



MAKING PDFs ACCESSIBLE

Part 1: Microsoft Word

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Creating Accessible PDFs During Formation in Word

Microsoft Word is currently the most common word processor, so common, the .doc (and to a lesser extent, .docx) format has become the de facto format for text documents. Word is often used to create files that are converted to PDF and placed in the web. Because of this the first step to creating an accessible PDF is to create an accessible Word document. This guide will cover several things that you can do to make PDF web documents, which are created in Word, more accessible.

The First Questions to Ask

What Version of the Software are you Using?

The frustration or ease of creating accessible documents can hinge on whether you are using the latest version of the software. In the past couple of years there has been a large push by software makers, in particular Microsoft and Adobe, to fix issues related to creating accessible documents using their software.

If you are using older versions of Word, in some cases it is impossible to make documents fully accessible, especially with Word for MAC.

If you are committed to making accessible documents, it may be worth your while to invest in the latest version of both Microsoft Word and Adobe Acrobat.

What Version of the Software was Your Document Created in?

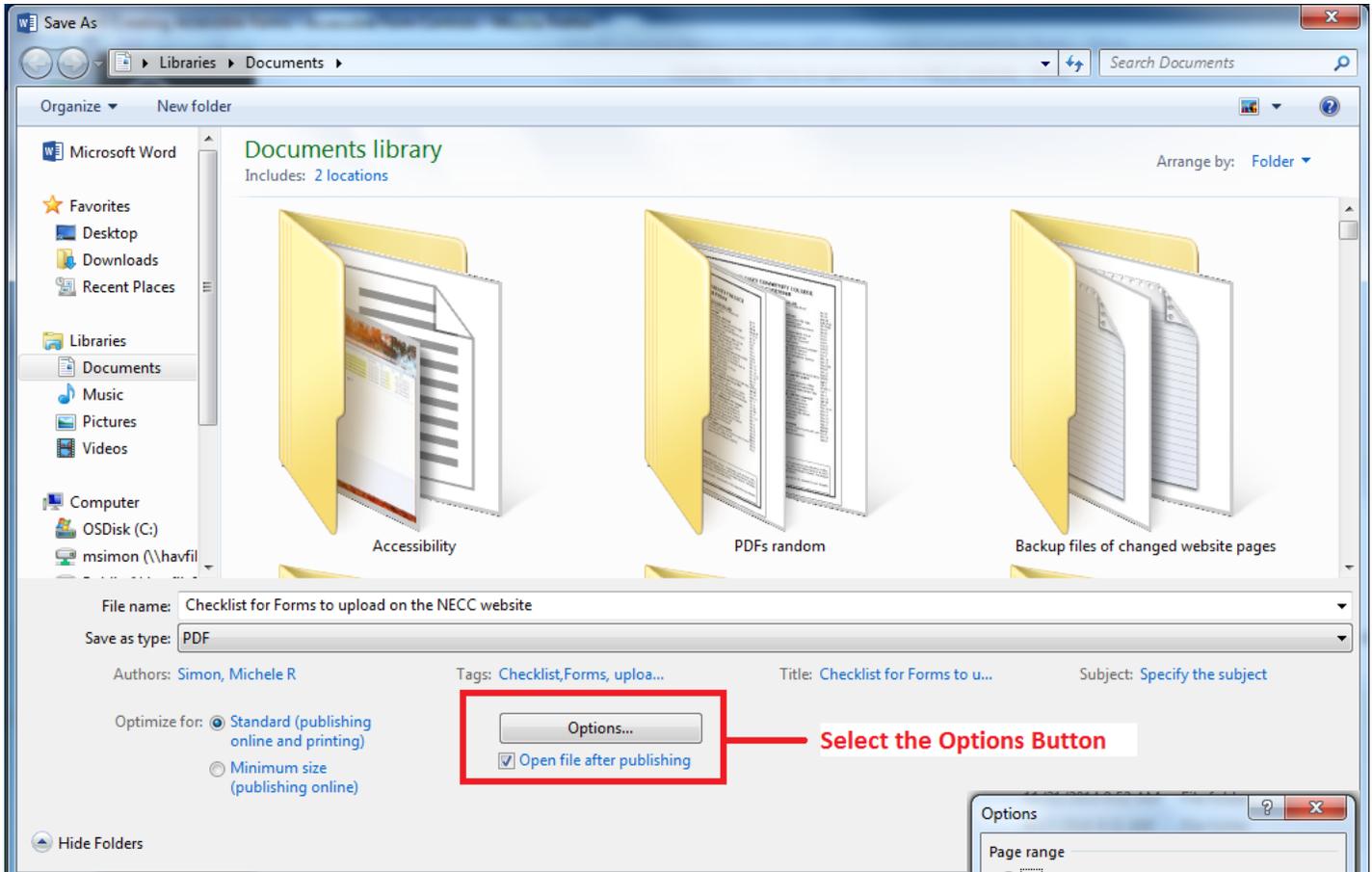
Documents made in older versions of Word (2003 and earlier) can cause a great deal of difficulty to remediate into an accessible document—depending on the content in them (such as tables). After reading through this document, you can follow the step below to convert them to an accessible document.

1. Plan your new version (How will the new accessible version look? Does it need to retain the old look?) The more time spent in planning, the less time you'll spend fixing the document later.
2. Save a copy of the original. Give it a name such as doc-2-original.
3. Open a Text Editor.
4. Select and copy all of the content in the Original Copy.
5. Then, paste the contents into the text editor. This action removes all previous formatting.
6. Select and copy the text from the text editor.
7. Open a new Word document. This is the time to choose a template.
8. Then paste the text into the new Word file. Give the file a new name and save it.
9. Apply Styles from the Styles Panel to give the unformatted document the look you want, and the structure it needs to be accessible. Because the new, plain text document lacks formatting, refer to the Original as a guide for determining structure and choosing styles.

