Author's Note
This book is based on the work and experience of Karen McCall. This book was written as a best practices guide for working with accessible Microsoft Word based documents. These are the techniques that have worked or not worked for me and I decided to share them with others who are working in the area of accessible document design.

Dedication
This book is dedicated to Joyce Malombe, Aimee and Greg Todd...and to my "live in" friends Barnaby Edmund and Olivia Zane...who all keep me focused and somewhat sane.
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Introduction

This book is put forth as an answer to the question of what is a logical document structure and why do you need to provide one in the documents you create? Once these questions are answered, the next step covered in this book is to attempt to provide some best practices and guidelines for ensuring that documents have a logical document structure.

For those of you who have read my previous book on logical document structure for Word 2003, there is a new call-out or special comment in this book specifically for document geeks and geekettes. These call-outs provide a greater level of detail about a topic and I do try to keep them short! My reason for doing this is to try and bring the concept and usability of XML based formats together for you so you can see how everything is related and how deeply accessibility in the content can be implemented.

Although focused on Microsoft Word, the principles and tools for providing structure to documents exist in almost every application we use. The tips and support information on how adaptive technology accesses information can be used to understand why we need to create better designed and structured documents. This is not meant to be a Style Guide, but something more basic. Once we understand that documents require a structure and that structure needs to have some sense of logic and flow to it, we can create and apply the necessary Styles identified by organizations.

The author takes the position that if adaptive technology is used by the end-user, the tools in that adaptive technology should be used to optimize accessibility for well-designed and structured documents. Larger font sizes should be used for printing documents that have to be read away from the computer. While a document is in digital format a combination of the adaptive technology and the ability of the end-user to optimize the accessibility of a well-designed and structured document should be used. This does not mean that document authors are responsible for creating their documents in what I call “differently accessible” forms. If a document is designed and created to be accessible, the end-user bears some responsibility for knowing how to use their adaptive technology and Microsoft Word to swap out fonts and font sizes.
What is a Logical Document Structure?

If we consider print documents, we can generally identify a logical document structure visually. We can visually identify headings, sub-headings, paragraphs, tables, lists of information, page numbers and headers or footers. These are structural elements of a document. They help us read documents and identify what we are reading. The structure has some logic to it in that each page doesn’t apply a different structure to the content. For example, the headings on page one are the same as the headings on page 40 or the page numbers are located in the same place throughout the document. Over the years, structural elements for print documents have been catalogued, identified and used to establish standards of presentation.

We make decisions on what we read based on its structure. For example header and footer information is not generally read as part of the main content on a page. Sometimes we might read a sidebar and sometimes we continue to focus on the main content. Our decisions are based on the visual structure of the page. Adding the underlying structure, or labelling the structure, “converts” that visual structure into actual structure that can be identified by adaptive technology and conversions tools.

For example, if you tell someone that a book is in hardcover, you know what the contents of the book should look like. Your expectations for the structure of a paperback may be different. If you are told that something is a magazine or newspaper article, you have expectations as to the structure of what you will find when you open the cover. You might have different expectations for accessing information in a manual or textbook.

What types of structure do you see in your mind’s eye when you think of a digital or web-based document? We seem to have lost this in our transition from print to electronic documents. It is very easy to mimic a structure by throwing formatting at content but formatting is not structure. Then when we attempt to repurpose content to other formats such as PDF, DAISY or Braille, we find that we have no structure, logical or otherwise, to our documents.

Consider the example of a page from this book without formatting. How would you find the content you needed when you needed it? Without structure, this is how someone using a screen reader would experience a document.
Working with Templates: 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 newsletters, letters, report, forms, or memos. When working in templates, as long as the space you are working in has been named as a template, the heading styles can be modified. This will not affect the normal or new blank documents created. The document template used for the template can also contain static content or content that will be reused every time the template is created or published. This saves time when creating a newsletter or report. The template can contain images and placeholders for tables of contents.

When content is added to a heading text placeholder replaced with a table of contents needs to be updated to highlight the contents. As for the blank document, once a template has been added to the document, the template will look like in a regular document. Using placeholder text during the design and creation of a template can prepare the document to be formatted correctly and immediately let you know how it looks on page. There are no keyboard commands you can use to insert random text from the Office Help documentation. The number you choose in the number of paragraph inserted, each containing three sentences. Are you able to then review and insert any paragraphs of text within the document. The content is from the Office Help documentation. As for the keyboard commands, you may use any other commands your organization uses. Creating a Template Before you create a template, you need to set the standard and sizes for your organization. The following steps are for Office 2007 and a Windows 7 computer. The location and steps specific to your environment the Template folder are specific to your system settings. If you are using Windows XP or an earlier version of Windows, the instructions may differ. The following steps are for Office 2007 and a Windows 7 computer: Open a new blank document. Press Alt + F + T to bring up the Office Open, Save As options and select Document and Template and open the file and dialog within the DCC or document template folder. For example, the Windows file, for example, the Windows file, can be found in C:\Program Files\Microsoft Office\Word\Templates. If you are using Windows Vista, templates did not automatically save to the default Template folder on the computer. To ensure that the Template will be named in this default Template folder name the navigation pane on the left Office link to Dialog. The keyboard command to use to press Ctrl + E tabs for the name of your computer (for Windows) or press the letter of your Microsoft file and press Enter. You will need to press Tab to move to the list of folders and files and stop when you choose Document Templates. This is where you want to be. Once you have access to the "Templates" folder in the list of files and folders, given Enter on it to open it revealing the templates currently installed in Word. Return to the Templates folder by pressing Alt + T. Type in the name of the template. In this example, Document Templates to the file.

Figure 1 First two pages of chapter on Working with Templates without structure.

The preceding image is of the first two pages of the chapter on "Working with Templates" from this book. Are you able to find the information you need from the text? Are you able to navigate to the paragraph you want or the topic you need?

In this next view of the same page, you will notice headings which have been formatted by bolding, adding borders and changing the font size. HOWEVER they have been created by individually formatting each of the headings therefore they are not identifiable structure needed for adaptive technology.
Why do I Need to Have a Logical Document Structure?

The strength of electronic content is our ability to repurpose content without a lot of repair and reworking of the content. If we produce a document in our word processor, the underlying structure of the document should exist so that we don't have to re-write the entire document for another document format.

In countries where there is legislation around the accessibility and usability of electronic documents, we are finding that we are unable to meet legislative criteria for accessibility if there is no underlying structure to the original document template or document. The ability of people who are reading our documents, whether they have a disability and are using adaptive technology or not, is seriously compromised without consistent and logical structure and formatting.

In short, we are finding out that we've been creating really bad documents since we moved to electronic document production.
As technology advances and we can separate content from formatting and structure, we can use the content we create in different formats. We can display it on different devices and allow people to view and interact with content as they choose to. It is easy to choose ‘File > Save As. HTML’ for example. Even when we do this, we need to ensure that our documents have a logical structure so that the tool creating the HTML identifies structural elements such as headings, lists, tables, and paragraphs.

Somehow, along the way in the transition from printed to electronic information we’ve made the decision that the thoughtful creation and design of documents is not important. As long as it looks “pretty” we have been satisfied. We are now beginning to see the folly of our short sightedness. We need to think about information, how it is going to be used, who will be accessing it, what kind of technology it will be displayed on, and how it should be structured before we start writing.

We will look at document structures that are used on a daily basis. Each piece of a document has a corresponding structural element. You can find out how to create that structure in the Help documentation of your word processor or application.

Although this book uses Microsoft Word to create a logical document structure, similar tools are available in PowerPoint, Excel, Adobe InDesign and Corel WordPerfect.

**Before We Begin...**

If you are not familiar with keyboard commands, focus and selection, the following is an overview of the tools people using adaptive technology are familiar with. The AppKey is the equivalent of the right mouse click. Focus happens when am item is surrounded by a dotted line and when it is highlighted it is selected.

This book uses keyboard commands rather than mouse clicks to identify steps as an attempt to provide people using adaptive technology equal access to the techniques described in this book.

**The AppKey**

The keyboard equivalent of a Right Mouse Click is the Application Key commonly referred to as the “AppKey.” The AppKey is located on the lower right side of the main keys on your keyboard. It is just to the left of the Ctrl or Control key, and to the left of the left Windows Key [the key with the Windows logo on it]. The image on it looks like a little application Window.

![AppKey from Windows On-screen keyboard.](image)
If your keyboard doesn’t have an AppKey, you can also use Shift + F10. Some applications don’t support the shift + F10 keyboard command but do support the use of the AppKey. For this reason, this document refers to using the AppKey.

**Focus and Selection**

Sometimes when focus is moved to the Desktop or on a list of files or options, and you are using adaptive technology, you may hear the words “not selected” after the name of the item. Visually, there is a dotted line around the item. This means you are looking at the item but it is not selected. Your attention is focused on it, but you can’t do anything until you tell the computer to select it.

A good example of this is entering the My Documents folder. As you move to the My Documents folder, you might hear “folder view, list view, My Pictures, not selected.” You are in the list of folders and files for My Documents; however, the computer doesn’t have anything selected for you to work with. To select or put focus on an item that is not selected, press the Spacebar.

An example of this on the Desktop might be when you press Windows key + M or Windows key + D and hear “Microsoft Word, not selected.” This means that you “are looking at” Microsoft Word, there is a dotted line around Microsoft Word, but you can’t open it because it is not selected. When something is selected, it is visually highlighted in a different colour. It is then both in focus and has selection.

In the images below, the first image has focus but is not selected. The second image has both focus and is selected.

![Figure 4Desktop icon showing focus and selection.](image-url)
Working with Versions

With Office 2010 it is easier to recover documents if you have inadvertently closed them without saving or if the document has been damaged.

I’ve included this section in the book because we often forget to save what we’ve done and many people don’t know that this tool exists in Office 2010. For those of us using the keyboard and/or a screen reader, these processes are quite accessible.

**Save Settings in Word, Excel or PowerPoint Options**
The first place to start is by choosing the Save settings in Word, PowerPoint or Excel. This needs to be done for each application so you can coordinate and customize the settings for each application.

For all three applications press Alt + F, T to open the Options dialog from the Backstage area under the File menu.

Press S to move to the Save category and then Tab to move into the settings for saving documents.

![Figure 5 The settings area for saving documents in Word.](image-url)
The following items are ones you will want to verify and select.

I suggest tabbing to the first setting since it is checked by default and using its keyboard command will uncheck it. It is the second setting in the Save category. The keyboard command for this check box is Alt + A.

Press Tab until you come to the “Save Auto Recover information every”... setting. This is a two part setting, the first is the check box to say yes, save an auto recovery version of my document and the second part identifies how many minutes you want between the auto saves. Once you verify that the check box to save a recovery version is checked, press Tab or Alt + M to move to the “Minutes” edit box. The default setting is to auto save your documents every 10 minutes.

I typically set auto save to every 3 or 4 minutes. While this might cause pauses in my work flow while the auto save is going on in the background, it is better than having written something brilliant that I can’t remember now and may be lost forever.

As a rule I typically save everything I’ve done that I like. If I've added a paragraph I save, if I’ve formatted text or created a style I save. Ctrl + S is your BFF!

The next item in the Save category settings doesn’t have a keyboard command to move to it. Once you are in the Minutes edit area press Tab to move to the check box to “Keep the last version if I close without saving.” This should be checked by default so verify that this is true.

**Word Option only:** The other setting you might consider in Word is the “always create backup” check box which is found under the Advanced settings in the Options dialog. The keyboard command to move to this while you are in the Advanced category settings is Alt + B. It is in the Save section of the Advanced category and is quite a way down the list of options. There is more than one setting that uses Alt + B but using this keyboard command to move from setting to setting will save you time. Once you land on the “always create backup copy” check box, press the Spacebar to check it. You can then Tab to and activate the OK button to confirm changes to the Word Options. A backup copy of your work is saved in the same folder as the original document. All backup copies of files start with “backup of…”

We’re now ready to talk about how to get that darn document back!

**Auto Recovery**

The typical Recovery Pane opens to the left of your document if you’ve experienced a crash of Word, PowerPoint or Excel. “Auto recovered” versions of the documents you were working on at the time of the crash are listed and can be opened using the keyboard.
To access the Recovery Pane press Shift + F6 while a blank document is open in Word. Use the Up and Down Arrows to review the recovered documents. Press Enter on any document you want to open and save. If you don’t need these recovered versions of your documents press Tab until you land on the Close button in the Recovery Pane and press Enter. The Recovery Pane closes and you are returned to your document.

**Manage Versions**
There are several ways to work with versions. All of them new to Office 2010.

**Manage Versions in File/Backstage Area**
In the backstage area under the Info options is a button to “Manage Versions. You will find it by pressing Alt + F, letter I, R for File/Backstage, Info, Manage Versions. This opens a sub-button and if you press Enter you are taken to an unsaved files folder on your hard drive. Any unsaved files are listed in this folder. You can then select the one you want and press Enter or Alt + letter O to open it.

![Figure 6 Manage Versions in the File/Backstage area of Office applications.](image)

If you are using a screen reader you will want to press Tab to move to the Manage Versions button, and then press Tab until you hear something like “Today at 4:15...” which is the latest recovery version of a document. This won’t appear until you open the original document. This is a good place to explore how the Manage Versions is set up however there are keyboard commands to help you work more effectively with this tool.

If you know or suspect that there is a recovered version of a document you can press Alt + F, letter I, V to move to the Backstage area, Info options, Versions which then becomes a list of the versions of the document available to you. You can press Y, number 1, Y, 2 and so forth to open the corresponding document. Pressing Y and the number 1 for example will open the first document in the list.

![Figure 7 Several versions of an auto saved document under Manage Versions.](image)

You can also press the Up or Down Arrows to move through the versions available and then press Enter on the one you want to open.
Once you save a document with changes the recovered version disappears from this list until the next auto recover save.

**Recovered Files in Recent Documents**
If you press Alt + F, R, R for Backstage, Recent Documents, Recovered Files, the Open dialog appears and you are in the Unsaved Files folder. Choose the file you want to open and either press Enter or Alt + letter O to open it.

Sometimes you'll find the documents in the Manage Versions of the Backstage area when you won’t find them in this unsaved files folder. As a suggestion, always start with the Manage Versions in the File/Backstage area to recover an unsaved version of a document.

**Open Button in the Open Dialog**
There is also the option to show previous versions from the Open dialog itself.

Press Ctrl + letter O, Tab to the Open button and press the Down Arrow. Choose Show previous versions by pressing the letter P until you find this option and then pressing Enter.

You are taken to the Unsaved Files folder on your hard drive where you can choose any of the listed files and open them. As with the Recovered Files from the Recent Files list, sometimes you'll find the recovered files in the Backstage, manage Versions list rather than in this unsaved files folder.

**Auto Recover “Shelf Life”**
Files are saved for 4 days on your computer. After that they are deleted.

One huge caveat to using the ability to manage versions and recover documents is that files are saved on the computer so if you are working on a computer that is not yours; make sure that there are no recovered versions of your documents on that computer. If you are working in an educational environment where the computer is “cleaned” each time it is restarted make sure you restart the computer before leaving the work station.

Also note that if you edit a document and save the document any “unsaved files” will be deleted. They are now “saved.”

**Background on the Open “Split Button”**
In Word 2010 when you open a document the Open button is a “split button.” This means that there are options for how you open a document.

This tool is extremely helpful with Mac versus Windows versions of documents or documents created in earlier Office versions or other applications such as Corel WordPerfect.

Press Ctrl + letter O to access the Open dialog. This is a standard keyboard command.

If you select a document and press Enter or press Alt + letter O the document will open. This method does not give you access to the split button and open options.
To access the Open options, with a document selected in the list of files or typed into the filename edit area of the Open dialog, press the Tab key to move to the Open button. Then press the Down Arrow to open the Open options.

The options for opening a document are:

- Open the document, press Letter O
- Open a read only version of the document, press R
- Open as copy, press C.
- Open in browser, press B.
- Open with Transform, press T.
- Open in Protected view, press P.
- Open and repair the document, press E.
- Show previous versions of the document, press P. This is new to Word 2010.

Two of the items use the letter P to quickly choose that item. Pressing P once will take you to Protected view and pressing P again will take you to show previous versions. Press Enter on the one you want to confirm that option.

