

MINNESOTA STATE ACCESSIBLE DOCUMENT REFERENCE GUIDE

Microsoft Office 365 Professional Plus



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Contact Information

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For Additional Accessibility Resources

[MN Office of Accessibility](http://mn.gov/mnit/programs/accessibility/) (<http://mn.gov/mnit/programs/accessibility/>)

Version Information

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About this document

This procedural manual will help you create fully accessible documents. It will not teach you how to use Microsoft Word, Excel, or PowerPoint. You need to have a good, basic understanding of the Microsoft products already.

The information in this reference guide is in order of use. It starts with the basic information all documents are required to have. Next is basic information on formatting text within the document. It then goes into specific areas such as images, tables, forms, etc.

Technology is an ever-changing field. What is standard today may change tomorrow. Therefore, this document undergoes periodic changes to keep it up to date.

Note: Information in boxes highlights important information, make note of potential problems, or clarify confusing issues.

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ACCESSIBILITY STANDARDS FOR DOCUMENTS

What is accessibility and why do we need it?

The Americans with Disabilities Act (ADA) became law in 1990. This act prohibits discrimination against persons with disabilities, which includes access to public spaces. The federal court labeled the internet a public space. In addition, the state of Minnesota enacted the [Minnesota State Accessibility Standards](#) in September of 2013. By law, state employees must provide all users with equal access to information.

Electronic documents are a powerful tool; they increase everyone's access to information. Documents only available in print can be cumbersome, difficult to get copies of, and limit the ability of some with disabilities to access the information. Users may not be able to see, hear, or process information in some formats, may have difficulty reading or understanding text, or may not be able to use a keyboard or mouse. Accessible websites and electronic documents have many business advantages in addition to the access they provide:

- They are more likely to be compatible with a variety of devices including smart phones and tablets.
- Users without fast internet speeds can disable graphics to increase download speeds, yet still read descriptions of the charts and pictures.
- Content becomes easier to find and read.
- Simple language is helpful for those not fluent in English.

In short, accessibility enhances the understanding and experience for all users.

Different ways to access information

There are many kinds of disabilities. Some are very noticeable; many are not. Below are examples of how some people with disabilities access websites and electronic documents.

Magnification and Color Contrast Controls

Magnification tools enable users to increase text and graphics to a larger size. Color contrast controls change colors to help people see and perceive information on a screen. Users can change the color scheme of a page or website or turn off color all together and have their screens just display black and white. Those who need more control or features use specialized, full-featured software. Testing your electronic document for color contrast ensures that no matter what color scheme is used by the person accessing your document, the information will be visible to them.

Text spoken out loud

A wide variety of individuals benefit from having the information on a webpage or electronic document read to them. This includes those that are blind, have learning disabilities, or need more input to hold their attention. A wide variety of software is available to provide this type of support, from very simple built-in software, to complex, full-featured software that enables navigation of large documents. Properly structuring documents and adding alternative text ensures that all information included in a document can be read aloud.

Multimedia

Closed captions are transcripts that interface with a video. People who are hard of hearing or deafblind, as well as those who have learning disabilities, sound sensitivities, or auditory processing disorders may use closed captions or transcripts. Many people choose to use captions to reduce noise in their work areas or watch videos in public or noisy areas.

Description, often termed “audio description” or “video description” is the practice of providing verbal descriptions of key visual information included in videos. For recorded media, professional describers create a second sound track that editors then add to the media. This is helpful for those with difficulty seeing or comprehending visual information.

Text transcripts supplement captioned videos and make podcast or audio recordings accessible. Some people prefer to read the transcript instead of watching the video. In addition, it is easier to download a transcript than a video.

Keyboard Only

Many individuals are not able to use a mouse to control their computer. In place of a mouse, they use a keyboard, speech input, and/or specialized computer equipment. People who are blind use specialized software and keyboard shortcuts to operate their computer. Properly structuring documents with accessibility in mind ensures that all people can access your document no matter how they interact with their computer.

Terms used in accessibility

You may see different terms when learning about document accessibility, some of which are in this document. Assistive technology (AT) is a software or device “that is used to increase, maintain, or improve functional capabilities of individuals with disabilities” ([Section 508 website](#)). This includes alternative keyboards and computer mice, magnification software, screen-reading software, and many other types of devices.