Set Options to Ensure PDF Documents are Tagged

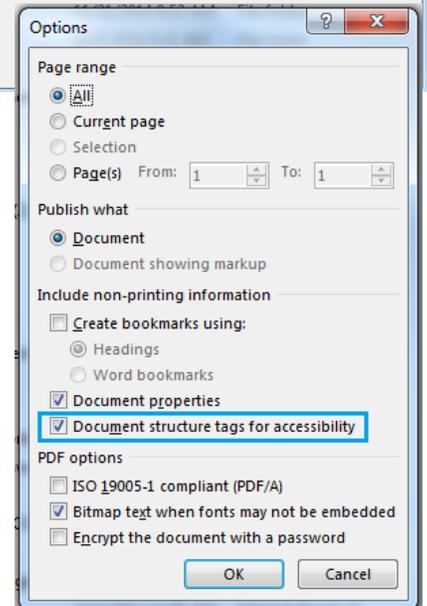
In order to create a tagged PDF from a Word Document you must check off the option in the PDF **Options** box:

1. Click **File**,
2. Click **Save as**.
3. In the '**Save as type**' drop down menu select **PDF**.
4. You will see an 'Options' button at the bottom of the window. Select this **Options** button.



5. An **Options** box will pop up.
6. In the Options box check the box; '**Document structure tags for accessibility**'
7. **Click OK.**

Please Note: You will only have to check this box once and all future PDF documents created from your Microsoft Word program will include your tags which you created for accessibility.



Document Properties

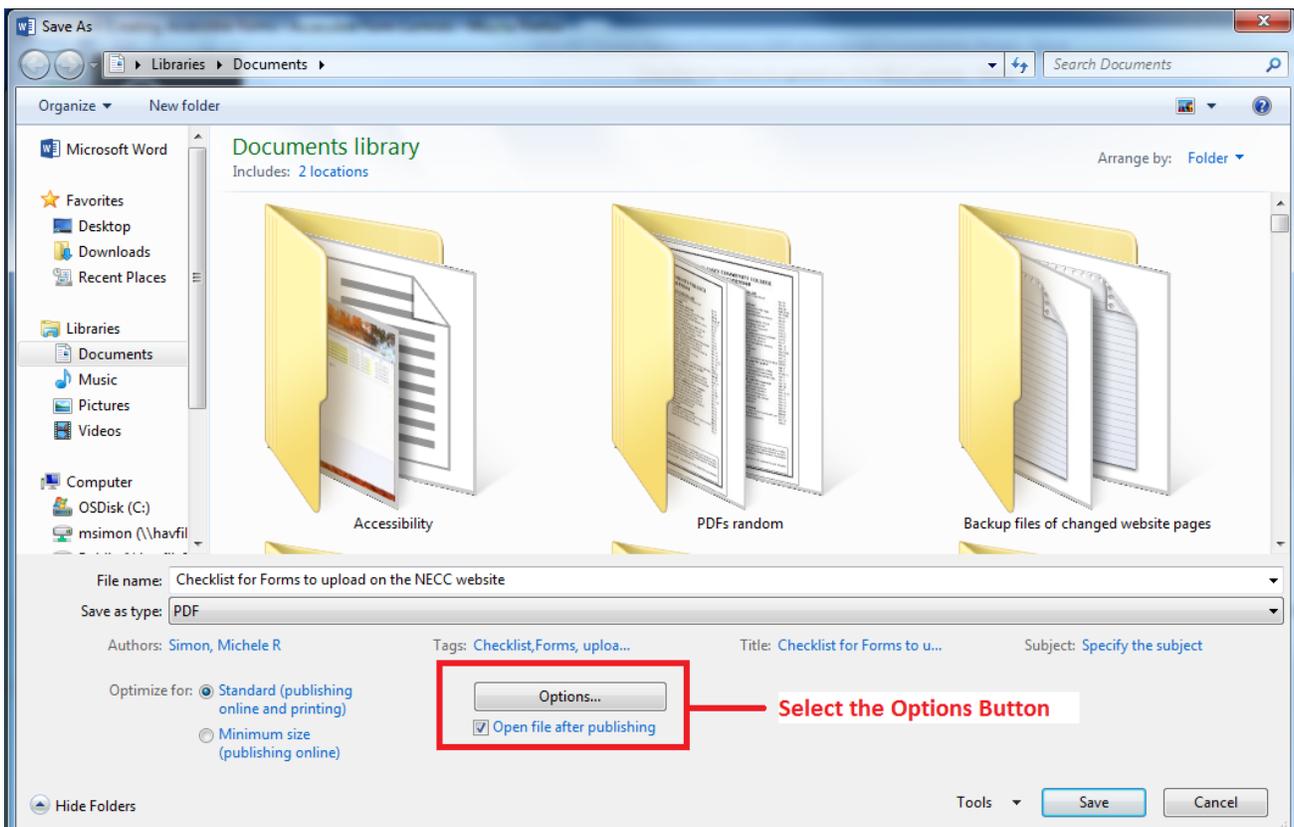
In documents that will be uploaded to the web, the **Document Properties** of 'Title, Subject, and Tags', must be added to the PDF. These document properties are used and displayed on the web by search engines such as Google. The title and subject also give a person using a screen reader a quick understanding about what the document is about.

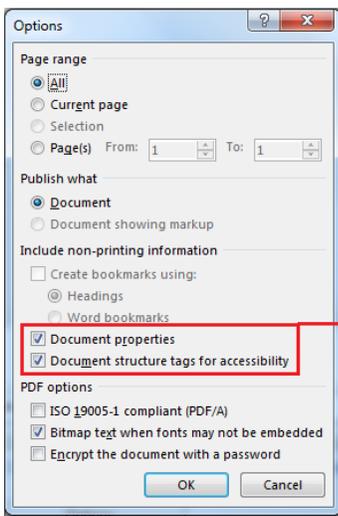
Adding these properties and checking to make sure they are accurate each time the document is changed and replaced on the web, is the responsibility of both the document creator **and** any future editors of the document. If these document properties are not checked and updated every time the document is added, changed, and replaced on the web then search engines may give people outdated information.

To be able to add Document Properties to a PDF, you must first allow the document properties to be saved when converting a PDF from a Word Document.

Allow Saving of Document Properties:

1. Click **File**,
2. Then **Save as**.
3. In the '**Save as type**' drop down menu select **PDF (or preferably 'Adobe PDF' if you have the Adobe Acrobat Pro software and have added the plugin)**.





4. Select the '**Options**' button at the bottom of the window.
5. An **Options** box will pop up.
6. In the Options box check the box; '**Document Properties**' You will only have to check this box once and all future PDF documents created from your Microsoft Word program will include your document properties.
7. Be certain to leave the check in the box for 'Document structure tags for accessibility'.
8. Click **OK**.