**What is “Protected view?”**
I generally refer to this as “preview mode” or “preview view rather than Protected View because documents that use the Office ability to protect them are not accessible to adaptive technology. This new preview or protected mode is.

Protected view is typically applied to attachments opened through or saved from Outlook or downloaded from the Internet. It lets you read the document but none of the elements that might be harmful to your computer are active. The content of documents in Protected view are accessible if you are using a screen reader.
If a document is in Protected View there will be an information Bar at the top of the document just under the Ribbons. You can either click it with the mouse or use the keyboard to turn off Protected View. Some current versions of screen readers may not see the Information Bar however this should improve as we work more with Office 2010.

![Figure 9 Info tab if a document is opened in Protected View.](image)

You can’t edit the document until you turn off Protected view.

As a reminder to turn off Protected view press Alt + F, letter I, E. It will be the only option in the Info options of the File/Backstage area of Office 2010 documents until you turn it off.

**What is “open with transform?”**

This option lets you open an XML document with an XSLT transformation in Word. I will admit that at the moment this is too geeky for me. However I can see the need for me to investigate this as we move to more XML based documents.

**Open and Repair**

This is a useful tool to try if you have documents that give you a corrupt file message when you try to open them.

- Press Ctrl + letter O to access the Open dialog.
- Select the file you got the corrupt file message for.
- Tab to the Open split button and press the Down Arrow.
- Choose Open and Repair by pressing the letter R.

You will be guided through the process and hopefully your document can be opened and repaired.

This is where having a backup copy or knowing where to find information on all the recovery techniques is really useful!

We’ve all had documents that the computer ate. We now have several tools to try and get those documents back or the parts of documents we haven’t saved yet.
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 newsletters, letterheads, 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.dot 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.
If you want the traditional Latin text, type =lorem(5) or =lorem (5, 7) to add Latin placeholder text into your document. It works the same way, use one number to add X paragraphs of three sentences each and X, Y to add X number of paragraphs with Y number of sentences.

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.

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 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. 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 2010:

1. Open a new blank document.
2. Press Alt + F, F, D, C, T which opens the File/Backstage area, Save and Send category, Change File Type, Word Template dialog.
   a. You can also press F12 and choose Word Template as the file type which might be faster.

3. 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.
4. 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.

Figure 10 Save document as a template.
a. **For Windows Vista:** You are looking for the Templates link. Once you find this, press enter which will open the available templates in the list of files and folders.
   i. On a Windows Vista system, you might need to open the Templates folder once you have activated the Templates link in the Navigation Panel. I’m not sure why but if you move to the list of files and folders and find a Templates folder, you will need to open this.

b. **For Windows 7:** 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.

5. Return to the Filename edit box by pressing Alt + N.
6. Type in the name of the template, for example Annual Report.
7. Tab to the Save button and press Enter to confirm.

The next few pages contain the steps visualized.

Locate the Microsoft Office Word option in the Save As dialog.

![Figure 11 Microsoft Office Word option in the Save As dialog.](image-url)
Press tab to move to the files and folders list where you will find the Templates folder.

![Figure 12 Templates folder revealed.](image)

Press Enter on the Templates folder to reveal the currently installed templates. Press Alt + N to move to the Filename edit box and give the template a name and then press Alt + S to save the template. It is now ready to work on.

![Figure 13 Templates folder open and template given a name.](image)
Template Caveats
Always start your document with the appropriate template. It is difficult to swap out some of the formatted elements completely and you may end up with some conflicts and wonky formatting. Themes do make swapping look and feel easier with less formatting conflict but Themes are not templates. There is more information on Themes in the chapter dedicated to them.

If you want to change the font to something like Verdana for the entire document, do this in the Styles Pane rather than selecting the document and changing the font size and Style. This prevents sudden relapses in original font size and Style [We'll go through how to do this in the next chapter.].

One of the distinct advantages to a template with Styles is the ability to use Ctrl + Alt + 1 to apply a Heading 1 Style. In a document with a Custom Heading 1 Style, pressing this keyboard command would apply the inherent or default Heading 1, not a Custom Heading. The keyboard commands for applying Headings 2 and 3 are Ctrl + Shift + 2, and Ctrl + Shift + 3 respectively. These three keyboard commands save a lot of time!

Summary of keyboard commands for formatting Headings:

- Ctrl + Alt + number 1 applies the Heading 1 Style.
- Ctrl + Alt + 2 applies Heading 2 Style.
- Ctrl + Alt + 3 applies the Heading 3 Style.

The other huge advantage to using styles is that you can change the look and feel of a document by making a few changes to a style or styles and don’t have to look throughout the entire document for hard coded or individually applied formatting.
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, colours and 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.

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

Before we begin working with and creating Themes, we need to understand a bit about Fonts and how they are used in DOCX formatted documents.

The best practice is to always use standard Unicode ISO fonts rather than custom designed ones.

Which Font is Most Accessible?

One of the frequently asked questions is “which font and font size is the most accessible?” The answer is that you can ask ten people with visual or print disabilities which font works best for them and you will get ten different answers for both font and font size. There are also fonts designed for display on a computer screen and those designed for print material.

This is where the use of Themes is the most powerful. Themes let the end-user create and implement the font and font size they need to access content in the document either on-screen or in print.

Some people with or without disabilities “prefer” a sans-serif or Arial type of font because the Serifs or ligatures get in the way of decoding the characters and their ability to use word prediction. Some people with or without disabilities prefer Serif fonts because they depend on the Serifs or ligatures for decoding or word prediction. There is no right or wrong answer.

Fonts that have been developed to the ISO Unicode standard are the ones to be used and used consistently for branded documents. Using what I call “one off” fonts or custom fonts not designed to the standard will cause accessibility issues with documents either in Word or when the document is converted to another format.

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.

Font size is another area where trying to account for every font size scenario is counter-productive. Someone who has tunnel vision cannot make use of 18 point font, someone with a visual disability might need 28 point font or larger, and someone with a print disability might need 14 point font.

Focusing on letting the end-user choose how they view and interact with the content is the key to this level of accessibility. This means not forcing fonts, font sizes or colours on the end-user but letting them apply their own Theme or Style Set to a document.
There are some basics to keep in mind when deciding on fonts and font sizes for specific content.

- All uppercase is the most difficult font Style to read for people with or without disabilities. It should be used sparingly. The reason it is difficult is that it removes our ability to use character and word prediction. We rely on the shape of words to read and when this is taken away by the use of uppercase it affects the readability of documents. There are some people with learning disabilities who prefer uppercase and this should be achieved by using customized Themes and Style Sets.

- Italic is difficult to read because the characters are thinner and slanted in one direction. In some cases when magnified the characters are unreadable due to the thinness of the strokes. This is another Style that should be used sparingly.

- There is single spacing after punctuation. When we had fixed fonts where every font took up the same amount of space on a line, double spacing after punctuation was necessary. With electronic documents we use proportional fonts which means that the letter “d” takes up more space on a line than the letter “l.” Using double spacing with proportional fonts creates issues of white space and distracts from the readability of the content.

- Full justification also interferes with the readability of content as it often creates rivers of white space throughout a paragraph or column. The person reading the content is forced to focus visually on the meandering white rivers of space which lengthens the time it takes to read. Full justification combined with double spacing is a reader’s nightmare. The standard for electronic documents is left aligned text.

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.

As digital content evolves both the document author and the end-user/reader will need to learn how to effectively create and access content in a “preferred” Style or format.

**Themes and Hard Coded Formatting**

If we have a document where we “hard code” fonts into the document, someone who can’t see those fonts clearly cannot easily use their own Theme to make the document more readable and accessible. This is similar to when web pages have hard coded HTML attributes rather than using CSS or Cascading Style Sheets to define the look and feel of web documents.

For example if you want a document to be in Verdana font, don’t select the entire document and open the Font dialog to apply the Verdana font. This is equal to “hard-coding” which is an inflexible method of formatting the font into the document. In this scenario text using the Emphasis Style would not reflect the use of Verdana and would remain in the default document font.
If you want to change the font and optimize accessibility:

1. Change the font in the Styles Pane by modifying the Normal Style which can be used for the current document or documents based on the current template.
2. Create a Theme Font which can then be used for other documents in other applications and applied globally to a document.
3. Create a Style Set with a specific font and font size that can be applied to a document. Themes can apply a font style while Style Sets can apply both font style and size.

Don’t worry, we’ll walk through this as we move through the Themes and Style Set topics.
Starting Point with Themes
Now that we’ve talked about Themes where do we find them and how do we use them?

There are a couple of ways to use Themes. First you can apply the entire Theme which includes font and font attributes, colours and effects for fonts such as shadow, subscript or superscript.

Global Theme Attributes
To look at the built-in Themes for Office 2010 press Alt + P for Page Layout and then T, H for Themes.

The Themes Gallery will open and you can view the Themes and some of the colour options. If you are using a screen reader, use the arrow keys to move around the choices. The names of the Themes will be read to you by your screen reader but not a description.

You can download additional Themes from the Microsoft web site. Remember that a Theme is different from a template in that a template is for a specific document in a specific application while a Theme can be applied to any document in most Office applications [Word, Excel or PowerPoint].

The following image is of the Themes Gallery in Word.

![Themes Gallery in Word 2010](image)

Figure 16 Theme Gallery in Word 2010.

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In the Page Layout Ribbon the Themes Group has the global Themes button and also buttons for Theme Fonts, Theme Colours and Theme Effects.

To apply a Theme navigate to it in the Themes Gallery and Press Enter. If you are working in Word you may not see the page background depending on the Word Option settings you choose. In most cases the page background colour is not displayed by default since it is expensive to print and we often forget to select the option not to print background. <grin>

Let’s take a look at how to create a new theme by modifying one component of an existing Theme. You may find that a theme or its components are almost what you need but not quite. You may only need one or two adjustments.

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 will be saved as new Theme parts and then the global Theme will be saved.

I know it sounds complicated but it isn’t.

Let’s start with a blank document with some random text inserted so we can see what we are doing.

Use the keyboard commands for inserting random text into a document. =rand(5,4)

Put your cursor back to the top of the document by pressing Ctrl + Home.

Choose Page Layout, Themes or press Alt + P, T, H.

For our example we’ll choose the Oriel theme.

The font set for the body and headings for this Theme are Century Schoolbook. To verify this place your cursor into any piece of text and look in the Font Style area of the Home Ribbon.

The colours are muted which is why it was chosen for this example.

Select some text and create a link by pressing Ctrl + K and entering any web address. This is a sandbox document so context is not necessary. We need to see how links are coloured in an Oriel
document. By creating a sample link the colour contrast or lack of it is more apparent than when we look at the Theme Colour samples in the Theme Colour Gallery. In most Themes, the link colour is so muted as to be unrecognizable. When we get to Theme Colours, this is the element we will change for our new Theme Colour set.

The preceding image shows some sample text in an Oriel Theme based document. This is where using the ability to create random text in a document comes in handy. The content is there for you to quickly format to get a feel for what your publication will look like. It takes a lot of the guesswork out of the process.

One thing noticeable on first glance is that the links are coloured in such a way that they may be difficult to see in the document.

We can change this in the Theme Colour options which we will do later in this chapter.
**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.

Each Theme comes with its own set of corresponding fonts. These can be applied to the template you are working on [or the current document].

![Figure 18 Theme Fonts Gallery.](image)

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

This is where we pick up the process of creating a new Theme. We will create a new Theme Font.

When you press Alt + P, T, F, C a dialog opens where you can create the new Theme Font using a preferred font set. For example many people like to use Verdana.
Figure 19 Create New Theme Font dialog.

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.

Once 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.

Figure 20 New Font Theme in list of available Font Themes.

We've done the first step in creating a new Theme. We have a Theme Font set called Karlen. Now let's look at modifying some of the colours.
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.

When we applied the Oriel Theme we noticed that the links in an Oriel themed document might not be accessible or readable since the colour contrast between the font and the background was not clear enough.

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.

![Figure 21 Theme Colours Gallery.](image)

To choose a Theme Colour set, press the down arrow and select it from the list of options by pressing Enter on your choice. That Theme Colour will be applied to the current document.

This is where we pick up the process of creating a new Theme Colour.
To change some element or elements of the Theme Colours choose “Create New Theme Colour” by pressing Alt + P, T, C, C.

**Note:** If you are in doubt about the colour contrast in your document, there is a free tool called the [Colour Contrast Analyzer](http://www.wat-c.org/tools/CCA/1.1/) that can be used on documents as well as web pages.

As mentioned the links may not be as visible as you need them to be. You might want a darker colour or the default blue link colour for them.

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.

![Figure 22 New Theme Colour option.](image)

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.

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a. If we are looking at the blues in the palette they are all pretty muted. We are looking for a brighter blue.

5. In the colour palette that opens, choose More colours (Alt + M).
6. 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.
7. Choose a bright blue that is comparable to the standard blue hyperlink colour.
8. Move to and activate the OK button to close the dialog.
9. 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.
10. Once you are returned to the New Theme Colour dialog you need to name the Theme Colour set.
11. I’ve called this colour set Karlen to match the Theme Font set I created.
I first tried one of the blues in the default colour palette and found that I couldn’t find one bright enough for a link colour.

To edit an existing Theme Colour set:

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 26 Blue hyperlink colour in Karlen Theme Colour.

You are able to see the changes immediately when you return to your document.
**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.

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.

There are a couple of good articles on Theme Effects on the Microsoft web site if you want more information. This Theme component seems to be fixed and sort of invisible for review.

- Add or change the effect for a picture in Word.
- Apply, customize and save a document theme in Word or Excel.

---

Create the 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 28 Create New theme Save As dialog.](image)

4 Microsoft web site, Apply, customize and save a document theme in Word or Excel:
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.

The Karlen Theme will show up in the Theme Gallery for PowerPoint, Excel, Word and Outlook [you can use the Theme in Outlook as long as the message format is set to HTML.].

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The Difference Between a Theme and a Template

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 it is created for. For example you can't use a Word template in PowerPoint or Excel.

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.

Taking the Karlen Theme for example, if we wanted the Heading 1 to be centered for a report we could create a template called Report that uses the Karlen Theme and then use the Styles pane to modify the alignment of headings for that template. Headings are template based. The Theme only determines the font, colours and effects to be used in a template.

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 in all Office applications.

Themes and 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.

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Creating a Custom 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.

1. You can choose from a list of Style Sets that are built-in such as “Distinctive,” “Elegant” and “Fancy.”
2. You can create your own Style Set which is something like Verdana 16 point.
3. 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.

Note: Themes can be used to create a common look and feel for documents in Word, PowerPoint or Excel. Themes don’t typically identify a font size but do identify Theme Fonts or Theme Colours. Using Style Sets provides more flexibility in applying font attributes such as bold, colour, or case so that you can read Word documents easier. You can copy one Style Set file rather than the separate Theme Font, Theme Colour and Theme Effects file from computer to computer.

I recommend starting with the Word 2010 Style Set because it has the paragraph spacing built-in whereas the Word 2003 Style Set does not and you will have to either manually add paragraph spacing or do this in the Normal Paragraph Style. So it saves you time!

You will only have to do this once. When you create your Style Set you can archive it somewhere for safe-keeping. If a service pack update or reinstall of Office removes your Style set as an option, you can copy it back to the Quick Styles folder and continue using it. You won’t have to recreate it.

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 ASP or 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 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.
   a. The new Style set is saved to the Microsoft/Quick Styles folder for Microsoft applications. Don’t worry about where it is saved at this point. We’ll get to that when we learn how to copy or delete a Custom 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.
Figure 33 Karlen Style Set applied to 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!

The option to make your Style Set the default for documents is found in the Style Set list. The keyboard command is Alt + H, G, S to Set as Default. If you are working on a document that has a template the defaults will be saved for that template. You will know this because the name of the template will appear in the Save as Default item on the Change Styles list.

Deleting a Custom Style Set

If you created a Style Set for practice and now want to delete it, you can do this. It means going into the user files on your computer.

Note: If you have the UAC or User Account Settings set to warn you when you are performing administrative tasks, you will need to activate the Continue button when it appears.