Accessibility of electronic information and websites, means individuals with disabilities “have access to and use of information and data that is comparable to that provided to [those] who are not individuals with disabilities” ([Access Board website](#)) Sometimes people confuse accessibility with usability. Usability is equally important but refers to how easy it is for a person to use the document, and if it achieves the creators intended goals.

Another term people use is “universal design.” When creating with universal design in mind, you make documents where “flexible approaches...can be customized and adjusted for individual needs” ([National Center on Universal Design for Learning](#)).

Finally, you may have heard of the term “accommodation.” “Reasonable accommodation is any change or adjustment to a job or work environment that permits a qualified applicant or employee with a disability to participate in the job application process, to perform the essential functions of a job, or to enjoy benefits and privileges of employment equal to those enjoyed by employees without disabilities” ([EEOC Website](#)).

The information included in this guide is not considered an “accommodation” because accessibility practices built into electronic documents are for anyone to use. Changes put in place because of the needs of one specific employee on a case-by-case basis are accommodations. If someone were to request a copy of this document in braille, then the braille document would be considered an “accommodation.” Employees requiring accommodations to assist them in performing their job duties should contact their Human Resources department.

People who create documents must take steps to ensure everyone can access the information. With the communication tools that exist today, this is a quick and easy process. Not only is it the law, it is the right thing to do.

MICROSOFT (MS) WORD 365 DOCUMENTS

Microsoft Word has many features built in that make it easy to create accessible documents that meet state and federal guidelines. Once learned, these tools can save time when used from the beginning of the document creation process.

Note: This document does not teach you how to use Microsoft Word 365. It only covers making documents accessible. Refer to a Microsoft Office user manual or press F1 for help with Word.

Document structure

Documents have hidden code called the Document Object Model (DOM). This platform-and language-neutral interface tells the program how to access and display content, structure, and style of the document. In addition, the DOM allows for easy navigation by keyboards and screen readers. Advantages for the author include self-generating table of contents, easy navigation within the document, and consistency in presentation.

We used to format text by manually changing individual attributes, creating variation within and between documents. Microsoft Styles (more on Styles later) gives the writer preset groups of styled fonts for various types of text. With the DOM, styles do more than look consistent; they provide necessary information to the end user's computer. For example, Normal text and Headings made with Styles become computer-coded tags:

Normal text	→	<P>
Heading 1	→	<H1>
Heading 2	→	<H2>

Tagged headings allow users navigating with keyboards and/or screen readers to scan document headings to find the desired information. These headings also enable self-generating table of contents.

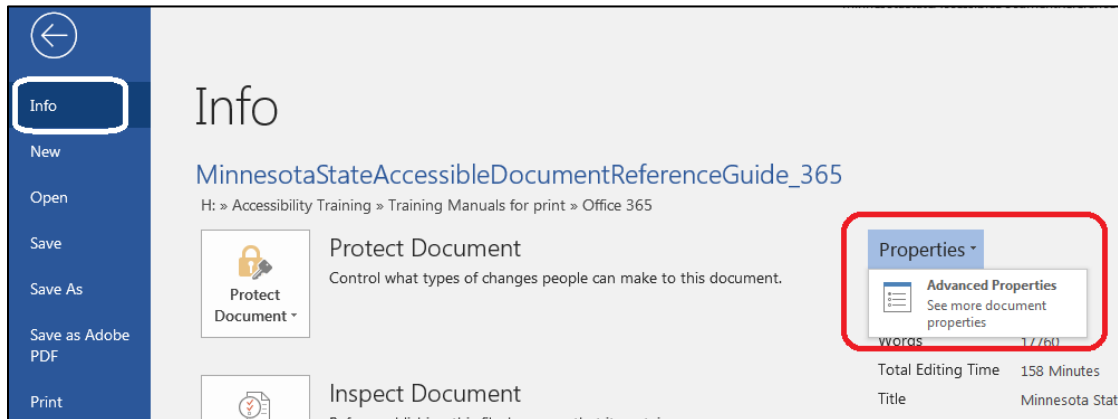
Title and subject

All documents must have a title and subject. The title is the first thing read by a screen reader when the document is opened. Your agency may require something different from what is here. Check with your supervisor if you are unsure of your agency's needs.