How to Check and Update Document Properties

1. Click the **File** tab.
2. Click **Info** to view the document properties.
3. Hover your pointer over the Title property and click on it to update the information. Then do the same for Tags.
4. Click '**Show All Properties**' to find and update the **Subject** Property.
5. Click the File tab again to return to your document. Any changes you made will be saved automatically.

Click on Info Tab

Document Properties

Check and update Title, and Tags Properties (Note tags here means the same as keywords on the web.)

Click on 'Show All Properties' to find the 'Subject' property

Properties

Size	2.85MB
Pages	19
Words	4206
Total Editing Time	46 Minutes
Title	Making PDFs Accessible
Tags	Accessible PDF, Microsoft W...
Comments	Add comments

Related Dates

Last Modified	Today, 11:57 AM
Created	Today, 11:57 AM
Last Printed	7/6/2016 11:02 AM

Related People

Author: Michele Simon

Last Modified By: Simon, Michele R

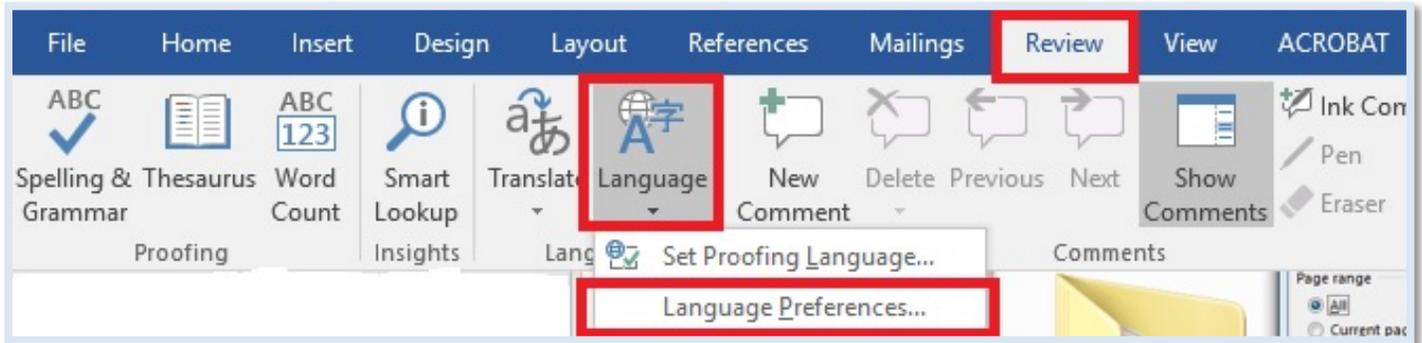
Related Documents

Show All Properties

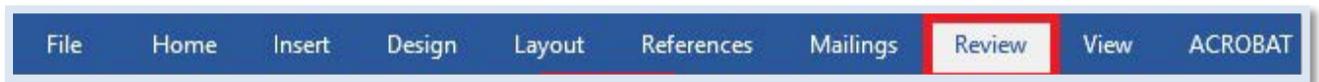
Language Settings

Language settings are important for screen readers to read accurately. You can set a default language, and if you are using multiple languages in your document you should set the proofing languages for each.

To set a Default language:



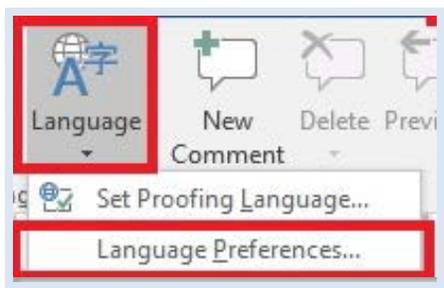
1. Select the **Review** Tab to open the Toolbar