The Quick Styles are stored in Users/Username/AppData/Roaming/Microsoft/Templates/Quick Styles.

To delete a Custom Style Set:

1. Go to My Computer and press Enter to open it.
2. Locate your computer’s hard drive which is usually C:\ and might have a name such as Local Drive or Local Disk Drive.
3. Locate the Users folder. You can do this by pressing the letter U.
   a. If the Show Hidden Files option is not turned on for your computer, go to Control Panel (Press Start Menu, Settings, Control Panel, press Enter), press F for Folder
Options and press Enter. Press Ctrl + Tab to move to the View tab at the top. Tab to Advanced settings: and arrow down to “Show hidden files and folders”. If the radio button is not activated press spacebar to turn on the ability to see hidden files. Tab to OK and press Enter. Close the Control Panel (Alt + F4).

4. In the Users folder, find your username and press Enter to open it.
5. Choose AppData from the list of files and folders. AppData is a hidden file which is why you need to show hidden files in order to do this. You can press the letter A to find this but it is most likely at the top of the list and the only file beginning with that character.
7. Choose Microsoft [Press letter M..].
8. Choose Quick Styles which should be the Quick Styles folder [Press letter Q.].
   a. You can use first character navigation for all of these steps.
9. Press Enter to open the quick Styles folder.
10. Locate the Custom Style Set you want to delete and select it by pressing the spacebar.
11. Press the Delete key.
12. Confirm that you want to delete this Style Set.
13. Press Alt + F4 to close the current window.

That’s it! The Custom Style Set has been deleted and will disappear from the list of available Style Sets in Word.

To delete a Custom Style Set without going into the User files:

1. You must have Recent Documents visible on the Start Menu to do this and your Quick Style Set must be in the list of recent documents.
2. Press the Windows key to open the Start Menu.
3. Press the Tab key once to get out of the search mode in Windows Vista or Windows 7.
4. Press R for Recent Documents or use the Arrow keys to find it.
5. Open the Recent Documents list and if you’ve recently created your Style Set it will be listed.
6. Select it and press the AppKey to open the context menu.
7. Choose Delete.
8. You may be asked to confirm that you want the file deleted. Say yes.

If you want to make sure this is the right file, instead of pressing Delete, open the Properties for this file and check that it is in the Quick Styles folder. Then you can access the context menu again and delete the file.
Using your Custom Style Set on Other Computers

If you have a laptop as well as a desktop or a computer at work [and you have administrative permission to access the user files] you can copy your Style Set to a flash drive and put it on the other computers.

To use the Custom Style Set on other computers:

1. Go to Users/Username/AppData/Roaming/Microsoft/ Quick Styles.
2. You can either copy the entire folder if you have several Custom Style Sets or the individual Style Sets by going into the folder and selecting the one you want to use on another computer.
3. Press Ctrl + C to copy it to the Windows Clipboard.
4. Switch to the external storage device such as a flash drive and press Ctrl + V to paste the folder or file to that device.
5. Go to the second computer.
6. Insert the flash drive and open the list of files and folders on it.
7. Locate the Quick Styles folder or file and press Ctrl + C to copy it to the Windows clipboard.
8. On the computer you want to copy the Style Set to, go to Users/Username/Roaming/AppData/Microsoft/ Quick Styles and either paste the Quick Styles folder or the Quick Style file into the Quick Styles folder. You can use Ctrl + V for this.

That’s it! You’ve copied your preferred Style Set so that it can be used on a different computer.

To copy your Style Set without going into the User files if it is in the list of Recent Documents:

1. You must have Recent Documents visible on the Start Menu.
2. Press the Windows key to open the Start Menu.
3. Press Tab to get out of the edit area for Windows Vista and Windows 7.
4. Press R for Recent Documents or use the Arrow keys to find it.
5. Open the list of Recent Documents and find your Style Set file in the list.
6. Press the AppKey to open the context menu.
7. Choose the “Send To” option and then choose the external device such as a flash drive to send the file to.
8. Press Escape to get back to the Start button.

You can now go to the external device to verify that the file has been sent to it.

If you want to copy the entire Quick Styles folder you will have to use the long method and go into the User folders and files.
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.

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.

If you do create chaos in the Styles of the Normal.DOCX template you can exit Word, delete it 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 Templates. 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 resume. When working in a template, as long as the space you are working has been saved as a template, the heading styles can be modified. This will affect the normal or new blank document created. Just document the current template is used for. Templates can also contain specific content or content that will be used every time the document is reviewed or published. Putting this extra 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 access to the template you can add placeholder text to the document to get an idea of what the template will look like when populated with content. Using placeholder text during the design and creation of a template lets you create styles you need for your content and understand how you are looking at 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 in the number of paragraphs inserted, each containing three sentences. “random ‘”’ Try this without the quotes. One of these random paragraphs will be added to the document with heading three sentences. You can use any number you want or need. “random ETS.” When the letter key is pressed five paragraphs of random sentences each will be added to the document. The context is from the Office Help documentation as with the previous keyboard command; 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 in the standard and how headings are to be formatted. The following 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” options in the navigation pane are “Templates” which is a bit more accessible and well you can save into the Templates folder on the hard drive. To create a template in Word 2007, open a new blank document. Press Alt + P, P. Which opens the Office Button, Save As options and selects Document Template and save the same as dialog with the DTS. or document template format in the filename edit box. We now need to ensure that the template is saved with other file names. Starting with Windows Vista, templates do not automatically save into 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 command are to press Shift + Tab until you hear the name of your computer/hard drive, press the letter T for Microsoft Office Word and press Enter. You will now have to press Tab to account for list of folders and files. Stop when you hear “Document Template.” This is where you want to be. Once you have access to the “Templates” folder in the left of Folders, press Enter on it to open. A new window the template currently installed in Word Return to the Windows edit box by pressing Alt + N. Typ e 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 34 Document page with no structure.

The preceding image is of the first two pages of the “Working with Templates” chapter from this book. Were you able to locate the step-by-step instructions? Were you able to find the “headings” you needed for the content you want? Without proper structural elements this is how someone who couldn’t see the visual representations of structure would experience the content.

Misuse of Heading Styles

I mentioned mistakes in the use 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.
As can be seen in the preceding image 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.

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.

**Heading Styles**

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 is 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.

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 horridly 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 simply 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.

In other words you create more work for yourself than is necessary.

**Applying a Heading Style**

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 to 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.

For example one of the challenges in putting this information together was that I found more tools to create more accessible documents. I had the basic structure of the book but needed to go through the topics and find the best place to add the new content.

In long documents it is easy to lose track of the hierarchy of content. Was the last Heading I added a level 2 or level 3? How can I see this easily?

There are several tools available to you and they are covered after the section on Custom Styles. However, for a quick view of the hierarchy of the document you can use Outline View of the document. To do this press Alt + W, U.

![Figure 36 Outline View of this document.](image)
The preceding image shows the hierarchy of content for this area of the book. The content is collapsed under the headings and you can easily see where you are and what heading levels surround the content you are working on.

The hierarchy is represented by the level of indentation of a topic. There are plus or minus signs beside the headings to indicate that they can be expanded or collapsed to show all of or some of the other levels of content under headings.

You can easily review the flow of the document and drag or cut and paste items around the document to create a more logical reading order.

You would not be able to do this if you simply formatted the text to represent a heading visually.

The following image is of one topic in this book with a visual heading: text with just formatting rather than applying a heading level or using a Style. It looks good, everything separated, with what looks like a proper heading.

If we look at the Outline view of this document by pressing Alt + W, U, we can see that everything is at the same level in the document. The visual representation of a heading is at the same level as paragraph text.

Unlike an Outline showing the heading levels, it becomes difficult to move content around the document to create a more logical flow.
A document that has structure will illustrate that structure in Outline view. The following image is of this document with proper headings and other structural elements.
other levels have been collapsed. This let’s you see if the flow of information makes sense. It also lets you verify that the topics for Headings 1 and 2 are as they should be, one following the other and that a Heading 1 shouldn’t be a Heading 2 and vice versa.

Figure 40 This document in Outline view with Heading levels 1 and 2 visible.

Going back to the first image in this series, we would not be able to view any “levels” or hierarchical structure in that document because everything was at the lowest level, that of body text or a normal paragraph.

Always use Styles to apply heading levels to content. If you don’t like the look and feel of a heading, modify it for your template.
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.

![Figure 41 Modify Style option from the Style Pane.](image)

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.
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.

**Note:** You can press the AppKey on a Style in the Quick Styles Gallery and choose Modify to do the same thing. The use of the Styles Pane is featured here because it is more accessible than the Quick Styles Gallery. The Quick Styles Gallery requires the use of the Up, Down, Left or Right Arrows to find a Style. There is no fast way to locate the Style you want.

When modifying or creating a new Style you will be able to see what that Style will look like with your changes. This lets you quickly assess size, alignment, border, and colour for readability and integration in the document look and feel.
Creating Custom 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.

   ![Figure 43 Styles Pane beside heading in document.](image)

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.

![New Style dialog](image)

**Figure 44 New Style dialog.**

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. 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.

10. 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.

11. 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.

12. You can also choose Alt + the letter O to activate the Format button which will let you add borders, shading, widows and orphans and block protect to your Style.
a. Widows and orphans are important to eliminate those single lines of paragraphs that appear on the next page making your documents look a bit lop sided. Widows, are the single lines of text at the bottom of the page while the rest of the paragraph is on the next page. Orphans are those single lines of text at the top of a page while the rest of the paragraph is on the proceeding page.

b. Block protect lets you keep text together by telling Word that the paragraphs or list items or other content is not to be separated. This can present document formatting issues when editing and adding content to a document. In some cases blocks of text are forced to the next page in order to keep them together which creates large white spaces on pages, or a paragraph on one page and the block protected content on the next page. At times the only way to repair this is to turn off the block protect for the affected content.

13. There is one other critical piece to creating your Custom Style. You must check the check box to add this Style to the template.

14. 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.

15. Activate the OK button to confirm your new Style.

When you generate a Table of Contents for the document, your Custom Styles will be included in the Table of Contents.

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.

When you save the current document, if you chose to use this Custom Style in documents based on this template, you will be prompted to save the changes to the template. Choose yes to complete the process of creating a Custom Style usable in this template.

**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 the 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 “Emphasis” 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.
Figure 45 First step to create a Character Style.

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 I wanted you to see the potential for using a Character Style.
9. Move to and activate the OK button to create the Style once you’ve formatted the Style the way you want.
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. 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.
A well-structured document uses a combination of Style types to format content.

**Additional Tools to Review Structure**

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.

All are briefly covered in the next section of this chapter.

**Navigation Pane: List of Headings**

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.

The following image is of the list of headings in this document in the Navigation Pane.
Figure 49 Navigation Pane open showing headings in this document.
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 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.

![Apply Styles Pane](image)

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.

Apply Styles Pane on the Quick Access Toolbar
You might find it easier to put the Apply Styles Pane or ASP on the Quick Access Toolbar or QAT.

![Customize QAT dialog](image)

To put the Apply Styles Pane on the Quick Access Toolbar:
1. Press Alt + F, T to open the Word Options dialog.
2. Press Q to move to the Quick Access Toolbar options.
3. Press Tab to move into the customizable options.
4. You could also put the QAT below the Ribbon using this Customize context menu.
5. The focus will be in the “Choose commands from...” list box.
6. Press Alt + Down Arrow to expand the list.
7. Choose “Commands not on the Ribbon” and press Enter.
8. Press Tab to move into the list of commands. The focus will probably be on <Separator>.
9. Use first character navigation or the Up and Down Arrows to find “Style.”
10. There are a couple of Style based options so make sure you choose the “Style” tool.
11. Once Style is selected, press Alt + A to add it to the list of commands in the QAT.
12. If you press Tab you will put focus on the Add button if you prefer this method.
13. Pressing Tab again moves you to the list box “Customize Quick Access Toolbar” where you can choose to have the customized items on the QAT displayed for all documents or for just the current document. I recommend that you have the QAT tools available for all documents.
14. Press Tab which will move focus to the list of commands currently on the QAT.
15. Pressing Tab again moves you to the “Reset” button where the original QAT items can be restored.
16. Moving through the options to customize the QAT, pressing Tab again will let you move a selected item in the list of QAT tools up.
   a. The “Move Up” and “Move Down” buttons are icons with arrows pointing either up or down so there is no keyboard command to move directly to them. Visually they are to the right of the list of items currently on the QAT.
17. Pressing Tab from the “Move UP” button will move focus to the “Move Down” button where you can move the selected item down in the list by pressing the Enter key.
   a. If you want to remove an item from the QAT, select it and press Alt + R. You could also Tab to the Remove button and press Enter.
18. Once you’ve added the Style tool to the QAT, Tab to and activate the OK button.
19. You are returned to the document and the new tools are added to the QAT.

You access the tools in numerical order. For example on my computer the Style tool is the fourth item on the QAT so pressing Alt + 4 will take me directly to the Style tool. When you move tools up or down in the current list of QAT tools in the Customize dialog, you affect the number you would need to press to move directly to that tool. For example, if I moved the Style tool down one place in the list, Alt + 5 would put focus on it not Alt + 4.

Figure 52 Quick Access Toolbar showing Apply Styles Pane added.
Putting the ASP on the QAT is one way to view the formatting of a document while you are working with it. There is a way to see more details about the formatting of Styles used in your document as you work with it.

One of the most often asked questions is whether there is the WordPerfect equivalent of Reveal Codes. The closest tool to this in Word is the ability to reveal formatting in a separate pane in the document.

**Reveal Formatting Pane**

To show the Reveal Formatting Pane press Shift + F1.

![Figure 53 Reveal Formatting Pane.](image)

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 the Reveal Formatting Pane make sure it has focus, remember you can press Shift + F6 to move to it and press Ctrl + Spacebar then C for Close.

**Styles Organizer**

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 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.

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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.
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 you can use to ensure consistent look and feel for documents that might not have or need Themes.

**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, in this document, at the current cursor position the Style Inspector shows the attributes for normal body text.
If I move the cursor to the next heading in the document, the information in the Style Inspector changes.

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 Styles 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 these tools to work with legacy documents or non-structured current documents.

To close this window, press Shift + F6 until it is in focus. Press Ctrl + Spacebar and then the letter C for Close. Use the same keystrokes to close the Styles Pane as well.

**For Geeks Only: Viewing the Document WordML**

This is one of those sections in the book just for those of us who need to see it or want to take a look under the hood of the document to see what is going on. This procedure is for DOCX files only because they are XML based. You cannot do this with DOC format files.

You can look at the WordML codes for a document by doing the following:

1. Press F12 to open the Save As dialog.
2. Save a copy of the current document. I added the words SampleXML when I did this to see if it worked.
3. Once the document is saved, close the current document.
4. Locate the file in its folder.
5. Press F2 to go into Edit mode and replace the DOCX with ZIP. You will be asked if you are sure you want to do this because it will affect how the document is opened. Say yes.
6. Press the AppKey on the new ZIP file and choose Extract All. Remember where the folder or place that the files are being extracted to. I typically keep the extracted folder in the same folder as the ZIP file.
7. Once the files have been extracted, launch NotePad. You can open this file in Internet Explorer but if you are using adaptive technology the XML content is a bit easier to navigate in NotePad.
8. With NotePad open, press Ctrl + letter O to launch the Open dialog and then locate the Document.XML file which you just extracted.
9. Once the Document.XML file is open, you will see the underlying WordML schema.
10. I suggest that you use the Find tool to locate some content text so that exploring the schema makes a bit more sense.

As I said at the start of this topic, this is for geeks and geekettes only! For most of us just knowing this is a tool that exists is enough!

Creating a Paragraph Style

We’ve talked about it in this section so now let’s work through creating a Paragraph Style that isolates that important information you need to draw attention to.

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 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.

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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.

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.

creating a bordered Paragraph Style visualized.

![Figure 68 New Style dialog showing Important style attributes.](image)
The preceding image shows a paragraph style similar to the one used in this book. The next few images show how to create a different look and feel for the same type of paragraph style. The difference is that I’ve ignored good colour usage.

Choose a border.

![Figure 69 Choose a border and add thickness or colour.](image)

Make any changes to the padding between the text and the border.