- **Title:** This should be the same as the document title in your document. For example, the title of this document is "Minnesota State Accessible Document Reference Guide Office 365."
- **Subject:** The subject conveys the scope of the document. The subject of this document is Microsoft Office 365 Accessibility. For some documents, the Title and Subject may be very similar or the same.
- **Author:** This field should contain your division and your name or initials. If the final document will be a PDF, there is no Company field. You should then start the Author field with your agency name or initials.
- **Company:** This should autopopulate with either your agency name or State of Minnesota.

Edit title and subject

1. On the **File** tab, select **Info**. (Alt+F+I).
2. Select **Properties** and then choose **Advanced Properties** to open the dialog box. (QS).
3. Select the **Summary** tab.
4. Type the **Title**, **Subject**, and **Author**, in the text boxes. There is a text box for the **Company** name if it doesn't automatically populate.

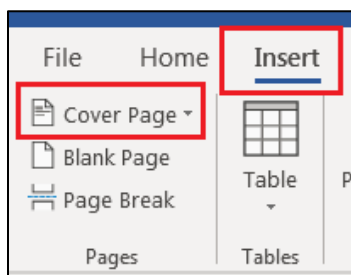


Headers, footers, and cover pages

It is common practice to place a lot of information, including the document title, version number, and date in the header and/or footer. This is fine, but the information must also appear in the document itself too. Screen readers do not automatically read headers or footers. The user must use a keyboard command to access and read the information placed there. A cover page containing the same information is an easy solution to ensure the screen reader reads all information at least one time.

Cover pages are useful for large documents. However, if your document is very short, you may not want a cover page. In that case, place the information contained in the header somewhere in the main content area on the first page of your document.

If your final document will be a PDF, you can tag the information contained in both the header and footer. However, hyperlinks inside the header or footer will not work, even if tagged. Make sure no hyperlinks are placed in those areas of the document.



Headings

It is important to understand and use headings properly. Headings provide the structure, or outline, to your document. They make it easy for everyone to find information contained within your document. Headings are found in the Styles group and panel. Almost all documents, even simple ones, need headings.

Headings must be used in the proper order. **Only use Heading levels 1 – 6.** Headings 7, 8, and 9 are not recognized by most types of assistive technology.

- I. **Heading 1:** Main topic – can also be used for the document title
 - A. **Heading 2:** Subtopic of Heading 1
 - 1. **Heading 3:** Subtopic of Heading 2
 - a. **Heading 4:** Subtopic of Heading 3
 - i. **Heading 5:** Subtopic of Heading 4
 - 1. **Heading 6:** Subtopic of Heading 5

You should never skip heading levels when going down. For example, do not go from a Heading 1 directly to a heading 4. You must go down in numerical order 1, 2, 3, etc... However, it is ok to skip levels to go back up. You can go directly from a heading 5 to a heading 2 to start discussing the next high-level topic in your document.

Common heading mistakes

There are four common mistakes seen with headings:

- Selecting the wrong heading level.
- Choosing a heading for the look of the font (size, color, etc.).
- Skipping a heading level in a pre-made template.
- Using a heading because they wanted the text to be large, bold, and colorful.

Always double check your heading levels. This is easily done by checking the structure of either the Navigation Pane or a Table of Contents.

Formatting documents

There are multiple ways of formatting text in Microsoft Word, but some of them do not create accessible documents. This section covers the proper formatting and use of Styles (a feature of Microsoft Office), color, columns, and white space for full accessibility.

State branded templates

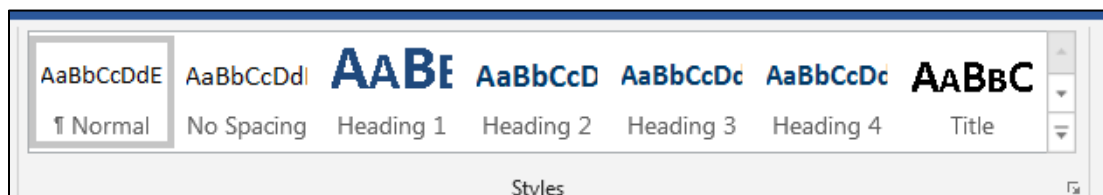
Minnesota Management and Budget has a full set of branded templates for MMB employees. They can be found on the [MMB Communication's page \(https://mmb.extranet.mn.gov/mmb-extranet/mmb-intranet/employee-resources/communications/index.jsp\)](https://mmb.extranet.mn.gov/mmb-extranet/mmb-intranet/employee-resources/communications/index.jsp).