2. Select **Language**

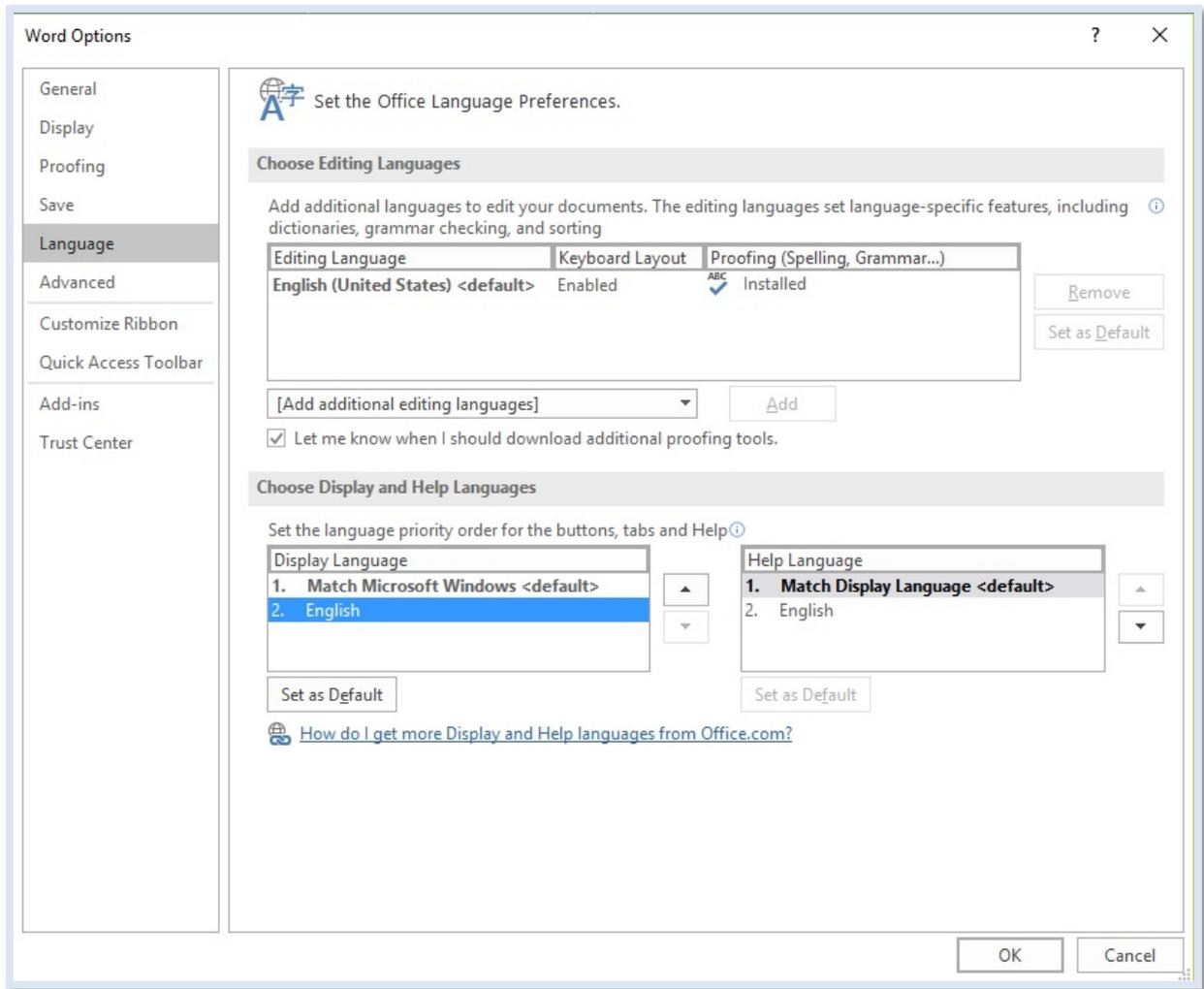


3. In the drop down, select **Language Preferences**.



4. The Word Options will open, in the Language tab

5. Under the 'Choose Display and Help Languages' heading select **English**.



6. Click **Set as Default**.

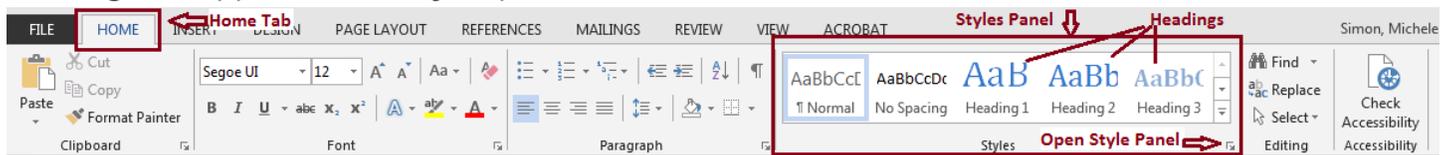
If several languages are used in the document,

1. Highlight the passages of text and
2. Select the **Review** Toolbar
3. Select **Language**
4. In the drop down select '**Set Proofing Language**' and change the language for that passage of text.

Headings

A good heading structure is probably the most important accessibility consideration in most Word and PDF documents, and on Web pages. Headings will make the documents more usable for everyone and will allow screen reader users to navigate through the page easily.

Headings are applied in the **Styles** panel on the **Home** tab.



Many people do not use true styles to create headings in Word. For example, when creating a heading, they simply change the font, enlarge the font size, and make it bold, etc. If this is done when creating an accessible document for the web, the document has no real coded structure that can be discerned by a screen reader.

How to Create a Heading in Word 2013

Word 2007 and later does a good job of encouraging the use of proper styles. About half of the Home toolbar is devoted to styles.

To create a Heading:

1. Type the text and highlight it.
2. In the Styles panel on the **Home** toolbar click on the appropriate Heading style level.



You can also add 1st, 2nd, or 3rd level headings using Ctrl + Alt + 1, 2, or 3 (Cmd + Option on a Mac).

Use Hierarchical Structure

Headings should be created in the document in a proper hierarchical structure. Use the Heading 1, Heading 2, Heading 3, Heading 4, and Heading 5 styles as indicators of section headings and subheadings within the document. We recommend reserving Heading 1 for the page title, Heading 2 for major headings and Heading 3 for major sub headings.

There are a couple of advantages of having true structure in Word documents. First, when the file is exported to HTML, it will retain the structure, making it accessible to screen

4 **Heading 1 - Page Title**

Heading 2 - a main topic on the page

This is the first topic discussed on the page.

Heading 3 - a subtopic of Heading 2

The content under this heading is a subtopic of the Heading 2 above

Heading 3 - a subtopic of Heading 2

The content under this heading is another a subtopic of the Heading 2 above

Heading 4 - a subtopic of Heading 3

The content under this heading is a subtopic of the Heading 3 above

Heading 2 - a main topic on the page

This is a new second topic on the page that is different from the previous Heading 2 and all of its subtopics.

Heading 3 - a subtopic of Heading 2

The content under this heading is a sun topic of the Heading 2 above

Heading 2 - a main topic on the page

This is a new second topic on the page that is different from the previous Heading 2 and all of its subtopics.

...and so on.

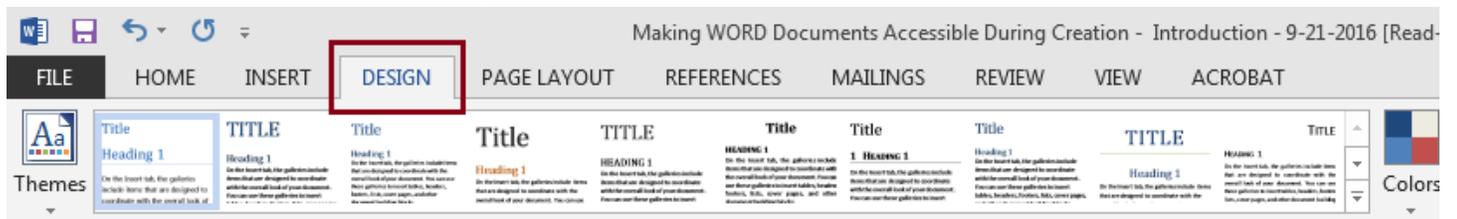
readers. Second, the structure will also be retained when exported to PDF. In both cases, the added structure increases the readability of the document for people using screen readers.

Customizing Heading Styles

There are a many reasons why you may want to add some of your own customized styles to the Styles panel.

1. You may want to personalize and design your document to your own color/font scheme while using recommended styles such as Heading 1, Heading 2 and others.
2. Using Styles allows you to easily create table of contents
3. Using styles in a document facilitates easy transition of content to PDF and preserves heading structure
4. You can globally modify content by changing one Style setting. This includes modifications needed for a low vision student or a student with other reading/visual processing issues.
5. In documents created in older versions of Word some themes do not automatically add the next heading style so you may want to correct this to allow you to use more than one or two headings

Note: Before completely designing your own color/font scheme for headings you may find it easier to visit the Themes panel in the Design Toolbar.