![Figure 70 Change padding between text and border.](image)
The changes can be seen in the New Style dialog so that if you don’t like what you see, you can make the edits before returning to your document.

![Image of the New Style dialog]

Figure 71 New Style before changes are confirmed.

Change the left or right indent using the Paragraph dialog.

![Image of the Paragraph dialog]

Figure 72 Left and/or right indent a paragraph.
Paragraph Frames

Paragraph frames are similar to text boxes. They are not accessible document elements and in most cases cannot be read by screen readers. Paragraph frames are used in much the same way that single cell tables or text boxes are used in that they isolate items the document author wants the reader to pay attention to. In the notes for this book, I’ve used paragraph formatting to achieve the same effect; however, some document authors use single cell tables, text boxes or paragraph frames to do the same thing.

Paragraph frames can be found while in the New or Modify Styles dialog. If you want to take a look at them, choose Format > Frames in the new or Modify Styles dialog which opens another dialog to attach a frame to the Style you are working on.

In Word 2010 if the paragraph frame is the only element on the page or the last element on the page, adaptive technology such as a screen reader will enter it and read it.

BUT, if as in the following example the paragraph frame is applied to the second of three paragraphs on a page, it floats over the third paragraph which has now moved up to fill the void left by the reformatted paragraph frame and adaptive technology cannot see it to access and read its contents.
In the preceding image the third paragraph on the page was formatted with purple shading so that it would be visible and the effect of applying a paragraph frame would be evident.

Even if you were able to adjust the spacing and make the page look like it should, because the paragraph frame is surrounded by other content it is invisible to adaptive technology.

Avoid the use of paragraph frames in documents and instead, create a Paragraph Style using borders to isolate important text for the reader.

**Headings, Bookmarks and Tags in PDF Documents**

We've talked about how important it is to use headings in documents but what does this look like in a tagged PDF document. Since most of the Word documents we work with will eventually be converted to tagged PDF it is important to understand the implications of using and not using proper heading Styles in documents.

I wrote a How To book on adding images to training material using the basic tools on your Windows computer. I'm going to be using it as an example of tagged PDF throughout this book. The How To book is a free download from the Karlen Communications web site.

---

7 Adding Images to Training Material by Karen McCall: [http://www.karlencommunications.com/adobe/AddImagesToTrainingMaterialCourse.pdf](http://www.karlencommunications.com/adobe/AddImagesToTrainingMaterialCourse.pdf)
Headings that are properly implemented in a Word or other document formats convert to Heading Tags in a tagged PDF document.

Using Adobe Acrobat Professional software, I opened the document and turned on the Highlight Content in the Tags Tree.

A screen reader or screen magnification software capable of giving the person a list of headings in the document will include this heading in the list.

By pressing the Enter key on the heading, the person can quickly navigate to that content and begin reading. Without this type of navigational structure the person would have to read the entire document each time they needed or wanted to read only specific information. By reviewing the list of headings, they can also review the contents in the document. Being able to get a list of headings anywhere in the document also means not having to return to the Table of Contents to find information. This does not mean you don’t have to include a Table of Contents. It is one more tool that we have to find information quickly in documents.
A person using adaptive technology capable of rendering a list of headings or links in a Word document will also be able to use these tools to quickly find content in a Word document.

Headings will also be converted to Bookmarks. This lets people who are not using adaptive technology quickly find what they need or want to read. For people with learning, cognitive or visual disabilities who are not using audio output such as screen reading or TTS/Text-to-Speech tools, this is also a tool that means they don't have to keep returning to the Table of Contents to find content.

![Bookmarks in a PDF document.](image)

In this PDF document, I've further enhanced the usability of these bookmarks by making all level 1 headings blue. Readers can quickly identify main topics, sections and chapters using this strategy. Just remember not to go overboard with colour or you may create an accessibility issue.
What do I mean by “content tools?” There are at least two useful tools in Word 2010 that will help you with elements of content. One will give you the grade level of the text in the document and one will let you create blocks of content that you use in several documents.

**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.

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.

The Readability Statistics dialog appears after the spell check is complete. For the document used in the sample the grade level was 2.8. 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.

**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 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.

Again a caution that some components of the built-in Building Blocks may not be accessible.
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.

![Figure 80 Building Block dialog.](image)

The following image shows a Bibliography Building Block inserted into the Text Group Samples document.

![Figure 81 Bibliography Building Block inserted into a document.](image)

You can use Building Blocks from their Ribbon location. For example, a cover page can be inserted into the document through the Page Layout Ribbon.
Create a Building Block
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.

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.

![Figure 82 Create new Building Block dialog.](image)

New Building Block Category
If you want to create a new category of Building Blocks, press Alt + C while in the Create New Building Block dialog. This will open another dialog where you can type in the name of the new category. For example, you might want a category specific to your business or one for accessible Building Blocks.

![Figure 83 Create new Category dialog from New Building Block dialog.](image)

You can also choose which document template the new Building Block is available in.
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, Table of Authorities, 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.

**Generating 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.

When you generate a TOC based on properly created Custom Styles, it will look like this:

```
Contents

Author’s Note .......................................................................................................................... 2
Dedication ............................................................................................................................ 2
Introduction ........................................................................................................................ 4
What is a Logical Document Structure? ............................................................................. 5
Why do I Need to Have a Logical Document Structure? ..................................................... 5
Before We Begin .................................................................................................................. 7
The Applicay ................................................................. .................................................................... 7
Focus and Select on ............................................................................................................. 7
Working with Templates ...................................................................................................... 8
Creating a Template ........................................................................................................... 8
Themes ................................................................................................................................ 8
Custom Styles .................................................................................................................... 8
Working with Styles ........................................................................................................... 8
Document Templates .......................................................................................................... 13
Index and Table of Contents ............................................................................................ 15
```

Figure 84 Table of Contents for this book.

You can choose some options for a Table of Contents. Generally, for readability, you want the dotted lines from the text to the page number. Putting page numbers right after the text can be visually confusing for people with learning, cognitive or visual disabilities. It is equally confusing when page numbers are on the other side of the page with no visual connection to their topic. Our fingers tend to wander in a less than straight line across the page trying to find the right page number for the topic we are looking for.

When a TOC or any text content is in all capital letters, it can be difficult to read. Uppercase fonts are the most difficult to read because it removes our ability to use letter shape for word prediction. This affects everyone’s ability to navigate a document, not just the ability of people with disabilities.
Italics are visually difficult to read and distracting. Italics, by their very nature, are thinner slanted font formats that may not be readable depending on the device used to view the document.

Since you are working with a digital document, it is also important that your Table of Contents has links that will let readers move quickly to the topic they want. If you are repurposing your document to tagged PDF this navigational tool will be carried through to that format.

If you are converting a Word document to Braille, the Table of Contents will let the reader know what the print page navigational structure is. Since Braille takes up more room than print, Braille is formatted through a translation software, for Braille and print pages to appear if the Braille copy. If someone is supposed to go to page 6 and find information, they can use the TOC to know they are in the right area, and use the print page number to move directly to that information.

PDF documents have the same type of page numbering structure, particularly if the document is being read in an older version of Adobe Reader and has preface pages such as "iii" or "iv." The PDF reader displays page numbers starting at page 1 no matter what the document page number is. Therefore, on a document with ten prefix pages, if you use the Go To tool in your reader to get to information on page 6, you will actually be on page "vi" not page 6 of the document. A Table of Contents will help people move closer to the information they want and need in the document.

It is easy to see how all of the basic structural elements of a document are related to similar functionality in other document formats.
Modifying What Appears in a Table of Contents

Let's take a look at a document that uses titles and Custom Styles. In the following illustration a document uses the Title Style as well as a Custom Heading Style.

![Document with Title Styles and Custom Heading Styles](image)

Figure 85 Document with Title Styles and Custom Heading Styles.

A Custom Style based on the Title Style was used for the cover page. This lets you make use of the Title Style for multiple purposes. The "Table of Contents" is the Subtitle Style modified to exclude italics. We are working with the Normal DOCX document for this example.

On page 2 the "Introduction" is the Title Style. The text "Styles" is a Heading 1, the text "Custom Styles" is a Heading 2 and the "Quick Tip for Custom Styles" is a heading called “Heading 2A.” Heading 2A is based on Heading 2. I purposely created it in wonky colours so it would stand out. The colours are orange and purple! Please don't consider this colour combination to have good contrast! It does, however make learning a bit more fun.

What we are about to do we could do in the Styles Pane but it is much faster to use the Table of Contents dialog and it is easier to keep track of the hierarchy of the content in the TOC.

We need to tell Word that the Title Style should be at the level 1 position, Heading 1 should be at the level 2 position, Headings 2 and 2A should be at the level 3 position and Heading 3 should be at the level 4 position.

Don't worry; there are lots of images for this one!

To customize the Table of Contents for a document:

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.

Figure 86 Table of Contents dialog showing Heading 2A in place.

The title text "Introduction" will not appear in this Table of Contents. We need to add it and adjust the levels of the existing TOC entries.

Figure 87 Table of Contents without part of the document hierarchy.

5. In the Table of Contents dialog move to and activate the Option button by pressing Alt + 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 1 = 2.
   b. Heading 2 = 3. [If you have a Heading 2 and 2A both should be at the level 3 position]
   c. Heading 3 = 4.

8. We do not have anything less than a Heading 3 in the document.

9. Scroll down to the end of the list of Styles. If you are using a screen reader you can press the Tab key until you find the edit box for "Title."
10. Edit the level of the Title Style to be number 1.
11. Tab to and activate the OK button which will close this dialog.
12. The Title Style is now included in the TOC and the hierarchy of content is clear.

When the Table of Contents is generated the Title Style is included but the text for the cover title and subtitle aren’t. You typically would not want information on the cover page or pages to be included in the Table of Contents for the document. We’ve modified the Table of Contents using this method because the Title Style was close to what we wanted to use for both the cover title and chapter titles. We could have used the Heading 1 Style. In this instance the technique is whatever you can keep track of. You can modify the Heading 1 to be a Chapter Heading which means you don’t have to go through this process. However, if staff understand document structure in terms of Chapter Headings being something separate from "headings" it is a good idea to build this modification into the template so that there is no confusion when generating a Table of Contents.

Speaking of confusion, you can use Bookmarks to flag content to create a Table of Contents. One huge caveat to this is not to over Bookmark a document. Some of the documents I’ve worked on have been revised by editors who don’t know how to maintain flagged Bookmarks for a Table of Contents or who don’t know what content should or shouldn’t be flagged. In these situations it is difficult without the original document author’s intervention to create a functional Table of Contents. Using the Heading Styles is a more effective method of generating a Table of Contents. One of the reasons is that anything that is formatted as a heading goes into the Table of Contents. Odd pieces of text that get mixed into a Bookmark field don’t end up in the document TOC.

**Updating a Table of Contents**

Now that we have a Table of Contents in our document, what happens if we add images or other content to the document? What if we remove one section and add another?
To update a Table of Contents:

1. Place the cursor in the Table of Contents.
2. Press F9 or press the AppKey and choose "Update Field."
3. You may be asked if you want to update the page numbers or the entire Table of Contents.
4. I always choose to update the entire Table of Contents since this covers any changes to the document including heading text.

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.

Table of Figures

You would create a Table of Figures in a similar way to creating a Table of Contents. Instead of using Heading Styles as the flags for a Table of Figures, captions are used as the basis for content in a Table of Figures. This book is a good example of how this works. All of the images except decorative ones at the beginning of the book have captions. This means that the decorative images which do have Alt Text can be identified using adaptive technology, but will not appear in a referenced Table of Figures.

![Figure 91 Captions Group on the Reference Ribbon.](image)

To add a Table of Figures to your document:

1. Place your cursor where you want the Table of Figures to appear in the document.
   a. Make sure that this section of your document has a Heading/Title.
2. Press Alt + S, G.
3. This opens the Table of Figures dialog.
4. Generally you can accept the default settings. Make sure that the Table of Figures is a linked Table of Figures.
5. Tab to and activate the OK button.
The following illustration is of a sample Table of Figures for this document. It shows the default settings for a Table of Figures.

![Table of Figures dialog](image)

Figure 92 Table of Figures dialog.

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**Table of Figures**

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Figure 1 Appley from Windows On-screen keyboard .......................................................... 7
Figure 2 Desktop icon showing focus and selection ............................................................. 8
Figure 3 Template option from the Office Button............................................................... 11
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Figure 7 Next step in creating a template in Word............................................................... 13
Figure 8 Second step in creating a template in Word......................................................... 14
Figure 9 Theme set in Microsoft Word.................................................................................. 15
Figure 10 Theme colours in Word....................................................................................... 16

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Figure 93 Sample Table of Figures from this document.

One thing to keep in mind when adding captions to images is the length of the text. In a Table of Figures the text will keep wrapping until the caption text is fully displayed. After you’ve created a
Table of Figures with verbose text and view the result, you'll get better at supporting the images in the document content and writing shorter captions.

If the Table of Figures text is just a titch too long, you can modify the font size for the Table of Figures [or Table of Contents] so that the text will fit on one line. This should only be done if the heading or caption text is on one line and is close to the page number. For multiple lines of headings or caption text, edit the text and update the table.

**Modifying Formatting for Referenced Tables**

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.”
Step 1 visualized.

Figure 94 Table of Contents dialog.

Step 2 visualized.

Figure 95 Modify TOC Style dialog.

100
Step 4 visualized.

![Modify Style dialog for TOC1.](image)

**Figure 96 Modify Style dialog for TOC1.**

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

1. With the Table of Figures dialog open, activate the Modify button.
2. This opens a dialog with the Table of Figures format selected.
3. 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 Figures by moving to and activating the OK button in the Table of Figures dialog.

Step 1 visualized.
Step 2 visualized.
Creating an Index

There might be times when you are working on a document that requires an Index. Creating an Index requires a bit more planning and concentration when writing a document. Words and phrases will be marked for an Index and then the Index will be generated. An Index doesn’t use headings or other Styles, but rather uses author identified information.

Creating an Index is a multi-step process. Before you build the Index, you need to identify the pieces of text that will be part of the Index.

To mark an entry for an Index:

1. Open a document.
2. Find text that you want to appear in the Index and select it.
   a. Keep in mind that this is an Index so long phrases should not be selected.
3. Press Alt + S, N which opens the Mark Index Entry dialog in the References Index Group.
4. The selected text is already entered in the first edit field.
5. Press Tab to move to the Bold check box and check it by pressing Spacebar. This means that the page numbers will appear in bold. Try to avoid using the Italic format because of readability problems.
6. Tab to and activate either the Mark button or the Mark All button to have Word go through the document and mark all instances of the word.

7. When you mark an entry, the paragraph marks are revealed as are the field codes for the marked entry. Tab to Close and press Enter.

8. Once you have text marked and identified, move to the page you want the Index to be on and place your cursor at the point at which you want the Index to start.

9. Press Alt + S, X to open the Index dialog.

10. Choose the type of Index to create. In this example I’ve used the classic template.

11. The Index is built at the cursor point.

12. In the images that follow that illustrate these steps the Words Alt Text were given a sub-category. The Index will be in two columns, there will be dot leaders between the text and the page numbers, and the page numbers will be in bold.

   a. Two columns works well with an Index for readability and conversion to other formats such as tagged PDF. With tagged PDF if you have four or more columns, the conversion tool can get confused and mistag multiple columns as one single column.

13. You can update the Index as you edit or revise content.

To show or hide paragraph marks press Ctrl + Shift + 8 on the number row. When you create an Index the paragraph marks may be automatically turned on to let you see the field codes next to the items you’ve selected to be indexed.

You can leave the Mark Entry dialog open while you work. It does float above the document so you might need to keep moving it. Pressing Escape closes it. You can easily show it again once you found an entry to mark by pressing Alt + S, N.
Steps to create an Index visualized.

**Figure 100 Index Group on the References Ribbon.**

Step 4 visualized.

**Figure 101 Text selected and Mark Entry dialog on-screen.**
Step 9 visualized.

"Introduction"

Whether you are working with students with or without images of computer or screen-based activities in the training material and-capabilities with material such as the use of contextual links and features.

Figure 102 Paragraph codes for marked Index entry.