All other state agencies should also have templates with the state branding available for their employees. Check with your supervisor or accessibility coordinator to see where your agency-specific accessible templates are located. If your agency does not have any templates, consult the [Minnesota Branded Document Template page \(https://mmb.extranet.mn.gov/mmb-extranet/enterprise/minnesota-brand/document-templates/index.jsp\)](https://mmb.extranet.mn.gov/mmb-extranet/enterprise/minnesota-brand/document-templates/index.jsp).

The branded templates should have a complete style set ready to use with very little modification necessary. Important: When using a template, it is easy to “break” the accessibility components. Be sure to use styles, headings, etc. properly, and always check your final document for full accessibility.

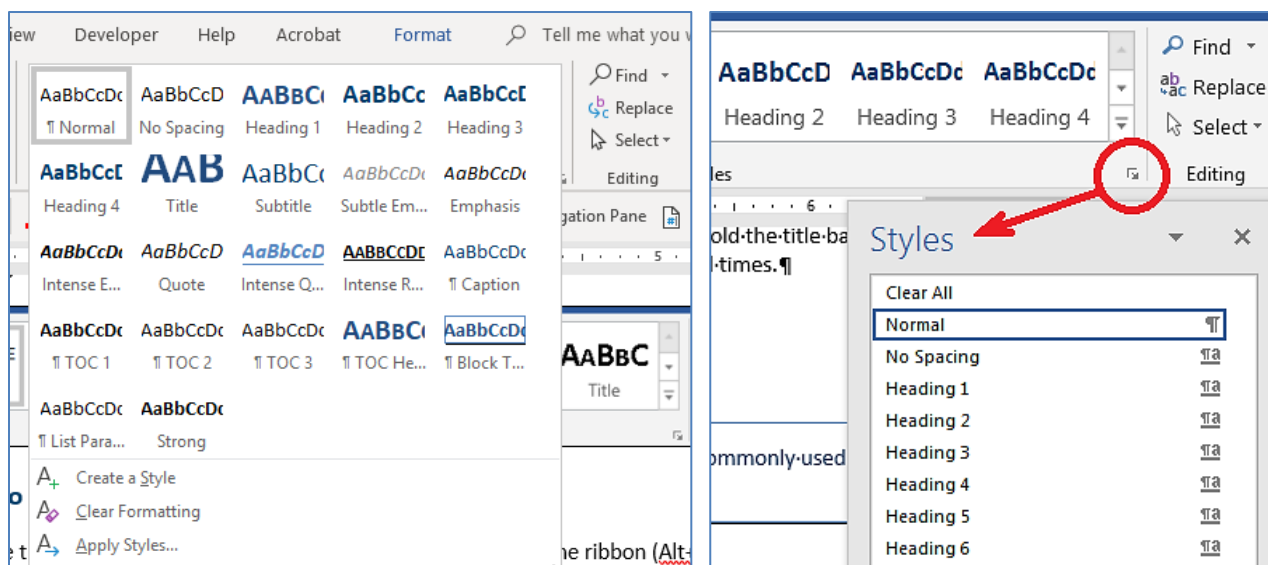
Styles

The **Styles group** is a prominent feature of the Home tab in Microsoft Word. Proper use of Styles is a key component to making the document fully accessible. There are also distinct advantages for the author, including consistency throughout all documents and the auto-generated table of contents.



How to use styles

You can use the Styles found in the **Styles** group on the **Home** tab of the ribbon (Alt+H+L). However, I find I must open the styles group to access the different styles too many times for it to be convenient. It's faster and easier to open the **Styles Pane**. Once opened, the Styles Pane remains open until you close it or close your document.



Open the styles pane

1. Click the **Styles Dialog Launcher** button at the bottom right of the **Styles** group (Alt+Ctrl+Shift+S). The Styles Pane opens up.
2. The style pane may be docked (attached) to the side of the screen. Click and hold the title bar of the pane and move it to the side until it is docked (some people prefer to leave it floating).