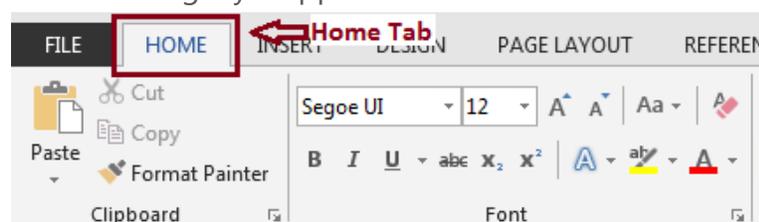


Hovering the mouse cursor over a theme will give you a preview of what your document will look like with that theme's styles.

To customize a Heading Style in Word 2013:

Note: When designing your own color scheme true fonts are best for accessibility, and sans serif fonts are the best for web documents. All font sizes are required for accessibility to be a minimum of 10 pts.

1. Highlight text and format using the Font tools in the Home tab. (You may use text that already has a heading style applied.



2. Find the heading Style you wish to customize in the Styles panel. If you do not see the Heading in the Styles panel, open the Styles Panel by clicking the arrow in the bottom right corner.



3. Then right click on the desired **Heading** and select "Update Heading to Match Selection." This will modify all the headings for this document.



Alternative Text for Images and Graphics

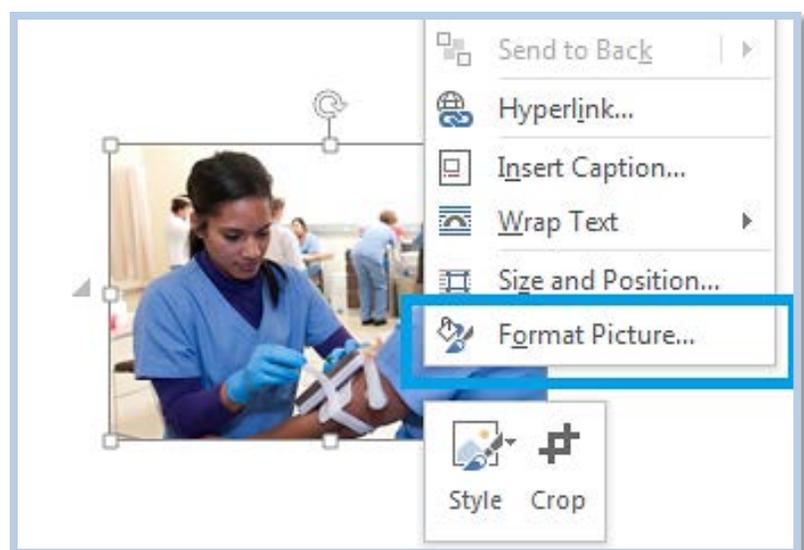
Accessible documents must have proper Alternative Text (Alt Text) for all images. The Alt Text should describe to a vision disabled person using a screen reader what they need to know about the image. This is not the same as a caption. If a caption is used, the alt text is everything important a vision disabled person needs to know to understand the image that the caption does not already tell you.

All Images that are not background should be given appropriate alt text in Word. This alt text will be read by a screen reader, and should remain intact when exporting to HTML or PDF.

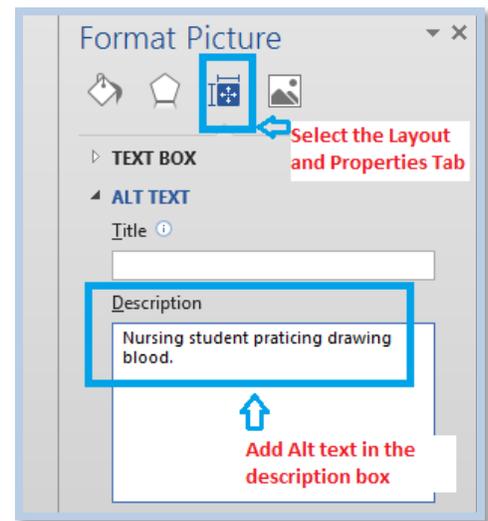
How to Add Alt Text to an Image in Word 2013

To add alt text to an image:

1. Right click on the image.
2. In the popup menu select the **Format Picture...** option. The options for Formatting Picture will open on the right of the page.



3. Select the Layout and Properties tab (see image on right). In Word 2010 and later Microsoft moved the place to add alt text back to an intuitive place, but made things even more confusing by creating two fields for alt text; a Title and Description.
4. Add your alt text in the **Description** field. Note: Information in the Title field will not be saved as alt text when the file is saved as HTML.



Constructing an Alt Text Description

Alt Text should be constructed using human understandable language. It should not contain file names, filing information, document sizes, or color descriptions (unless the image is something like artwork where the color is used to convey a message.)

Alt text should be as brief as possible while still giving the most important meaning for the image.

If words are used in an image the alt text should contain all the words in the image.

Images that have only text in them are a direct violation of Section 508. Instead use Styles for the text. This does not mean headings styles unless you want to weave the text into the structure of the document. Custom styles can be [created in the Styles panel](#).

Alternative Text for Embedded Charts

Embedded charts should be given a text description within the context of the document itself. If you create an Alt Text description for the chart, the data that is used to create the chart will be accessible in the original Word file (it is basically a simple spreadsheet), but will not be included in a PDF when converted. Charts which are in documents intended for the web should have descriptions in the content of the document.

Alternative Text for Word Art

"**Word art**" is actually converted to an image in Office 2003-2007 and must be given alt text. It remains text in Office 2010 and later.

Alternative Text for Images Using Word for MAC

If you are using a MAC be aware that there is **no way** to add alt text to images in Word 2004 or 2008 for MAC.

Links

Hyperlinks are frequently created incorrectly in Word by pasting the full URL into a page (e.g., <http://www.necc.mass.edu/academics/programs/> and then hitting the 'Enter' key, space key, or some other key. This automatically creates a link. It's simple, but the URL will most likely not make sense to the reader.

Using Link Text

Hyperlinks placed in PDF documents on the web must be constructed using text to describe to people (especially people with disabilities, or others using screen readers), what the link is about and where they will be going to if they click it.

Example Using Link Text:

Good: NECC is now a member of the [Kryterion International Testing Network](#).

Bad: NECC is now a member of <https://www.kryteriononline.com/Locate-Test-Center>.

Links should make sense out of context. **DO NOT** use phrases such as:

- click here
- more
- read more
- click for details
- any single letter or number such as 'A'

Examples:

Good link text:

Learn more by reading an [article about the Knights in the NECC Newsroom](#)

Bad link text:

If you want to learn more about this, [click here](#).