Step 11 visualized.

Figure 103 Index dialog.
As mentioned in the steps on a previous page, a sub-entry was created for Alt Text called "Accessibility." This was done to demonstrate what a sub-entry is. Visually, when the Index is generated, Alt Text now has a sub-entry or sub-topic called "Accessibility." Any other item marked for the Accessibility sub-entry would appear under this topic.

**Updating an Index**

Update the Index by placing your cursor in the Index fields and either pressing F9 or pressing the AppKey and choosing Update Field.

You may get asked if you want to update all or some of the Index. I usually choose all so that everything is up to date.

**Cross-References and Accessibility**

Cross-references can be used in documents with a caveat. While they may work in the source Word document, when cross-references are converted to tagged PDF they often either don’t convert gracefully or don’t convert at all. This behaviour is not limited to Word documents and seems to be an issue with cross-references in general.

If the document has cross-references and is converted to tagged PDF note that there is currently no effective way to repair them. With this in mind make sure that any text identifying items that are cross-referenced are clear enough so that the end-user can locate the cross-reference if the link is broken in a tagged PDF document.

Since cross-references are not converted to Braille or DAISY format, making sure the text for cross-referenced material is clear is a good habit to get into.
Tables of Reference in a Tagged PDF Document

At the end of the section on headings and Styles we looked at how these tools affected and optimized accessibility and navigation in a tagged PDF document. Using the same "Adding Images to Training Material" book, the following image is of a list of links in that document show the table of contents entries.

As with the list of headings, the list of links in a tagged PDF...or even Word document can be asked for at any time. This gives the person reading the document a choice in navigational tools.
At first thought, this might seem an unlikely combination. What do Tables and Text Boxes have in common? Tables are often used to isolate important thoughts rather than using paragraph borders. Text Boxes are also often used to isolate ideas; however, many document authors don’t realize that Text Boxes are inherently inaccessible. Both items are included in this discussion of tables and design layout for document content as they are both used ineffectively.

Some legislation states that data tables must be correctly identified and/or tagged. Tagging might refer to converting content created in a word processor to either HTML or PDF content. If the legislation intends that all Tables used in word processed documents are data tables, a lot of document authors who use the table structure for design layout will face major problems in making their documents compliant. Tables used for design and presentation aren’t data tables.

Being correctly identified or tagged is different than ensuring that all structural elements of a document are identified or have tags. You can have a Table identified or tagged, but you will be unable to apply “correct” identification or tagging to the table structure because of how the table has been used in a document.

**HTML Table Structure**

What do we mean by proper or correct table structure? The best way to see a correct or proper table structure is to look at the code or specifications for a Table in HTML. The same structure is used in tagged PDF, Corel WordPerfect, and Microsoft Word to identify data tables.

A Table has a Header row to let the reader associate data they are reading with the context of its importance. The code used for a Table Header is `<TH>`. The cells containing data are tagged as `<TD>` for Table data, or data cell. The HTML code would look like this:
<table width="83%" border="0" summary="Type a short summary of the table contents">

<caption>Provide a caption for the table</caption>

<tr>
<th id="header1" width="33%">First Header</th>
<th id="header2" width="14%">Second Header</th>
<th id="header3" width="30%">Third Header</th>
<th id="header4" width="23%">Fourth Header</th>
</tr>

<tr>
<td headers="header1" width="33%">table data</td>
<td headers="header2" width="14%">table data</td>
<td headers="header3" width="30%">table data</td>
<td headers="header4" width="23%">table data</td>
</tr>

<tr>
<td headers="header1" width="33%">table data</td>
<td headers="header2" width="14%">table data</td>
<td headers="header3" width="30%">table data</td>
<td headers="header4" width="23%">table data</td>
</tr>

<tr>
<td headers="header1" width="33%">table data</td>
<td headers="header2" width="14%">table data</td>
<td headers="header3" width="30%">table data</td>
<td headers="header4" width="23%">table data</td>
</tr>

<tr>
<td headers="header1" width="33%">table data</td>
<td headers="header2" width="14%">table data</td>
<td headers="header3" width="30%">table data</td>
<td headers="header4" width="23%">table data</td>
</tr>

<tr>
<td headers="header1" width="33%">table data</td>
<td headers="header2" width="14%">table data</td>
<td headers="header3" width="30%">table data</td>
<td headers="header4" width="23%">table data</td>
</tr>

</table>

Using the <caption>...</caption> puts a caption above the table so that people with learning disabilities or people who are blind or visually disabled have an idea of what is coming. The summary attribute is also used to let people using screen readers know why the table is there. These two elements meet W3C guidelines for accessibility of tables.

<th id="header1">...</th> indicates a Table header. This is used by screen readers to let the end user know what the cell information is related to. For example if you were down four rows and over two columns, you could ask the screen reader to read the title of the information so that you can associate the data better.

<tr>...</tr> indicates the Table row, notice we have four of them here

<td headers="header1">...</td> indicates a Table data cell and the header cell its information is related to. This is how screen readers and other adaptive technology help you keep track of where you are in a table.
You can see how a table is structured. If you are working in HTML, begin with the `<table>...</table>.
The next tag is the `<tr>...</tr>` to define the rows across the page. The `<td>...</td>` is for the "columns" or data cells in the table.

Of course, HTML editors such as Adobe Dreamweaver and Microsoft Expressions have tools to let you automatically create tables. You can then look at the underlying code to ensure that the table is correctly tagged.

If you are confused about Tables and how they are structured, you can copy the well-structured code from a source document and fill in your own information switching from NotePad/HTML editor view to the browser view until you get the structure and placement right.

In HTML, a lot of learning is done through copy and paste of code! If you are trying to do something difficult or new, go and see how other people have done it. There’s no sense in re-inventing the wheel. One caution is that your own creativity and individuality need to be present in a web page, just copying source code and filling in the blanks won’t impress your customers who are also out there surfing and seeing what is new in accessible web page design!

**Tagged PDF Table Structure**

If we take the Table in the previous section and convert it to a tagged PDF document, what would the tags or table structure look like?

![Figure 106 Tagged Table in a PDF document.](image)

The tool used to tag the table or convert it to tagged PDF was Adobe Acrobat Professional. Notice that the column and row titles have `<TH>` or Table Header Tags. Highlight Content was turned on to illustrate the content that corresponds to the selected Tag.

Notice that a `<THead>` or Table Header row has been identified. The conversion tool used the “Header row repeat” to create the Table Header information. Also notice that there is a `<TBody>` tag which indicates that the following Table Rows and cells are the body or data of the Table.
What can we do in Word to ensure that we meet legislative criteria for accessibility for repurposed content? How can we make our word processed documents more accessible and usable to our readers? To answer this we need to look at table structure in Word.
Table Structure in Word

Now that we have an idea of what the structure of a correct or proper data table is, let’s look at what a proper or correct table structure consists of in a word processed document. Here we will find similar components for data 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.

A properly structured data table might look like this:

Table 1 Properly structured table in Microsoft Word 2003.

<table>
<thead>
<tr>
<th>Salesperson</th>
<th>First Quarter</th>
<th>Second Quarter</th>
<th>Third Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data cell</td>
<td>Data cell</td>
<td>Data cell</td>
<td>Data cell</td>
</tr>
<tr>
<td>Data cell</td>
<td>Data cell</td>
<td>Data cell</td>
<td>Data cell</td>
</tr>
<tr>
<td>Data cell</td>
<td>Data cell</td>
<td>Data cell</td>
<td>Data cell</td>
</tr>
<tr>
<td>Data cell</td>
<td>Data cell</td>
<td>Data cell</td>
<td>Data cell</td>
</tr>
</tbody>
</table>

In the above table, the Header row has been visually set apart by using bold and centring. The Header row has also been structurally identified by selecting the row, choosing Table Layout and then choosing Header Row Repeat from the Table Layout Ribbon. The keyboard commands are Alt + J, L, J. This means that in the unlikely event that this data table is divided over two pages, the column Headers will display on the second page. In Word 2010 you can select more than one contiguous row to be header rows.

This is not the same as Heading Styles and Heading Styles should not be used in a table.

The steps are in this book in detail after the general discussion about Tables.
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.

The preceding Table has been further structured by selecting the table and choosing Table Properties > Rows, and un-checking “allow rows to break across pages.” This keeps you honest as a document author. If the amount of information in a row breaks across a page, you need to redesign the way the information is displayed. Some people can't follow the text in a row if it breaks across a page. Even if a cell doesn't have a lot of information, not letting the row break across pages helps with the readability and usability of a document.
Tables for Design or Presentation

This topic looks at how we misuse the table structure in our documents. If we know that a proper table structure includes a Header row or column and a caption, how would you add these elements to a table that spans 20 pages, has multiple types of content, multiple Headers, split and merged cells, and deleted cells for visual effect? A Table can have only one Header row and one Caption. Although in Word 2010 it is possible to identify more than one Header row, keep in mind that this information is going to be provided to someone using a screen reader for every cell the Header information applies to.

Simple formats are often the best. Just because we can put information in a table for presentation doesn’t mean that this is the best way to present the information or to read it. Often we find that information plunked into a table is not readable in any logical manner.

Document design is important before you start formatting.

The following Table begins with 6 columns and 125 rows. In the original document, this one Table went on with similar “formatting” for 68 pages.
As we see, the Table quickly loses four of its columns and appears to have three “Headers” before we get to the information in the table. If this Table were to go on for pages and pages, which of these three header rows would you use as the Title or Header row of the table? How can we swap out the first yellow row which is a visual “topic change” with the yellow row at the bottom of the page which also is visually indicating it is a topic change? Adaptive technology is not "psychic" in knowing that the topic change should now be read instead of the originally coloured topic header. Word processors are not designed to identify row titles. They are only designed to identify column headers or column titles.

But wait, things quickly change on page two.
At the top of page 2 of this horrid Table there are no visual headers or topic changes. Remember, it was at the bottom of the first page. The "Table" suddenly decides it IS a data table and deletes some columns and adds yet more header rows.

We've now lost one column, but the table purpose/structure has changed to that of a data table displaying a check list for accessibility. Then, yet another format comes along. We have another Header, but the two columns we are presented with aren’t the same two as in the beginning of the table and “column 1” is now smaller than column 2. I’ve left the grid lines on in this example to demonstrate the illogical structure of the document; however, typically, these would be turned off.
Looking at this one Table that spans many pages, identify the Header rows that will be identified throughout the table for someone using a screen reader. Provide a caption for the table. Remember that the Header rows were way back on page 1 of the table.

Even from a "visual" perspective this "table" is confusing and unreadable.

If you are looking at a table and can’t identify Header rows and provide a caption for the table, you need to look at using a different structure or presentation method. It is not acceptable to divide each change in table usage/structure into individual tables. Tables are intended to display brief pieces of comparative information. If we are not doing this, we should not be using a table.

Let's look at another example of bad Table use. I recently heard someone say that putting information into table format for people who are using screen readers would make that information more readable. Given that people who are using screen readers have to use table
navigation keyboard commands rather than general document navigation keyboard commands, this statement and belief demonstrate a lack of understanding.

Why would you force someone to use specialized keyboard commands to read your document when “plain old every day” keyboard commands let them read and navigate faster and more effectively?

The following example shows how we tend to format agendas for meetings. Once again, ask yourself what the Header row is and what the caption is for this table.

![Figure 113 Table structure used for agenda.](image)

Using Tabs would give you the same effect and be more readable and navigable. However, is this the best design for an agenda?

With Word 2010 you can now select more than one row as the Header row of the table. In the sample Table below this still presents a problem in that there is no scope attribute for the column titles in blue that span more than one column. If this document is sent to Adobe Acrobat as a tagged PDF document, the scope can be added using the Table Inspect tool. However if this document remains a Word document, a slight redesign would be necessary to ensure that the information about the province is rendered to adaptive technology.

**Table 2 Table with two Header rows, split cells and one column with no Header.**

<table>
<thead>
<tr>
<th>Day of the Week</th>
<th>Toronto</th>
<th>Calgary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Winter</td>
<td>Summer</td>
</tr>
<tr>
<td>Sunday</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Monday</td>
<td>3</td>
<td>31</td>
</tr>
<tr>
<td>Tuesday</td>
<td>4</td>
<td>30</td>
</tr>
<tr>
<td>Wednesday</td>
<td>4</td>
<td>24</td>
</tr>
<tr>
<td>Thursday</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>Friday</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td>Saturday</td>
<td>5</td>
<td>25</td>
</tr>
</tbody>
</table>
Which of the first two rows would you designate as the Header row? What would you do with the two blank cells that were merged for visual effect in the upper left hand corner?

Table 3 Average daily temperature in degrees Celsius.

<table>
<thead>
<tr>
<th>Days of the Week</th>
<th>Toronto - Winter</th>
<th>Toronto - Summer</th>
<th>Calgary - Winter</th>
<th>Calgary - Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
<td>5</td>
<td>25</td>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>Monday</td>
<td>3</td>
<td>31</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>Tuesday</td>
<td>4</td>
<td>30</td>
<td>2</td>
<td>27</td>
</tr>
<tr>
<td>Wednesday</td>
<td>4</td>
<td>24</td>
<td>4</td>
<td>23</td>
</tr>
<tr>
<td>Thursday</td>
<td>3</td>
<td>25</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td>Friday</td>
<td>2</td>
<td>23</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>Saturday</td>
<td>5</td>
<td>25</td>
<td>0</td>
<td>25</td>
</tr>
</tbody>
</table>

With the Table above, a person using a screen reader will be able to designate both column and row Titles/Headers and ask the screen reader for the relationship of the information in cell C5. It would tell you that the average temperature on Wednesday in winter in Calgary was four degrees Celsius.

If the only information someone using a screen reader can get is the number four without being able to know what day or what city, or what time of the year it relates to; or even that these are average daily temperatures, how usable “and” accessible was the original table?

Also remember to support the information contained in a table in the surrounding text of the document. Don’t use Tables or images out of context or gratuitously.

The next demonstration of a misuse of Tables is prevalent in both word processing and HTML. It is the use of a one cell table to isolate an important piece of information.

The next image shows a single cell table used to display something the author has identified as important and worthy of note. The single cell has been decorated with a blue border to make it stand out.

The lower part of the image shows the same text but instead of using a table to present this as important, the borders and shading tool in Word was used for the same effect. By using borders and Shading, I also had access to the shadow effect which is not available when using the borders and shading for table cells.
If we were to provide a Header row and caption for the single cell table, the result would be something like this:

Once we can visualize or even listen to this type of table with a screen reader, we can quickly see that using a paragraph with a border is more efficient and effective. In HTML you can achieve the same effect using an external Style sheet [CSS]. With both word processing and HTML, you can create a Custom Style that will also include different fonts, font sizes, margins and indents.

I know what some of you are thinking about the next heading…Text Boxes! Just say no!

Text Boxes- Just Say No!
Some document authors use Text Boxes instead of single cell tables to isolate information or to create an effect for text. Text Boxes are very difficult to navigate if you are using adaptive technology and they may not convert well into other formats.

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 moving along this river looking left, right and in front of you. You can touch the area you are nearest to which means you “have access” to these parts of your surroundings.

Figure 116 Photo 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 as you walk that you have access to.

Figure 117 Photo of clouds taken from plane copyright Karen McCall.
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 118 Photo of clouds taken from plane to illustrate objects and layers.](image)

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.

In the preceding image a Paragraph Style was used to visually isolate important content. Some screen readers have the verbosity setting to allow for the identification of borders and shading. This aside the content is accessible and an end-user who is accessing your content non-visually will be able to read this important content.

Once you understand the formatting you can do using the basic tools in Word, you'll find that these are easy to use…and you can create Custom Styles for formatting you do frequently.

**Creating Tables in Word**

It is important to create proper data tables in Microsoft Word or any other application. This will let you take advantage of the automated tools you or your readers use daily. For example, if someone reading your document requires a Braille version, your Table will format properly in the Duxbury Braille Translation software. When you convert to HTML or tagged PDF, people using TTS [Text-to-Speech] or screen readers can navigate information in a table more easily.
Note: Tables should not be used for formatting; they should be used to display brief pieces of comparative information. If you want to create columns, use Format > Columns in Word, or the structural element for creating columns in the application you’re working in.

