents, this is a good alternative to having Adobe Acrobat on everyone's computer.

To save a Word document, for example, as a tagged PDF document:

Press Alt + F, F in Microsoft Word. This will open the Office button and then open the additional file format saving options.

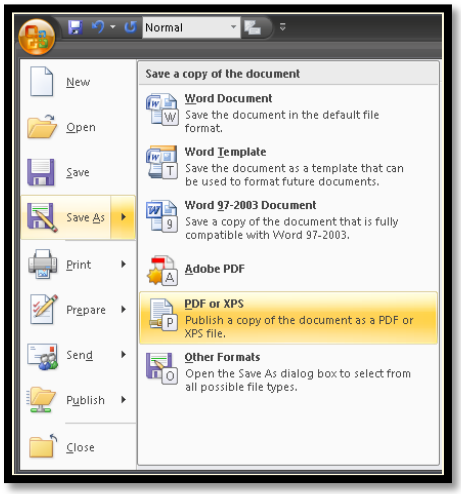


Figure 79 Save as PDF or XPS options from the Office Button in Word 2007.

This will open a Save As dialog that lets you choose between XPS and PDF format. Choose the PDF format.

[6] Microsoft Save as PDF or XPS plug-in: http://www.microsoft.com/downloads/details.aspx?FamilyID=4d951911-3e7e-4ae6-b059-a2e79ed87041&displaylang=en

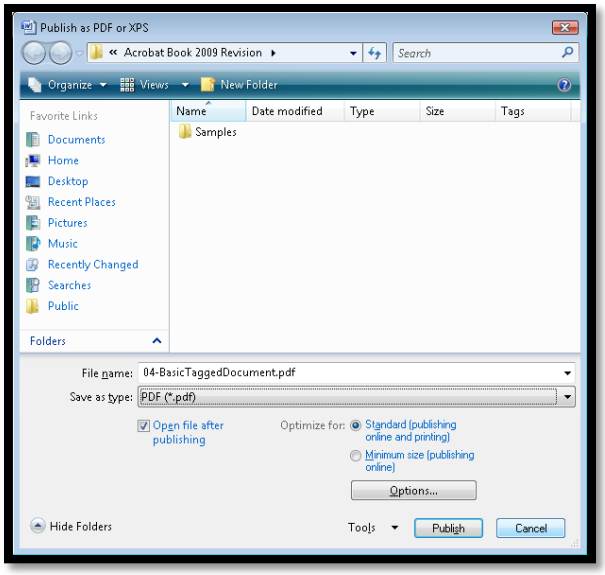


Figure 80 Save as PDF or XPS location and options dialog.

Activate the “Options” button in the lower right corner of the dialog once you’ve chosen PDF as the file format.

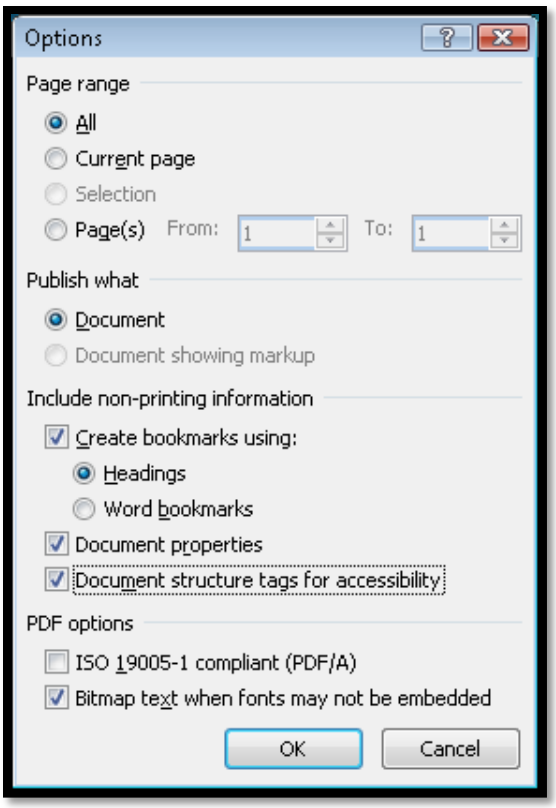


Figure 81 Save as PDF options dialog.

In the Options dialog, make sure that the check box to create Bookmarks is checked and that the bookmarks are based on Word headings. Also make sure to check the check box to include the document structure Tags for accessibility.

Tab to and activate the OK button by pressing Enter.

Now when you use this tool, until you repair or reinstall Microsoft Office, you will be using the headings in Word to create Bookmarks in your PDF documents and the document structure will be tagged for accessibility.

In Office 2010, the add-in is part of Office and is not a separate install. The other change is that you don't access this option from the File/Backstage area in two steps. Use the typical Save As dialog by pressing Alt + F, A for File/Backstage, Save As and then choose PDF from the Files of Type list. You can also press F12 to get to the same place. How easy is that?!

Using both the Adobe and Microsoft tools lets you create a work flow where tagged PDF are generated using the plug-in and then audited and QA's through Adobe Acrobat.

One of the quirks of Acrobat 9 and X is that if you have images in a document, all of the images for that document are placed at the top of the Tags Tree rather than their logical place in the reading order. Another problem that I've seen is that the images are placed at the bottom of the page in the tags Tree and Order Panel despite their logical position on the page. When the <Figure> Tags are all at the top of the Tags Tree you will either have to drag each <Figure> Tag to its logical place in the Tags Tree or, if you have used captions, you can put the images in the background as Artifacts. People using adaptive technology will have access to the caption text so they will know that there is an image and what it is. In most cases, reassigning these images as Artifacts is the most cost effective solution. Microsoft is aware of this issue and is working on it.

> **Note:** the XPS format is a completely inaccessible file format.

Print to Adobe PDF

You only use the Print to Adobe PDF if you are going to use your Word document as the template for a form in Adobe Acrobat. To create a form you need to start with an untagged document.

If you are using Adobe LiveCycle Designer it is strongly recommended that you create the entire form in LiveCycle Designer or an imported document used as a template will not get tagged.

Index

This tutorial will give you the basics and hopefully a lot to think about when working with Word documents and accessible document design.

The books written by Karen McCall have more tips and techniques, as well as information on converting your documents to tagged PDF.

A detailed list of books by Karen McCall and where they can be purchased is on the Karlen Communications web site.

There is a Karlen Communications Blog with articles on accessible document design and tips for accessing content if you are using adaptive technology.

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