Keep link text brief. Do not be overly wordy by describing every detail about a link destination.

Include File Types in Links

If the link is to a document, it must include the file type, such as PDF, within the link text.

Example: [Application to NECC \(PDF\)](#)

Including '(Opens in a new window)' in a Link

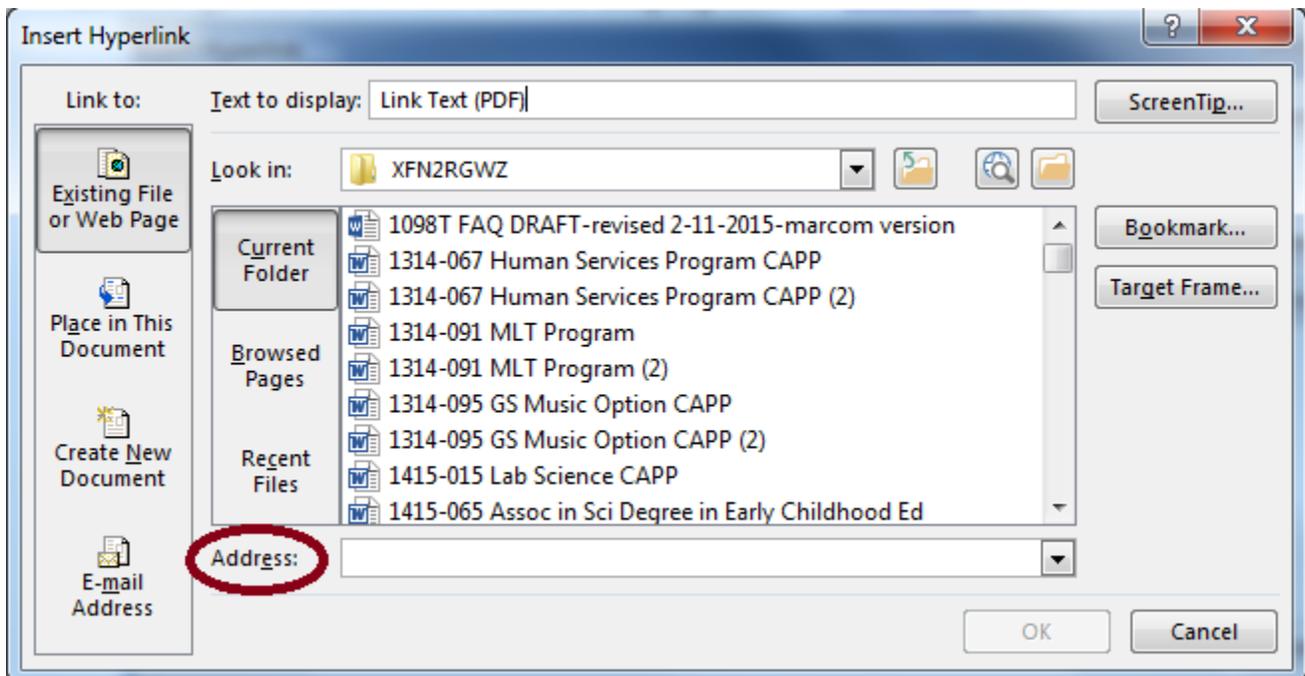
In general links should never open to a new window, but for the occasional link to an outside website, if it opens in a new window you **must** include within the Link Text the exact phrase with parenthesis

“(opens in a new window)” This announcement should be placed at the end of the link. This will allow people using screen readers to understand what will happen if they click the link.

Example: [State of New Hampshire \(opens in a new window\)](#)

How to Add a Hyperlink in Word 2013

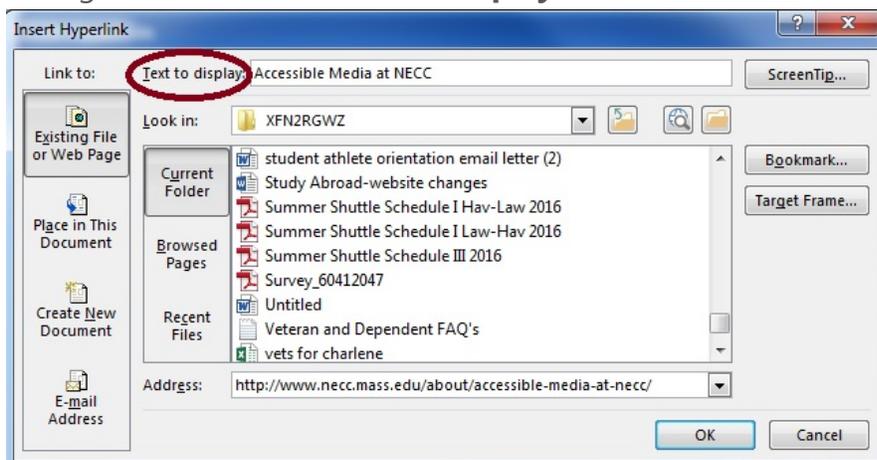
1. Type the [Link Text](#) that you want to use for the hyperlink.
2. Highlight the text. Right click and select Hyperlink. 
3. Add the URL in the **Address**.



If you are creating a Word document that may be **both** printed and read electronically, you may want to include a description in the link text, and after it the full URL for print readers.

How to Change the Hyperlink Text in Word 2013

1. Select a link
2. Right click and select Edit Hyperlink, or select Ctrl + K (Cmd + K on a Mac).
3. Change the URL in the **Text to Display** field to [Link Text](#) that is more descript



If you are creating a Word document that may be **both** printed and read electronically, you may want to include a description in the link text, and after it the full URL for print readers.

Lists

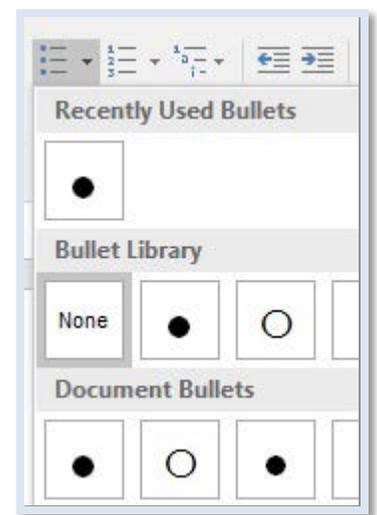
Any content that is organized as a list should be created using the **List** tools for ordered (numbered) and unordered (bulleted) lists that are provided in the Home Toolbar. When lists are explicitly created with these tools they are given list coding, which helps screen readers to understand how the content is organized. When screen reader users enter a list, their screen reader informs them that they're on a list and may also inform them of how many items are in the list. This can be very helpful information when deciding whether to continue reading.