There are some elements of creating a table you need to include.

Creating a Table
Create 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 121 Insert Table using Table grid.

Using Insert Table or the grid of possible rows and columns initially creates a uniform table which is more recognizable by automated tools like Duxbury, DAISY book authoring tools, HTML and PDF converters. It will also make navigating tables in Word a lot easier.
Once you’ve created your table Tab to OK and press Enter. Now there are a few settings you need to modify.

**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.

Adaptive technology such as screen readers have their own verbosity settings or user settings that will let the person using the screen reader choose which columns and rows they want read as the Header rows of a Table. The settings in the Table Tools Sub-Ribbons are not the place this is done.

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.

![Table Tools Design Ribbon Table header options.](image)

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.

**Rows Braking Across Pages**

The second thing you need 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 125 Allow rows to break across pages Table option.

This does two things: first it keeps you honest in only having short pieces of information in a table cell; and 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.

**Empty Table Cells**

You should not have a lot of blank cells in your table. If you have a blank cell because there is no information, use a – [dash] which will help automated processes understand that this is a blank cell. If someone is using a screen reader to read a table and empty cells have been used for “spacing” or visual effect, the person using the screen reader hears “blank” for each empty cell. If someone hears too many “blanks” in a row, they will stop reading the table information thinking that either their screen reader is stuck, or that the document author simply put lots of empty cells in a table for visual effect. Either way, the person reading your document is frustrated and loses mental focus and concentration on what they are reading.

Tables used in HTML for design layout often have 10, 15, or more empty cells in a row or column because the document author is misusing the table structure for a visual effect. People using adaptive technology such as screen readers have been conditioned to believe that any series of
blank or empty cells are just another example of improper use of Tables and that it is a waste of time and energy to try to figure out where the content is.

Figure 126 Cell Properties dialog.

**Cell Margins**

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 that content 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.

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.
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!

**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, 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.
Figure 128 Insert Caption item from context menu.

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

Figure 129 Insert Caption dialog with label changed to 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.

**Table Frames or Drawn Tables**

I've recently come across the notion of "Table Frames" which appear to be drawn tables that text is dumped into.

If the tool to draw individual table cells is used to create a visual table, this is not an accessible table. There are some interesting side effects that affect the readability of the content. There are also some side effects that will impact your ability as a document author to rearrange content and control table frame/drawn table content.
This type of tool is used in documents, not only Word documents, to create a table instead of using the tools in an application that would create a uniform standard table.

The following image is of a visual table created using several drawn tables positioned to look like a single table.

![Figure 130 Drawn Table in document.](image)

As with uniform tables, the table can have one of the built-in designs applied to it as shown in the image below.

![Figure 131 Drawn Table with design applied.](image)

So what are the issues that affect accessibility and readability? These look fine to me.

The first issue is that when an end-user enters this type of "table" they are not told they are in a table. If they have the verbosity set to announce borders and shading, they are told they are in bordered text. It isn't until they move to the second "cell" in the "table" which is empty, that they
are told they are in a table structure. They are not, however told how many columns or rows the "table" has. They are told it is a non-uniform table.

As the end-user moves through the "table" cell by cell, they are not provided any information about where they are. The screen reader indicates the key pressed which is either Tab or Shift + Tab. If the end-user arrows through the "table" they hear space on the empty cells rather than the cell coordinates. At times we hear things like "table 4, or table 3, column 3, row 4." Remember that each "cell" of this table is an individual table that has been "joined" for a visual effect.

When I created this table, as I added subsequent cells they "joined in a non-uniform table structure. Pressing Enter after the last table I drew created a duplicate row which then formed the "table."

Even if the first row is selected in either sample shown previously in this topic and identified as the header row to repeat, the information is not available to someone using a screen reader.

Another interesting element to drawing tables is that if there is another drawn table near the one you are working on, they seem to recognize each other and connect.

<table>
<thead>
<tr>
<th>Salesperson</th>
<th>January</th>
<th>June</th>
</tr>
</thead>
</table>

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 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...

Figure 132 Table frame with table headers from previously drawn Table in document.

For example I had created what can be referred to as a "Table Frame" borrowing from concepts I’ve found on the Internet in help documentation, and my drawn table cemented itself to the Table Frame and couldn’t be separated.
Not only that, when I had the header row repeat on the first table, it did so on the second table...the one containing the text. I used a table break to separate the two tables.

This brings us to the other disadvantage of using a table frame or table to position content. If a table frame or drawn table is used as a container for text, as it is resized it will spill over to the next page. It does not behave as columns would. You will have to remove some content from the table and try to find a way to display it on the same page. I tried to create a table next to this one on the page without success. This is not a challenge! It is a recommendation not to use drawn tables or table frames to position content!

Figure 133 Drawn Table resized to look like a column with content spilling onto next page.

Parallel columns have their own unique issues when it comes to accessibility. The difference is that there is a technique you can use to modify the reading order and retain the look and feel you want.
Document authors can also alter the reading order of information once it’s tagged. For example, if you have parallel columns with the document text on the right and a quote from that text highlighted on the left, it all gets tagged in order which may put the quote in the middle of the text. It changes the reading order of the document for those using adaptive technology. Whereas our eyes will pick up the quote first and then move to the text, someone using Read-Out-Loud [comes with Adobe Reader 6.x or later] or a screen reader will have the text and quote jumbled together. As a document author, you can find the paragraph or quote and move it in the logical document structure so it makes sense to the reader. The visual appearance of your document isn’t altered, but people accessing the content in a non-visual way will be able to better understand what they are reading.

Consider this example:

“You might have a very insightful quote here. The quote may or may not be included in the text on the right.”

In the sample above, because we used the column tool in Microsoft Word, the columns were tagged properly when the document was converted to PDF. This is not likely to be the case if we draw the
parallel columns, use objects or other non-standard methods of visually displaying this same information.

The other advantage to using parallel columns in Word is that a screen reader or TTS technology will read down the first column and then down the second column...in the logical reading order. If someone changes the document view to Draft, the column content will flow from one page to the next in a single column, once again reflecting the logical reading order.

The Borders and Shading tool can be used to further isolate a quote when using this format. This is the technique used in the preceding example.

Parallel columns do not have an inherent “structure” 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. 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.

You can also create newspaper columns from selected text and have each column equal so that information doesn’t stray and look out of place.

Using the dividing line, which is a check box in the Columns dialog, people reading information in columns can better separate information. This is especially useful if you use three or more columns and text appears to visually blur into one line.

I can also use the Borders and Shading tool to further isolate a quote when using this format. This is the technique used in the example above.

You can also create newspaper columns from selected text and have each column equal so that information doesn’t stray and look out of place.

Using the dividing line, which is a check box in the Columns dialog box, people reading information in columns can better separate information. This is especially useful if you use three or more columns and text appears to visually blur into one line.
The preceding columns have wide gutters, or spaces between them. Again, I've used the dividing line to visually separate information. The gutters are the standard distance assigned by Word between two columns on a page. The size will be adjusted smaller the more columns you have.

**Text Alignment and Justification**

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 thought or the article.

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.

**Creating 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.

Figure 134 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.


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 to move to Presets 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.

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.
Graphics, Images and Charts

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.

If you are converting the document to tagged PDF, one of the “wonky” things about Acrobat 9 and the Microsoft Save As PDF or inaccessible XPS add-in is that the <Figure> Tags or all of the images in the document are placed at the top of the Tags Tree. This means that you will either need to manually drag them and drop them into their logical place in the Tags Tree or relegate them to being Artifacts in the document. If you have captions, making the images Artifacts is a moot point since everyone will have access to the captions. This is the fastest, most effective repair for this type of situation. Hopefully this bug will be repaired in the next version of Acrobat and the Save As PDF or inaccessible XPS add-in. This oddity does happen in both tools.

We create information for people to read and the more accessible, readable, and usable information is; the more people will gain from what we create.

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.

If we are creating content for e-learning opportunities, we need to look at the context of the images used and the Alt Text or support information we provide. It is always best that the document author provide the Alt Text or a long description or descriptive text file for an image.

For example, if I as the instructional designer, independent of the document author, saw this image in this document, I would set the Alt Text as "Photo of a dinosaur skeleton." That is, after all, what it is.
But would I really want to leave the interpretation of this image to someone who may not understand my intent in using it? It does look out of place within this document.

As the document author, what I would want you to take away from this image was that it is a metaphor for universal instructional design and accessible and usable digital environments and information.
This is an image of a dinosaur skeleton in the foyer of the Geology Department building at the University of Saskatoon in Saskatchewan Canada. It has all the elements of the struggle for understanding the role of accessibility and usability in digital environments and information.

The skeleton of this prehistoric creature represents the way we've thought of classroom learning for the past hundreds of years. The fact that the creature has died, yet this environment doesn't seem to know it, only adds to the richness of the metaphor.

If you consider the fact that these remains of the past are further encased in a building that provides some light and "creature comforts" we can pose the hypothesis that the traditional way of teaching and our expectations of learning are encased in our own architectural framework. Yet, through the remains of this long dead creature, through every inch of its skeleton, we see new growth, new ideas, and new realizations of what learning can be for instructors and learners if we take the technology available to us and use it to our advantage rather than trying to make it fit this skeleton.

The fact that I set the Alt Text as "Photo of a dinosaur skeleton as a metaphor for the progress toward accessible information" gave the reader a direction and path to think about this image related to the topic at hand--the accessibility and usability of digital environments and information.

How different would your mind's "recognition" of this image be if the Alt Text simply said "Photo of a dinosaur skeleton"? You would wonder why it was plunked in the document. I also supported the image in subsequent text by drawing your thoughts to how we might see this as a metaphor. Even if you had read the subsequent text, would you have chosen the Alt Text I provided for the second image? What would you have said about the image?

**Context is Key**

Clearly, it is essential that document authors define and describe the images used in content for the sake of context and the support of surrounding information. This is also the reason that Alt Text needs to be concise and meaningful to the reader.

In a non-web based version of this document, you would add the caption as I've done when transferring this image from HTML to word processor format.

**Adding Alt Text**

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.

Your image now has Alt Text that will be associated with this image when you convert the document to a PDF document using the conversion tool on the Menu bar. The Alt Text will not be captured if you use Print > Adobe PDF to create the PDF document.

![Figure 138 Alt Text category in Format Picture dialog.](image)

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.
Captions for Images

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.

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.

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.

This is a good place to discuss a related topic, the “cost of accessibility.”

It has long been my view that building accessibility and usability into the documents we produce “costs the same” as producing documents with good design and structure.

When we first got our word processors, we were thrilled the first time we saved a file and it actually appeared in the location we intended it to go to. When we had to spell check documents, we learned how to do this. It is the same for adding page numbers, footers, headers, Styles, lists and other parts of documents we use on a daily basis.

Yet, we don’t seem to view the accessibility of digital documents in the same way. We find reasons not to learn about how to create better documents in these formats.
Do we look at word processed documents we produce and say that doing a spell check will cost and take too much time so we won’t do this?

The other argument I hear is that creating accessible and usable content will detract from the author’s ability to be creative. Again, can I choose not to spell check a document based on the premise that it interferes with my “creative license?”

Learning to create accessible digital content is simply evolving with the technology. The process of creating accessible and usable content is also evolving as we understand how people are accessing digital information and the need for device independent information. Learning how to create information that is more accessible and usable for everyone should be part of our global learning and production plans in creating documents.

We are at the point in our ability to create accessible and usable information where we should no longer be trying to justify why we should create accessible content; but rather we need to justify why we are not creating accessible and usable digital environments and information.

How does this informative ramble relate to the issue of documents structure?

I knew about captions years ago but somehow put it on a shelf for later investigation. What I’ve realized with Office 2003 is that Alt Text helps identify images if you are reading the document electronically. How does the reader relate the image to the surrounding content if they print any type of document? The Alt Text which is used digitally is not available if you move a mouse over a printed image. Captions provide the print equivalent of Alt Text and we need to begin including them for images, Tables and equations as well as providing Alt Text where we can for these types of content, especially if we intend on repurposing information.

**Captions for Equations**

Until we have the ability to have a MathML/XML type tag for mathematical and scientific equations, we will need to provide Alt Text that describes the formula in long hand. Most equation editors provide an image of the equation within a document. This information can’t be extracted by adaptive technology. Depending on the device the equation is being read on, it may not be readable or understandable.

Providing a caption along with Alt Text for equations, which will likely be <Shape> tags in the Tags Tree of a PDF document, will help readers understand equations.

To add a caption to an equation in Microsoft Word 2010, select the equation object, and press the AppKey. The Caption dialog appears. Press the Tab key once to move to the Label list box and choose Equation. Press Shift + Tab to move back up to the Caption edit box and type the caption for the equation.
Figure 140 Caption dialog showing Equation label.

If you have a table, select the table and press the AppKey. Choose Insert Caption. Change the label to “Table” and add the caption.

Figure 141 Caption dialog showing the Table label.
**Grouped Objects and Accessibility**

One of the commonly used elements in documents are grouped objects. These are shapes, arrows, SmartArt and other visual elements that are composed of several smaller objects. Some of the elements or objects are accessible while some are not.

Let's look at the accessibility issues and the tools you can use in Microsoft Office 2010 [specifically Word], the Windows operating system and in Microsoft OneNote to create a single image out of grouped objects.

**Grouped Objects**

What is a grouped object? Any piece of content that is made up of other components such as SmartArt, shapes, arrows, organization charts and so forth.

**SmartArt**

SmartArt replaces the old Org Chart that was available in PowerPoint. Not many people knew that this was a stand-alone application that could be used on its own to create accessible Org Charts.

Who knew?!

SmartArt is a tool that lets you create charts in Word, PowerPoint, Excel and Outlook.

![Figure 142 SmartArt dialog.](image)

To explore SmartArt or to insert one of the SmartArt objects, press Alt + N, M.

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.

![SmartArt with Text Pane](image)

**Figure 143 SmartArt with Text Pane.**

In the SmartArt used for this example there are three main areas of the object: three picture placeholders and three text placeholders. While someone using a screen reader can access the text placeholders, they cannot access the picture placeholders.

This means that non-essential images should be used in picture placeholders for SmartArt Objects.

It is true that each of the images in the example SmartArt object can have Alt Text and this should be added so that if adaptive technology can eventually support access to it, it is already there.

Alt Text can be added to the global SmartArt Object as well and this should definitely be done. It helps someone using a screen reader locate the specific SmartArt object they need to examine.

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 how to do this in this book.
Creating Your Own Images

There are times when you will be creating tutorial content and will want to show the person reading your document what the dialog or screen looks like. This chapter takes you through a couple of tools and techniques for creating images from your computer screen. It is included in this book because these images will also need Alt Text and Captions.

Creating Pictures with Snipping Tool and Screen Clippings
There are two “built-in” tools that can be used to create a single image from a group of objects or images. One is found in the Windows Vista or Windows 7 operating system (not in the Home Basic version), and the other is found in Microsoft OneNote (both 2003, 2007 and 2010). OneNote 2003 is a standalone program and OneNote 2007 or 2010 is included with the Microsoft Home/Student version of Microsoft Office.

Both of these tools are mouse dependent activities.

Windows Vista and Windows 7 Snipping Tool
This is a great tool for taking parts or “snips” of what is on the screen.

![Figure 144 Snipping Tool Window.](image)

You might want to put this item in the Start Menu list of programs or on the Desktop as an icon so it is easy to find.

To launch the Windows Snipping Tool:

1. Press Windows key to open the start Menu.
2. In the Start Menu Search edit box, type Snipping Tool.
3. The Snipping Tool should be the first item found.
4. Press Enter on it to launch it.
5. When the Snipping Tool launches, the desktop screen “dims” and you are ready to use the mouse to outline the part of the screen you want to use as an image.
Figure 145 Computer screen with Snipping Tool active.

You can press the Escape key to exit Snipping Tool mode but the snipping Tool will still be on your screen. Press Alt + F4 to close it in the same way you would any other application. Once you have the application you want to snip a screen image from continue with the steps.

1. Hold down the left mouse button and drag the mouse diagonally across the screen over the part of the screen you want to use as an image.
2. Once you select the area of the screen you want to create the image from, let go of the mouse button. The Snipping Tool window opens and the “snip” is displayed.