Format new text

1. Select the desired style in the **Styles** group or pane.
2. Type your content.

Format existing text

Titles, subtitles, and headings

1. Click anywhere in the line of text.
2. Select the desired style in the **Style** pane.

All other styles (except List Paragraphs)

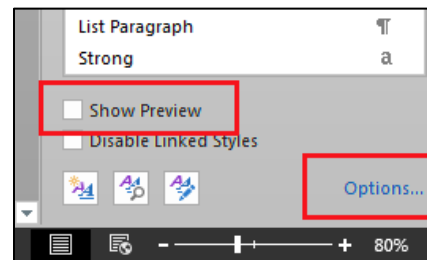
1. Highlight the text you wish to change.
2. Select the desired style in the **Style** pane.

Note: When opening a new document, the default text is “Normal.” This is the most commonly used font style in a document.

Previewing styles

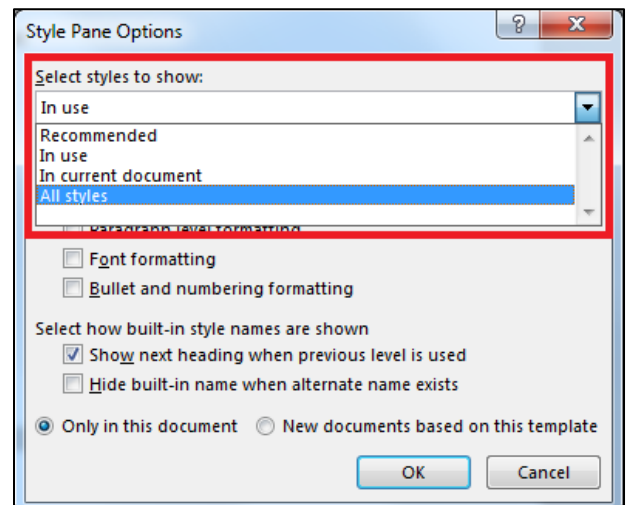
You can see what a style looks like before you assign it to your text by using the Show Preview command.

1. Open the **Styles** pane.
2. Check **Show Preview** at the bottom of the **Styles** Pane.



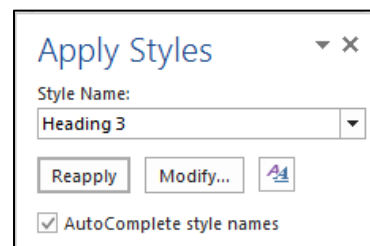
If the desired style is not in the Styles pane, there are several options.

1. Click **Options** at the bottom right of the **Styles** pane to open the **Styles Pane Option** dialog box.
2. Click the drop-down arrow next to **Select styles to show**.
3. Select **All styles** (Ctrl+Shift+S).
4. Available styles are displayed in the **Styles** pane.



Use keyboard shortcuts.

1. Press **Ctrl+Shift+S** to open the **Apply Styles** pane.
2. Open the dropdown menu and choose the desired style.
3. Use the **Modify** button to modify the style if necessary.
4. Click **Reapply**.



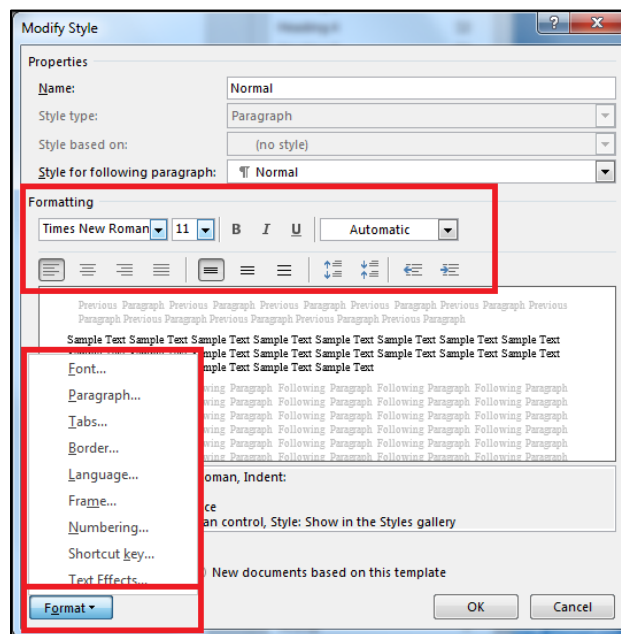
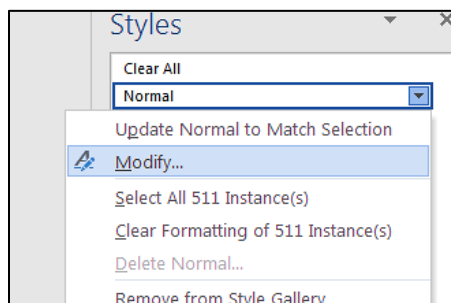
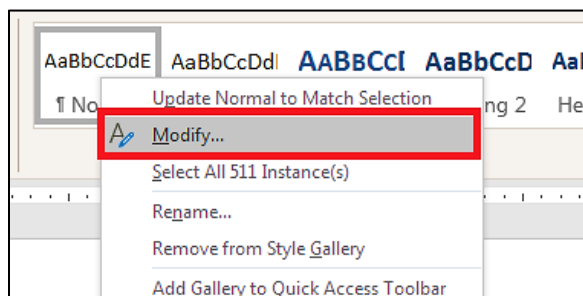
Modifying styles