Notes about Making Lists

1. Avoid making lists with just dashes - or asterisks * or pictures for bullets; a screen reader may not be able to read the list in the proper order because there is no code to tell it what it is.
2. Plain text bullets and numbers are more accessible than pictographic (fancy) bullets and numbers.
3. Special characters and images can confuse screen reader users if the content is translated as a word that may make it seem like it is part of the real content.
4. It is important to use the bullets provided through the list styling options because these characters are a type of text that can be translated into something meaningful by screen readers.

Styling Lists

It is a common mistake for people constructing lists to use the Enter key or spacebar to add white space around bulleted items. If extra spacing between list items is desired apply styles to the list. Do not hit the enter key multiple times then add an additional bullet. What is happening when you do this is you are creating multiple lists of one item, which is very frustrating for screen reader users.



Data Tables and Accessibility Issues

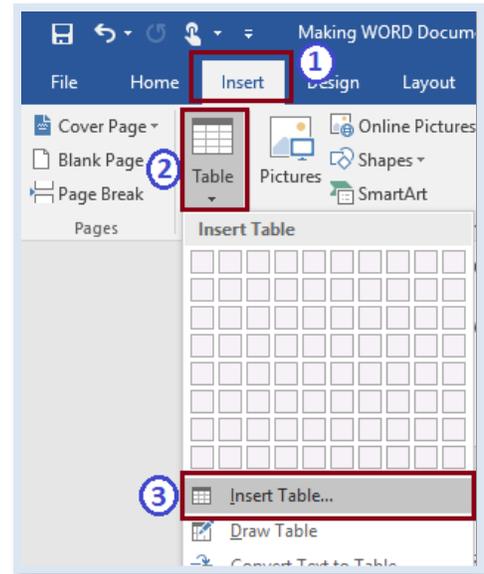
Tables can present a great deal a difficulty for people using screen readers to be able to access the information they need from them. If the tables are complex or poorly constructed, it can be almost impossible. In addition to being difficult for screen readers, tables can also be problematic to display well on mobile devices. For these reasons, tables should be avoided if there is another way to present the data. If you only need one or two rows it is likely the information can be presented with lists or paragraphs, and headings instead. If tables are used they should only be used for data, and not simply to format other content in a layout.

With earlier word processors, it was common to create entire document layouts with tables. We now know that using tables for layout - solely to line things up conveniently - makes it nearly impossible for people who use assistive technologies to access the information. A table can be classified as a data table whenever you need to specify a row or column with header information about that row/column. If no informational header is needed, then it is a formatting layout table.

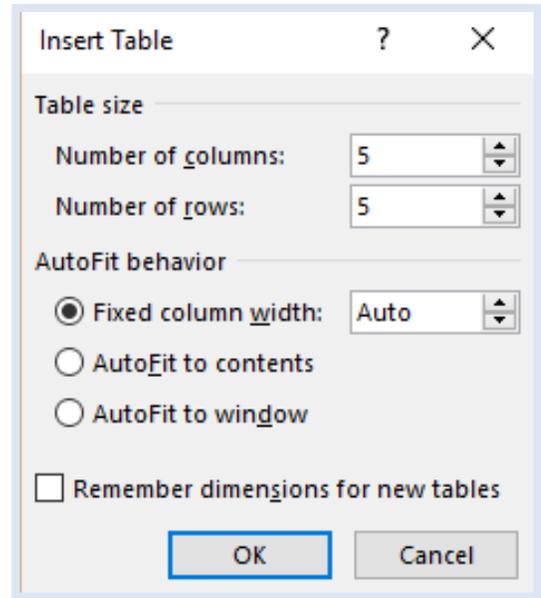
To create accessible tables for the presentation of data, we need to keep them simple and follow a few simple procedures.

Create an Accessible Table

1. Open the **Insert** toolbar
2. Select the **Table** drop down to open the options.
3. Select the **Insert Table** button. Do Not insert the table by just selecting the columns and rows. Do Not select 'Draw the table'.

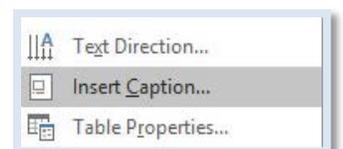


4. Enter the **Number of columns** plus 1 for the left header. So if you have 4 columns of data enter 5 to include a column for the header.
5. Enter the **Number of rows** plus 1 for the top header. So if you have 4 rows of data enter 5 to include a row for the header.
6. Select a **Fixed column width** to make sure the table does not go beyond the page width. For some tables you may need to change the page orientation to landscape.



7. Click OK.
8. Give your table a title using the Caption tool: **Select the entire table** by clicking on the move handle of the **table**  (found in the upper left corner of the table).

9. Right click in the table to open the menu. Select **Insert Caption**.



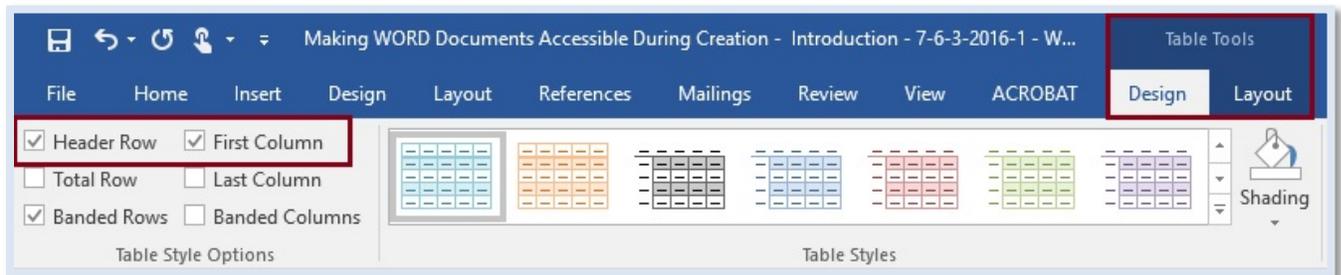
10. Enter the **Caption** for the Table.
11. Set the **Label** field to table to make sure the label field indicates that this is a caption for a table.
12. Set **Position** to 'Above the selected item'.
13. Click OK.
14. The caption will appear over the table.