The Snipping Tool uses the Windows Clipboard to display and copy content to.

Figure 146 Snipping Tool Window with snip of Word Ribbon.
While the image is in the Snipping Tool window, you can add information to it. Unlike laying arrows or circles on images as other objects or layers, when the modified image is copied to an application such as Adobe Fireworks, Adobe PhotoShop or Paint, the additional information is there too. This is also true if you copy the image from the Snipping Tool into a Word document.

![Figure 147 Screen snipping with Office Button circled.](image)

The preceding image shows the Word Ribbons with the Office button circled in blue. This came from the Snipping Tool. With practice, these types of additions will be less awkward looking. You can also do this on a tablet computer with a pen instead of on a desktop computer with a mouse...or add a tablet style pen to your desktop computer for working with images.

There are options for the Snipping Tool. Almost all of them are selected by default. The exception is to hide the text instructions for the Snipping Tool.

![Figure 148 Snipping Tool options.](image)

The colour of the outline of the “snip” can also be changed from red to one of the other colours in the palette.

You can choose to have the Snipping Tool as an icon in the Quick Launch Toolbar.

The snipping can be saved directly from the Snipping Tool by choosing File, Save As.
By using the Snipping Tool to create a single image from grouped objects, the individual pieces of the grouped object will not be identified as images with no Alt Text when the document is converted to tagged PDF or when someone using a screen reader comes across them in your document and you will not have to add Alt Text to every piece of the set of grouped objects. Nor will you have to arrange the grouped objects into a logical Tab Order. You will just have to add one piece of Alt Text to the single image.

**OneNote Screen Clippings**

Microsoft OneNote is a free form writing tool that has many interesting applications for both academic and business environments. One of the most useful tools within OneNote is the ability to create “screen clippings” from any content on the screen. In this example, four pictures were added to a PowerPoint slide and the OneNote screen Clipping tool was used to create one single image.

![Figure 149 Single image taken from PowerPoint slide using OneNote Screen Clippings.](image)

The first thing to do once you launch Microsoft OneNote is to go to Tools, Options and the “Other” category. Make sure that the option to place the OneNote icon in the taskbar is checked. This will let you create images of the screen as you need them without having to launch OneNote.
To use the OneNote screen clipping tool:

1. Press Windows key + S or click the OneNote icon in the System Tray.
2. The screen “dims.”
3. Use the mouse to select an area of the screen by holding down the left mouse button and dragging diagonally until you have the content you want selected.
4. When the mouse button is released, OneNote opens and the screen clipping is on its own “Side Note.”
5. Select the screen clipping (not the associated text).
6. Right mouse click on the plus sign to the left of the screen clipping and choose Cut.
7. Switch to your image editing software such as Paint and create a new image.
8. Press Ctrl + V to paste the screen clipping into your imaging software.
9. Save the image in the file format you want.
You can either keep this side note or delete it from the Side Notes area. The fastest way to delete the page is to have it selected then press Ctrl + Shift + A and then the Delete key.

Your image is on the Windows Clipboard and can be copied directly into Word or Paint or another imaging software program such as Adobe Fireworks or Adobe PhotoShop. The Screen Clipping Tool is just the mechanism for putting it there.

Keep in mind that copying images directly into documents increases the file size substantially. It also means that you don’t have an archive of images to work with. Trying to remember what document you copied an image into gets tiring. 😊

**Using Paint to save Images**

Whether you are using Print Screen, the Snipping Tool or the Screen Clippings Tool, you can paste the image into Paint and save it as a PNG file and add circles or arrows or other symbols to it.

Paint comes with the Windows operating system.

To launch Paint:

1. Press the Windows key.
2. In the Search edit box type Paint.
3. It should be the first item found.
4. Press Enter to open the Paint Application.
5. To open Paint on a Windows XP or earlier computer:
6. Press the Windows key.
7. In the Start Menu choose All Programs and press Enter.
8. Choose Accessories and press Enter.

![Figure 152 Paint application Window.](image)

The image shows Paint in the Windows 7 environment. Your version might look slightly different but the tools will be the same.

The white area is the canvas and the canvas can extend to the entire document area of the application Window. You will need to keep an eye on the size of the canvas relative to the size of your image. We'll work through this to demonstrate.

If we look at the image of the Word application Window that was used earlier in this document, we can walk through the process of creating a PNG image. You can create a JPG or GIF but PNG is now pretty much the standard for creating images that can be used in both documents and on web pages.

The first thing I am going to do is press Print Screen to snag the Word application Window. I have a blank document on the screen so that background text/noise doesn't interfere with what I am trying to demonstrate.

I then switch to Paint and paste the image into the Paint "document" by pressing Ctrl + V.
The image appears quite large so I chose View and Zoom Out so that I could see the entire image.

I need to be able to see the entire image so that if I need to remove any surrounding white pieces of the canvas, I can use the mouse to do so. If you have white pieces of the canvas showing, it will be saved as part of the image. This creates unbalanced images or images that you can't size effectively in a document.
Choose File, Save As and expand the Save As menu to show the ability to save the picture as a PNG file.

I usually create a file folder in My Pictures or Pictures for the project I am working on. For example in this case I created a Create Images folder to put the images in. For this document and in the future if I need images related to the creation of images, they are all there ready to use.

Now I need to create and image of the Paragraph dialog. In this case it is the Lines and Page breaks part of the dialog that I am teaching. This is not the tab that opens by default so if you are following along, don't panic.

I used Alt + Print Screen to get this image which doesn’t include the image of my document underneath. Then I move back to Paint and paste the image onto a blank canvas.
In this case the image is smaller than the canvas. If I were to save this image now and had to resize it in a document, the Paragraph dialog would not be visible in a way that it could be seen.

So I need to remove some of the canvas.

To remove some of the canvas from an image in Paint:
1. Click on one of the edges of the canvas usually in the centre of a side or the corners.
2. You will see small handles that change to a double arrow when you hover the mouse over them.
3. Click on one of the handles while you have the double arrow and drag it toward the image.
4. Stop when you are at the edge of the image.

5. You can now go to View and Zoom in to see the image clearly.
6. You may have to zoom out again to adjust the bottom edge of the canvas.
You can now save the image and when it is inserted into a document, you will only have the Paragraph dialog [in this case] as the image.

So far we've shown where the Paragraph dialog appears on the screen and what it looks like close up. Now we can create images that focus on specific parts of the dialog.
Note: When we resized the canvas, it will stay at that size until you resize it again.

![Figure 161 Resized canvas in new Paint document.](image)

To create the new image of a piece of the Paragraph dialog you can use two methods:

1. Use the Snipping Tool or the Screen Clippings Tool when you aren’t going to have an image of the larger dialog or application Window.
2. Use the ability in Paint to cut a piece of the image out and make a new image of it if you don’t have access to the Snipping Tool or the Screen Clipping Tool.
3. To create an image from the Snipping Tool or the Screen Clipping Tool:
4. Snag the piece of the screen you want. In this example it is the first set of options in the Paragraph Line and Page Breaks dialog.
5. Switch to Paint and paste the image.
6. Resize the canvas as necessary.
7. Save the image as a PNG file.

You can now insert the image into a document.
To create an image of a piece of an existing image in Paint:

1. Open the image you want to take the piece from. In this case it is the Paragraph dialog image. I’ve also zoomed in to make it larger.

2. From the Home Ribbon choose Select and then Rectangular Selection.
3. Use the mouse to drag diagonally across the image to choose what you need. In this case I'm going to select different options from the previous example.

4. Press Ctrl + X to cut the piece of the image out of the larger image.
5. Do not save the changes to the image when you close it.
6. Close the large image and create a new blank image document.
7. Press Ctrl + V to paste the piece of the image into the new image document.
8. Make any adjustments to the canvas as needed.
9. Save the new image as a PNG.

That’s it!

You now have several different ways to create images for your training material. When working with Word, use Insert, Picture. The keyboard command is Alt + N, P.

Once the picture is inserted remember to add Alt Text and a Caption.
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.

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.

**Drop Caps**

In this paragraph, the letter “I” for the word “in” has been made a drop cap, or dropped capital letter. By using a drop cap, the paragraph is emphasized and stands out visually on a page. How does this affect the accessibility and usability of the document? Technically drop caps are “images” and “formatting.” They are a type of hybrid document element. One of the nice features is that Alt Text is automatically added to them as it is created which helps when converting to tagged PDF. The down side to using them is that adaptive technology interprets them as graphics and puts a pause between the drop cap and the rest of the word. If you are repurposing text to Braille, the Braille document will require repairs where drop caps are used.

As seen in the image below, the letter “I” has its own “box” or container.

*Figure 170 Image of the drop cap after inserted into text.*
When a screen reader encounters this, 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.

The drop cap used above is set to display in the margin. The same results occur when the drop cap is placed on the first line or designated to take up a specific number of lines as shown in the image below of the drop cap options 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 Drop Cap would 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.

If you choose "Drop Cap Options you will open the Drop Cap dialog.
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 using a screen reader.

**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.

If you move the cursor down the left margin of this page, you'll notice that it does not go into the WordArt. It stays at the margin. This means that the WordArt is an object in the document. When the document is converted to tagged PDF if WordArt has been used for headings, it will be a figure requiring Alt Tex and the addition of a Heading Tag.

In this 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.
In the preceding image the WordArt is not distinguishable from the other images in this document. It would be impossible for someone using a screen reader to know what is an image and what is WordArt.

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.

**Figure 173 List of objects for the JAWS screen reader showing WordArt.**
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.

The following image shows a list of links that have been created using the URL’s for the target documents. Imagine having to listen to all of these and try to identify the link you want to go to.

![List of links](image)

**Figure 174** List of non-contextual links using the JAWS Screen reader.

The following image from another Word document on adding accessible images to training material, demonstrates the ease of finding the target document if the links have clear and concise text.
The person using a screen reader can use the first letter of the topic they are looking for, also known as first character navigation, to quickly find and move to that area in the document.

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 throughout this document and other publications by Karen McCall.

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.
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.

For example:

Contact Karlen Communications: info@karlencommunications.com

This technique optimizes accessibility and usability of linked content. I did not add the footnote for this link because it is an example of text I would put in a footnote.

An example of a contextual link with a footnote is:

The Karlen Communication web site has an accessible document on Adding Images to Training Material.9

In this case the important information is the linked content: the name of the publication. If someone were reading the document and knew the name of the publication that is what they would be looking for, not the information about the web site itself.

**Contextual Links**

One of the other questions most often asked is if contextual links will change the way we write. Yes. We will automatically begin to think of a clear and concise way of providing the link information. This is not necessarily a bad thing for document authors. While the process might seem awkward at first, we'll get better with practice.

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 for 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?

9 Adding Images to Training Material: http://www.karlencommunications.com/MicrosoftOfficeAccessibility.html
Consider the following list of links. Would you know where you are going? Would you have the patience to read through all of this to find that one piece of information that might tell you what the link is for? How would you feel after listening to an entire URL only to find that the target page is named “file01.html” or “image42158.gif?” Would you find this information useful?

**Linking to Document Formats**

The other mistake document authors make is when there are several flavours for formats of a document. This is usually done with web-based content, but since the line is blurring between what we would consider “regular” documents and web-based ones, it is worth mentioning here.

Often you will have a document available in tagged PDF or Microsoft Word. Typically a document author will identify the different formats as follows:

Chapter One: Introduction [PDF] [Word]

Again, think of a series of chapters or lectures where the only information you have is:

PDF
Word
PDF
Word
PDF
Word
PDF
Word

Would you be able to find the Word document for chapter five or lecture 13?

We need to be aware of more than the visual when creating documents. With smaller devices, the need for auditory access for input and output will increase. What will be the fastest most efficient way to get information when you need it?
Bullets and List Items

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.
List Paragraph Style

There is some confusion around the relationship between the List Paragraph Style and the use of the Bullets, Numbers and Outline buttons on the Home Ribbon.

![Bullets, Numbers and Outline buttons from the Home Ribbon.](image)

**Figure 176** Bullets, Numbers and Outline buttons from the Home Ribbon.

Until Word 2007 there was no “List Paragraph Style” as that was separate from the bulleted and numbered lists. Now we can see the List Paragraph on the Quick Styles Gallery or by looking at the Apply Styles Pane when working in a list item.

![List Paragraph selected from Quick Styles Gallery.](image)

**Figure 177** List Paragraph selected from Quick Styles Gallery.

Why do we need these two seemingly separate formatting tools? What is the relationship between the two tools? Which one should I use? Does using one create a more accessible document over using the other?

By having these two tools Word gives you the ability to either modify the spacing or look and feel of a single list or to modify the spacing or look and feel of every list in a document. If you are simply adjusting the spacing for a single list it is OK not to create a separate List Paragraph Style. [Remember NOT to use the Enter key to add spacing between bulleted or numbered items.]

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.

**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.

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.

If you apply the List Paragraph Style without using bullets or numbers keep in mind that someone using a screen reader or using screen magnification will still "see" that formatted text as a list. For screen readers the Style name “List Paragraph” is provided to them. Hearing this they may think that there is a list that cannot be found, is broken, their screen reader is not working properly and other problems exist which will cause the end-user to stop reading and go into troubleshooting mode. For someone using screen magnification, they may think that their technology is being overwhelmed and some of the visual formatting is not being rendered to them. As with someone using a screen reader, they will stop reading and go into troubleshooting mode to try and find the problem.

Having said this, using the List Paragraph Style if you have a paragraph of text under a bulleted or numbered list item and the Word document **IS NOT** going to be distributed would be an appropriate use of the List Paragraph Style. The advantage in this instance would be that the text would be formatted properly to nest under the bulleted or numbered list item as shown in the following image.
1. 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 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.

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 Styles gallery, use the Change Current Quick Style Set command. Both the Themes gallery and the Quick Styles gallery provide preset commands so that you can always restore the look of your document to its 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.

Figure 178 List with sub-text formatted as List Paragraph.

For the text in the preceding image, the List Paragraph Style was identified to a screen reader. In this instance you may want to adjust the spacing after each List Paragraph Style so that the content is more readable and discernable.

However, without the use of the Bullet or Numbering icons on the Home Ribbon, when this document is converted to tagged PDF, the List Paragraph Style is interpreted as a regular paragraph and not part of the list itself.

Figure 179 Tagged PDF showing List Paragraph Style converted as regular paragraph text.

Once again we need to consider how someone is going to access the document. If it is in Word the List Paragraph Style information will be available to someone using a screen reader. If the document is going to be converted to tagged PDF, using the List Paragraph Style will ensure
consistent formatting but we will need to repair the PDF document to nest the `<resulting P>` Tags under their appropriate `<LI>` Tags.

When reading through the document using a screen reader in Word it is not until the end-user asks for formatting information that the use of the List Paragraph Style is provided to them. However, for consistency and structure it is recommended that the List Paragraph Style be used when nesting information under a bulleted or numbered list item when that content is not its own bulleted or numbered item.

**Creating a Well Structured List**

Without the underlying structure, as with headings, the bulleted or numbered lists would be presented as paragraphs of text each one having no more or less position or role in the document than any other. With the list structure, the content is set apart and presented as brief points of concise interest.

Let's take a closer look at the problems created when lists are not used correctly in a document.

![List spaced using Enter key.](image)

**Figure 180 List spaced using Enter key.**

When the Enter key was pressed after the first and second bulleted items it "broke" the list structure so that oranges is one list, apples is a second list and pears, apricots and mangoes is a third list.
The intent of the document author was that this is one list of fruit that is spaced more generously than the standard spacing before or after list items. The reality is that the fruits are no longer "related" to each other except for the pears, apricots and mangoes.

This is one of those instances where you can choose to affect the spacing of all lists in the document by modifying the List Paragraph Style or by selecting the list and modifying the spacing for this list only. We are going to modify the spacing for this list only.

To modify the List Paragraph Style for all lists in the document select the List Paragraph Style from the quick Styles Gallery, press the AppKey and choose Modify. Then activate the Format button and choose Paragraph which will open the Paragraph dialog. From that point the steps are the same as the ones that follow.