There may be times when you need to change the attributes of a style for your document (be sure to stay within our state branding standards). This should not be a common occurrence as the state branded templates should meet your needs. However, there are times when you need to meet unusual requirements such as crating a document with large print for an accommodation request. The **Modify Style** dialog box allows you to change the following settings:

- Fonts
- Paragraphs
- Tabs
- Borders (and shading)
- Languages
- Frames
- Numbering
- Shortcut keys
- Text Effects

Access the modify style dialog box

1. Right-click the name of the style you wish to modify. You can right-click the style name in either the **Styles** group or the **Styles** pane.
2. Select **Modify** to open the **Modify Styles** dialog box.
3. The initial page allows you to change basic font attributes. For other changes, select **Format**, and then select the desired features.
4. After making desired format changes, click **OK**.
5. Click **OK** to close dialog box.



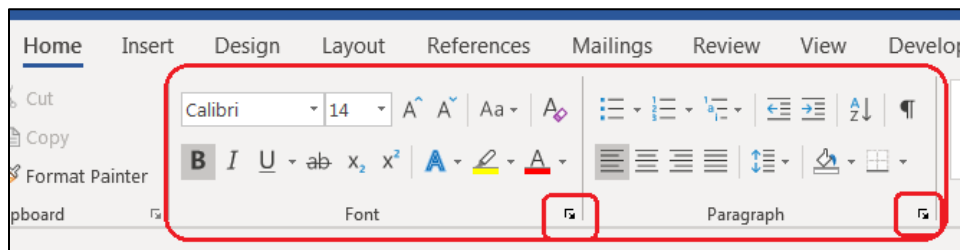
Important!**Do not change the style name.**

Computers and Assistive Technologies **ONLY** recognize existing Microsoft style names.

Modify a single section of text

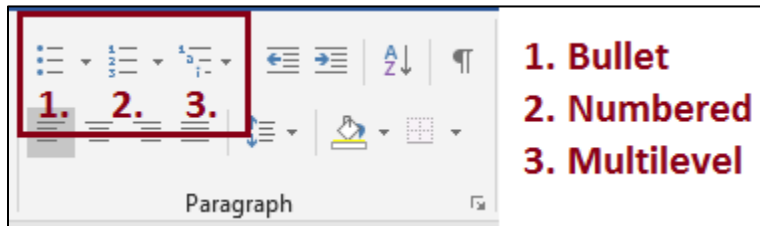
There are times when you only want to modify a small portion of text, without changing the entire style. Perhaps you want a section to stand out by using bold or italics. You can use the available settings on the Font and Paragraph groups. For more advanced settings, use the **Font** and **Paragraph Dialog Launcher** on the **Home** tab.

- To modify font settings, click the **Font Dialog Launcher** (Ctrl+D).
- To modify paragraph settings, click the **Paragraph Dialog Launcher** (Alt+H+PG). More detailed instructions about paragraph settings are below in the **Spacing and Tabs** section of this document.



List paragraphs

List paragraphs include both numbered and bulleted lists. When typing a numbered list, Microsoft Word automatically uses the **List Paragraph** style. This includes automatically making a Multilevel List when using the **Tab** key.