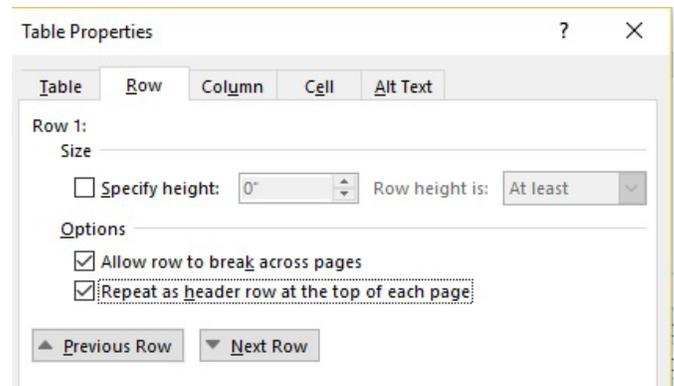
Table 1 Schedule of Respiratory Info Sessions

Date	Time	Location	Room
January 15, 2016	4:00 pm	414 Common Street	LC 230
February 12, 2016	1:00 pm	414 Common Street	LC 300
March 10, 2016	3:30 pm	78 Amesbury Street	LA 218

15. Next specify the header row and column of the table: Click anywhere in the table.
16. Click on the Table Tools **Design** tab to open it.
17. In the Table Style Options group, select the Header Row checkbox, and the First Column checkbox.



18. Next, you need to specify that the header row should repeat at the top of each page: click in the top header row.
19. Right-click, and in the pop-up menu choose **Table Properties**
20. Select the **Row** tab.



21. Under Options, select box for '**Repeat as the header row at the top of each page**'. When converted to a PDF the headers at the top of the table will be tagged as headers for the table. Unfortunately, when converted to PDF the left column Header will not be tagged as a header column and must be tagged manually in Adobe Acrobat Pro.
22. Click OK, and enter your data into the table.

Things You Should Not Do with Tables

- Do not use tables to create forms.
- Do not have Blank Headers. Each Header cell should describe the data in the column or row.
- Do not create Header Rows in the middle of the table. If you feel you need a new header row in the middle of a table, create another table instead. If this doesn't work for you and you feel you absolutely must create a complex table like this, then each and every cell must contain unique IDs and header information. This can be a very time consuming process that must be done accurately, but be aware though that even if you successfully tag each cell the table may still be too complex to understand. Not every screen reader user is a power user that can manipulate the software to its maximum capacity.
- Do not create your table using the Draw Table tool, which is available only with the Table tools on the Insert ribbon.
- Do not create page layouts with tables.
- Do not merge cells, and do not split cells.
- Do not control spacing in your table with blank rows or columns. Adjust line spacing instead.

Table Accessibility Issues with Conversion to PDF

In PDFs converted from Word there is no way to assign table headers (or <th> elements) to rows of a table that will transfer on conversion to PDF. You can indicate that a top row should Repeat as header on the top of each page; in the Table Properties menu. When saved as PDF, the cells in the first row are detected as table headers for those columns. There is no way to add row headers (headers across the side of a table) in Word.

Word 2013 Accessibility Checker

Word 2013 included a new accessibility checker that allows you to check for accessibility problems. This is an excellent resource. The accessibility checker makes it much easier to identify and repair accessibility issues.

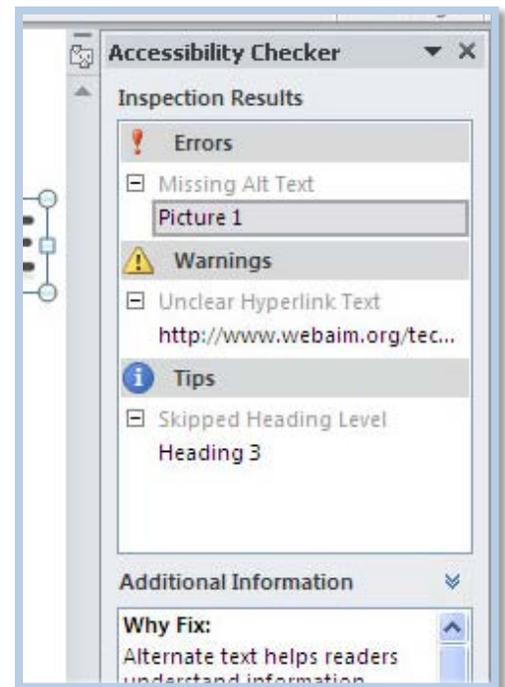
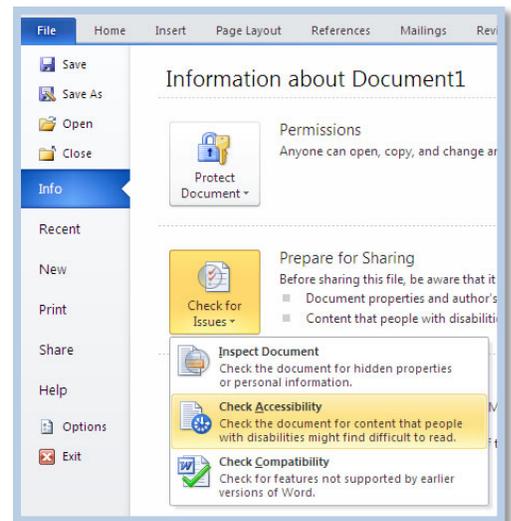
To run the accessibility checker:

1. Select **File**
2. Select **Info**
3. Click on **Check for Issues**
4. Select **Check Accessibility**

This will start the accessibility checker. The checker displays:

- Accessibility errors such as images with no alt text
- Warnings such as unclear link text
- Tips like avoiding skipping from a first level heading to a third level heading
- Feedback about the importance of each item
- Tips on how to repair items

Selecting an item in the report will select the corresponding item in the document.



Other Principles

In addition to the principles addressed above, most web accessibility standards can also be applied to files created in Word. The following is a list of a few other important accessibility principles:

- Ensure that font size is sufficient, usually around 12 points or more.
- Use simple language.
- Provide a table of contents, especially for long documents. If you have a good heading structure, creating a table of contents is easy.
- Provide sufficient contrast.
- Don't use color as the only way to convey content. People that are color blind may not get the message, and colored text does not indicate importance to screen reader users.
- Use true columns, not tables or columns created by hand with the Tab key.