To add space before or after bulleted or numbered list items:

1. Type the list and then format it for bullets or numbers. It is easier to control the formatting if you apply formatting to selected content rather than turning it on, typing and then turning it off.
2. Select the list.

3. Press Alt + H, P, G to open the Paragraph dialog.
4. Uncheck the check box "Don't add space between paragraphs of the same Style."
5. When you do this a default spacing of 10 point or points is added after each list item.

Figure 181 Paragraph dialog shown over selected list in document.
6. If this is not enough spacing adjust it to what you need.
7. Tab to the OK button and activate it by pressing the Enter key.
8. The underlying list structure is intact however the list has spacing between the list items.

![Properly spaced list.](image)

**Images as Bullets**

If the Word document you are creating is **ONLY** going to be used to create a tagged PDF and **NO one** will get the Word document, you could use images as bullets such as in the following image.

![Visual list created without using list structure.](image)

Why the caveat?

Although the image of the list looks “pretty” it is not a list structure. Each point is a paragraph with no relationship to other visual list elements.
In a tagged PDF document we could make the following repairs:

1. Make the images of the paw prints Artifacts so that screen readers would ignore them. It is not necessary to give them Alt Text of “bullet” since we will...
2. Add the list structure in the Tags Tree which is what the adaptive technology such as screen readers uses to determine the structure of the document element.

![Figure 184 Repaired list in a tagged PDF document.]

The Highlight Content was turned on so that the list elements could be seen better. The images have been reassigned as Artifacts or pieces of the background. If someone is not using adaptive technology they will see the visual representation of a list but if someone is reading the document with adaptive technology such as a screen reader they will know that this is a list because the structure was added.

This technique should only be used if there is no possibility that the Word version of the document is provided to clients, customers, staff or students. Within the Word environment this is an inaccessible list. For more information on working with tagged PDF documents, purchase “Accessible and Usable PDF Documents: Techniques for Document Authors Second Edition”\(^{10}\), ISBN 978-0-9782675-2-0.

\(^{10}\) Accessible and Usable PDF Documents: Techniques for Document Authors - http://www.karlencommunications.com/products.htm
Microsoft Office 2010 has a built-in "Accessibility Checker" 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.

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

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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:


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

![Figure 186 Check Accessibility item in the sub-menu of Prepare for Sharing.](image)

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.
Office 2010 includes an add-in that lets document authors create tagged PDF directly from Word without having Adobe Acrobat installed on their computers. In Office 2007 this was a free but separate download. Now it is just part of the file types you can save as.

The key to ensuring that the resulting tagged PDF document is tagged correctly is to build the structure into the Word document.

**Note:** Currently XPS is a completely inaccessible file format because there is no way for adaptive technology to access the content whether the XPS content is viewed in a browser or one of the XPS viewers.

The disadvantage to using the Save as PDF option is that you can’t view the Tags in the resulting tagged PDF document to make any repairs or to perform the QA/Quality Assurance process unless you have Adobe Acrobat. However, if one person in the department vets documents for legislative compliance for accessibility, using the save as PDF tool can reduce costs.

**Note:** The Save As PDF tool often puts all images or shapes at the top of the Tags Tree. The Save As PDF tool uses the PDF 1.7 specifications which are the current specifications for PDF documents so this is an issue with the Tags not necessarily with the tool itself. You will also see this behaviour when using Adobe Acrobat 9 or X. It hasn’t been fixed as of the date of publication.

**Using Save as PDF**

There are two ways to use Save as PDF:

- Through the File/Backstage area which will take you to the same place as pressing F12.
- Through the Save As dialog which you can use by pressing Alt + F, A or F12.
To use the Save as PDF tool through the File/Backstage area:

1. After ensuring that your Word document has the necessary structure, press Alt + F, D, P and then press Tab to move to the Save as PDF button. Press Enter to open the Publish as PDF dialog.
2. This opens the Publish to PDF dialog.
3. I usually keep the filename the same to avoid confusion.
4. I also generally keep a copy of the PDF document in the same folder as the source document to avoid confusion.
5. Press Tab to move to the Files of Type list. If you are using the keyboard and PDF is not the selected file format, press the letter P. PDF should now be the file format you will save the document in.
6. Check the Options to make sure that Tags will be generated and that headings will be used as Bookmarks. [see next topic]
7. Tab to and activate the Publish button by pressing Enter.

![Figure 188 Save as PDF from File/Backstage area.](image)

While in the Save and Send tools you can also choose Change File Type and then choose Save as Another file Type. The keyboard command is Alt + F, D, C, V. This will also take you to the Save As dialog where you can choose PDF as the file type.
To use the Save as PDF tool through the Save As dialog:

1. After ensuring that your Word document has the necessary structure, press F12.
2. This opens the Save As dialog.
   a. I usually keep the filename the same to avoid confusion.
   b. I also generally keep a copy of the PDF document in the same folder as the source document to avoid confusion.
3. Press Tab to move to the Files of Type list. If you are using the keyboard and PDF is not the selected file format, press the letter P. PDF should now be the file format you will save the document in.
4. Check the Options to make sure that Tags will be generated and that headings will be used as Bookmarks. [see next topic]
5. Tab to and activate the Publish button by pressing Enter.
Save as PDF Options

You should only have to do this once unless you need to repair or update your installation of Office. If the document you are saving to tagged PDF does not contain structural headings the option to use headings to create Bookmarks in the tagged PDF document will not be available to you.

In the Save As dialog, once you choose to create a PDF document, some of the dialog changes. For example there is an Options button and the Save button is now the Publish button.

You will need to press Alt + letter O to open the options for your PDF document.

The two important options to check are:

- Create Bookmarks using headings. "Headings" is a radio button under the option for creating Bookmarks and is the default setting once you choose to activate this option.
- Document structure Tags for accessibility. This should be checked by default.
Once you have the options set for creating a tagged PDF from Word, Tab to and activate the OK button in this dialog and then Tab to and activate the Publish button to start the conversion.

Review the Tags in Adobe Acrobat. There is a bug in Acrobat 9 and X where the <Figure>Tags are either all placed at the bottom of a page if Picture Styles aren’t used; or, if Picture Styles are used, all <Figure>Tags are placed at the top of the Tags Tree. Adobe has known about this bug since Acrobat 9.

If you’ve used captions for images, the fastest way to make the repairs is to make all images in the document Artifacts. Someone using a screen reader or TTS software can access the caption text so they know that an image is there and what it represents in the document.

If you are using Acrobat 9 you will then have to go to the Tags Tree and delete the empty <Figure>Tags but in Acrobat X this is done automatically when you use the TouchUp Reading Order tool or the Order Panel to make images Artifacts.

I still add the Alt text to image in Word documents because I may need to distribute the Word document and at some point, hopefully in the near future, Adobe will fix this longstanding bug.
There is an add-in available to you for Office 2010. It is the Save as Daisy add-in\textsuperscript{12} which lets you create DAISY or Digital Accessible Information System books/Digital Talking Books directly from Word. At the time this book was published the Save as DAISY add-in had not been included in the release version of Office 2010 and the Daisy Consortium hadn’t updated the add-in for Office 2010; however keep checking to see when the add-in has been updated because it is a useful tool for everyone.

I hear the puzzlement…but I don’t want to create Daisy books.

You don’t have to. The reason this topic is in the book is because of the Acronym tool that comes with the Save as Daisy add-in.

This is a wonderful tool for documents that have a lot of acronyms. What this tool gives you is a way to provide the expanded text for acronyms while the document is being read or edited in Word.

So, you don’t have to create a Daisy book in order to use the tool. As long as it is installed on a computer, the end user will have access to the list of acronyms.

Once the Save as Daisy add-in is installed there will be an “Accessibility Ribbon” which is misnamed since it is a tool for creating Daisy content not accessible Word content.

The Acronym tool is found under the Accessibility/DAISY Ribbon. It is a tool for creating DAISY\textsuperscript{13} books or Digital Accessible Information System books for people with disabilities.

BUT..

In a Word document it allows you to create a list of acronyms and their expanded text so that anyone reading the document and not being familiar with the acronyms used in the document can quickly review the meaning of the acronym if they also have the Save as Daisy add-in installed.

It is NOT just a tool that can be used by people with disabilities or for the creation of DAISY books.

\textsuperscript{12}Save as DAISY add-in for Microsoft Word: http://www.daisy.org/project/save-as-daisy-microsoft

\textsuperscript{13}Daisy Consortium: http://www.daisy.org
Locating the Acronym Tool
To find the acronym tool press Alt + Y, then C to open the Create Acronym dialog or G to open the list of acronyms in the current document if you have acronyms identified.

Creating an Acronym Entry
It is easy to create a list of acronyms for your document. The first step is to type the acronym into the document.

To mark an acronym entry:

1. Select the acronym.
2. Press Alt + Y, C.
3. This opens the Manage Acronym dialog.
4. Your focus is in the edit area where you type the expanded text for the acronym. For example Royal Canadian Mounted Police with RCMP selected in the document.
5. Press Tab to check the check box to use this acronym in the entire document.
   a. Use the Spacebar to check or uncheck this option.
6. Press Tab again to have the acronym pronounced in the resulting DAISY book. If you are not creating a DAISY book from your document ignore this check box.
7. Tab to the Mark button and press Enter.
8. The Acronym is now in the list of acronyms for this document.
Viewing Acronyms in the Document
You can view your list of acronyms anytime by pressing Alt + Y, G. This opens the Manage Acronyms dialog.

Note that both the dialog for marking an acronym entry and viewing the acronyms are called the same thing, however they have different elements.
In this book we've looked at what structures and elements create both barriers and paths to accessibility when creating Word documents. What do you do if you have a legacy document – a document that is in its third, fourth or twentieth revision cycle and you need to make it accessible? Of course the other question I get is “why aren't my PDF tags right?”

The first item to consider is developing a basic Style guide for a document or documents you are going to produce. This would be available to anyone who works on the document and it needs to be followed. Often people aren’t aware of what was done in the document previously and after quickly searching for Styles that are not there, make things up as they go. Then there are people who are truly creative and give the document a new look and feel without removing old formatting.

When you have inconsistent formatting, even in documents where you've been careful to create Styles and structures, you are building barriers to accessibility and repurposing content.

**Removing and Organizing Styles**

In previous sections of this book we've looked at using the Styles Organizer to copy Styles from one document to another. With legacy documents there often aren’t Styles or the “Styles” that you see in the Styles Pane are “manual” Styles or inherent document Styles with formatting flung at it.

Manual Styles will look something like “normal + bold + italic + 10 point” or “Heading 1 + Centre + 15 pt.”
The “Clear All” at the top of the Styles list will do the same thing as Alt + H, E. It will clear the formatting of selected text.

This does not remove the manual Styles from the Styles Pane. They are there until you delete them. This gets difficult in a document where there is so much one-off formatting of text that visually isn't much different from surrounding text. Combine this dog’s breakfast with the department manager who insists that the document MUST look exactly the same and you face long hours of frustration.

In the case where the department limits what can be done to ensure the accessibility of the document, often the only thing you can do is to start educating them on why so many Styles can create barriers and to gently lead them toward a more cleaner looking document that uses proper Styles.

If you have the authority to clean these types of documents up, keeping the general look and feel but cleaning up the document styles, there are several approaches you can take to make repairs.

In the example above, most of the text in the document formatted with the one-off manual Styles is paragraph text. Choose one and make that the Normal Style for the document.
You may have to keep notes in a separate file on what changes you are making just to keep it straight in your own mind.

**Legacy Macros**

Another step in working with legacy documents is to review any macros used to populate the document with reused content. Let's look at an example. Macros, in this sense, are automated components of a document that would let you enter text in one place in a document and have it immediately “fill in a blank” at another place in the document. For example, if I were to type my name at the top of page two, every other place in the document that would require my name to appear would be filled in automatically.

If I have a list of three general topics that are to appear in an executive summary or introduction, and then are used later in the document, a macro might automatically copy them to the appropriate place later in the document.

For this example I’ve flung formatting at some of the text so that I can reproduce the inaccessible/incorrect elements.

Don’t do this at home kids!

- **Tables**
- **Text Boxes**
- **Parallel columns**

As I type these topics into the document, they will also appear on a later page:

- **Tables**

Type information here.

- **Text Boxes**

Type information here.

- **Parallel columns**

Type information here.

In the example above, the text was copied from the bulleted list but the bulleted formatting wasn’t removed before the Heading Style was applied. When a conversion tool or anyone reading this document in Word, comes across this, they won’t be sure of what it is. Typically a list has more than one item and typically a heading isn’t a list item...what should I do with this? Conversion tools just
pick one and in the case of the items above, the tool may see the first one as a bulleted list item, the second one as a heading and give up on the third one and say it is a paragraph. This means you have to repair the converted document.

When you use a macro to populate a document with text or information that’s already been entered, you must remember to include the step of removing the original formatting and then applying the new formatting as it is placed in the document structure.

This brings us to the key of working with legacy documents. Always start with a document that has been cleared of formatting! Select the document using Ctrl + A, then press Alt + H, E to Erase formatting.

With some legacy documents, so much damage has been done in terms of over formatting and misuse of structure being layered on top of one another, that taking the document into something like NotePad is the only way to give you a clean copy to work with. If you need to do this, remove table structures before doing so. Choose Table > Convert Table to text and use tab stops in the document. This will let you select the unformatted text again and apply the table structure.

As with text, some tables have been so horribly created that starting with a new table and copying and pasting each cell content into the new table is the only way to ensure that the table is accessible to someone with a disability and often this makes the table more accessible to someone without a disability.

**Manage Styles Tool**

This topic was covered in a previous section of the book but is also here so you don’t have to go back to review its value.

You will also want to remove wonky and unwanted Styles from the Styles Pane using the Manage Styles tool. Sometimes copying the unformatted content to a fresh new document will remove a lot of the wonky Styles but in other instances it won’t and you will have to manually remove them from the list of available Styles in the document.

To use the Manage Styles tool to remove wonky and unwanted Styles:

1. Open the Styles Pane by pressing Alt + H, F, Y.
2. Tab to and activate the Manage Styles button in the bottom of the Styles Pane. It is the button on the right of the set of three at the bottom of the Styles Pane.

![Options...](image)

Figure 197 Manage Styles button in the Styles Pane.
3. This opens the Manage Styles dialog.
4. Select the Style you need to remove from the document and choose the Delete button.

You can remove some of the wonky and unwanted Styles directly from the Styles Pane but I find this method more reliable and consistent in letting me delete Styles. It also keeps me focused on what I am doing.

It will take you less time to start with a clean, unformatted document, make the necessary edits and format it again, than it will to try and solve all of the formatting and Style conflicts. It will also save financial resources if you need to perform accessibility audits on documents...some conflicts are just cost prohibitive or can’t be “fixed” once the document is converted.

As with any “inheritance”, things can go either way. You may have to pay off substantial debts accrued through documents without structure that have been worked on over years; or you can “get the bonus” of receiving documents that have been created in a clean and logical manner.

The latter requires little or no investment of time and financial resources to make them accessible and repurpose them.
We’ve learned that creating web-based content that has good design and structure helps everyone, not only people with disabilities. It is the same when we create logical document structures. It makes document access easier for everyone with the bonus of saving financial resources on repairs. No one wants to inherit a “money pit!”
References and Resources

Text/Typographical Layout Tutorial by WebAIM this resource provides information on structuring and formatting web-based documents. Some of the concepts can be transferred to other digital formats. Readability and usability are format independent issues.

Re-visioning Document Structure from All things Web

Microsoft has published a document on “Creating Accessible Word Documents” which has good information. Although the document indicates the use of styles for long documents, best practice is to use them in all of your documents. They have two other documents, “Creating Accessible Excel Documents” and “Creating Accessible PowerPoint Documents.”

HTML


Resources for Programmers, But Worthy of Note

DSD – Document Structure Description. This demonstrates the move toward, and need of, document structure for repurposing content. Given that next generation word processors such as Microsoft Office 12 will be XML based, document structure will become an integral part of how we create information.


I've removed the table of figures from the document and am trying an index. Knowing how to create an index and actually implementing it in a document are two separate things. This book represents the third index I've created and I think I'm betting better at it! There will be some things I've missed but I think I'm getting the hang of this. Learning is fun!

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