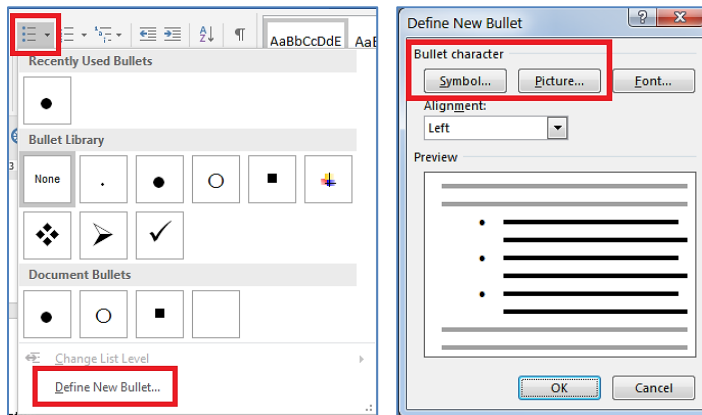


Bulleted lists

1. Highlight the information you want bulleted.
2. Click the **Bullet List** command button in the **Paragraph** group on the **Home** tab (Alt+H+U).
3. To change bullet styles, click the drop-down arrow on the **Bullets** button.
4. Choose the desired style.

Pictures should never be used in place of bullets (Example: a Minnesota state shaped icon). If you wish to use an unusual graphic for a bulleted list, you must define the graphic as a bullet point.

1. Open the dropdown menu on the **Bullet** button and click **Define New Bullet**.
2. Click on **Picture**. Navigate to the image to use as a bullet and then click **Insert**.



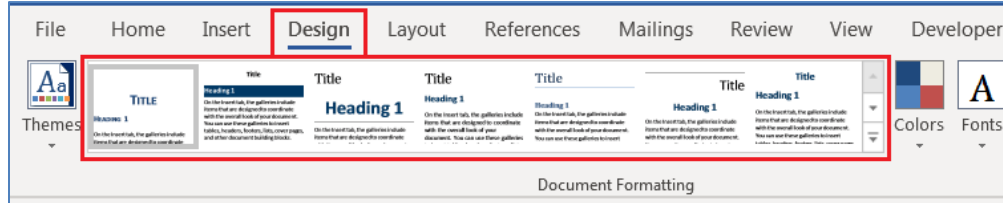
Numbered or multilevel numbered lists

1. Highlight the text you wish to format.
2. Click the drop-down arrow for either the **Numbering** or the **Multilevel List**.
3. Choose the desired style.

Style Sets

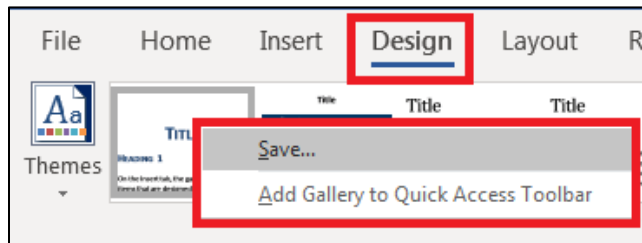
The state of Minnesota now has the updated branded templates. These templates must be used when creating documents. However, I have included this information for your personal use or if you are creating documents for outside organizations.

A set of stylized fonts grouped together is a **Style Set**. Microsoft Word comes with many preset style sets. A style set consists of stylized fonts for different uses such as normal text, headings, titles, list paragraphs, etc. Style Sets are found on the Design tab on the Ribbon.



If you want to keep a style set you have modified, you can save it as a template.

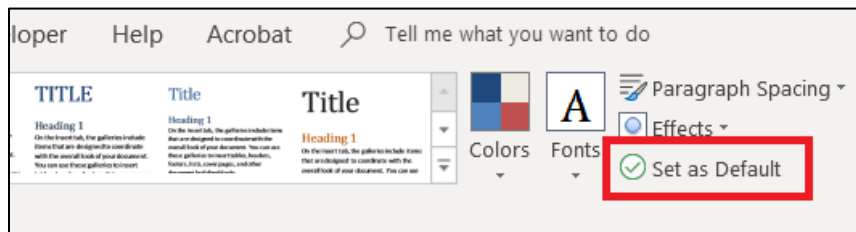
1. Click on the **Design** tab.
2. With the modified style set in use, right click on the far left style set and choose **Save...**
3. Name the style set and then click on **Save**.



Setting a default style Set

You may find or make a style set that you wish to set as your default style for all your documents.

1. To make a default set, on the Design tab click on **Set as Default**.
2. For convenience, you can add your favorite style set to the Quick Access Toolbar. Right click, and choose **Add Gallery to Quick Access Toolbar**.



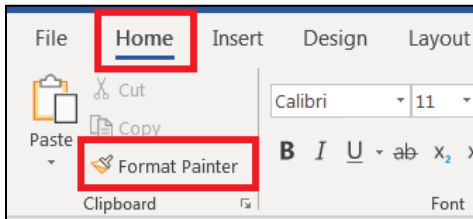
Format painter

The format painter allows you to quickly apply the same formatting to multiples pieces of text. This makes it easy to update multiple headings or change many words or sections to a specific look such as bold or italic font.

Use the format painter

1. Assign the desired style to a section of text. Leave your focus on that text.
2. Double-click **Format Painter** on the **Home** tab. Your pointer looks like a paint brush.
3. Highlight each section you want to format. The Format Painter automatically changes the highlighted section.
4. When finished, click **Format Painter** once (ESC).

Alternate: Use the format painter with a keyboard: Ctrl+Shift+C to copy and Ctrl+Shift+V to paste formatting.



Navigation pane

When working on larger documents, the **Navigation Pane** makes it easy to navigate within the document, see the layout, and change the order of sections in your document.

1. On the **View** tab, check the **Navigation Pane** check box in the **Show** group (Alt+W+K).
2. The **Search Document** text box and three tabs are at the top of the **Navigation Pane**. The tabs are:
 - **Headings:** Lists all headings in order.
 - Use the arrows in the pane to open and close subheadings.
 - Select a heading to go directly there without scrolling through the document.
 - Move an entire section of your document. Click and drag the heading to the desired location.
 - **Pages:** Shows thumbnails of all pages.
 - **Results:** Shows search results. Select the desired result to jump to that spot in the document.

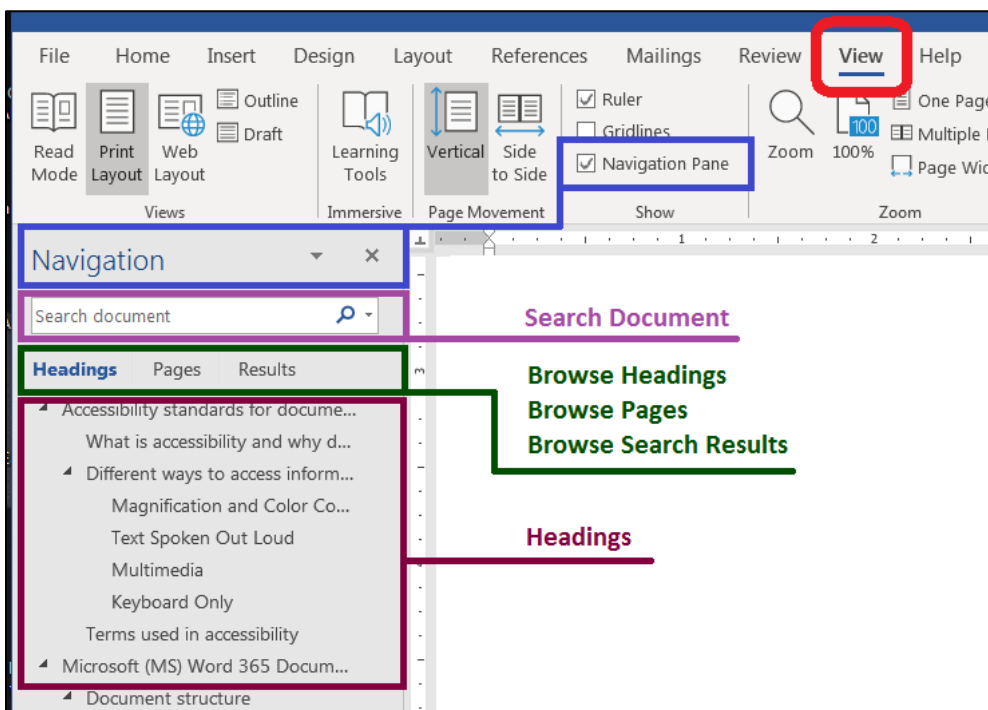


Table of Contents

A major advantage for the author of an accessible document is the self-generating table of contents (TOC). If you have ever manually made a TOC, you understand how much time you can save with this convenient feature. With just a few clicks of the mouse, the self-generating TOC is complete with page numbers and hyperlinks to each section.

Built-In (Automatic) vs Custom Table of Contents

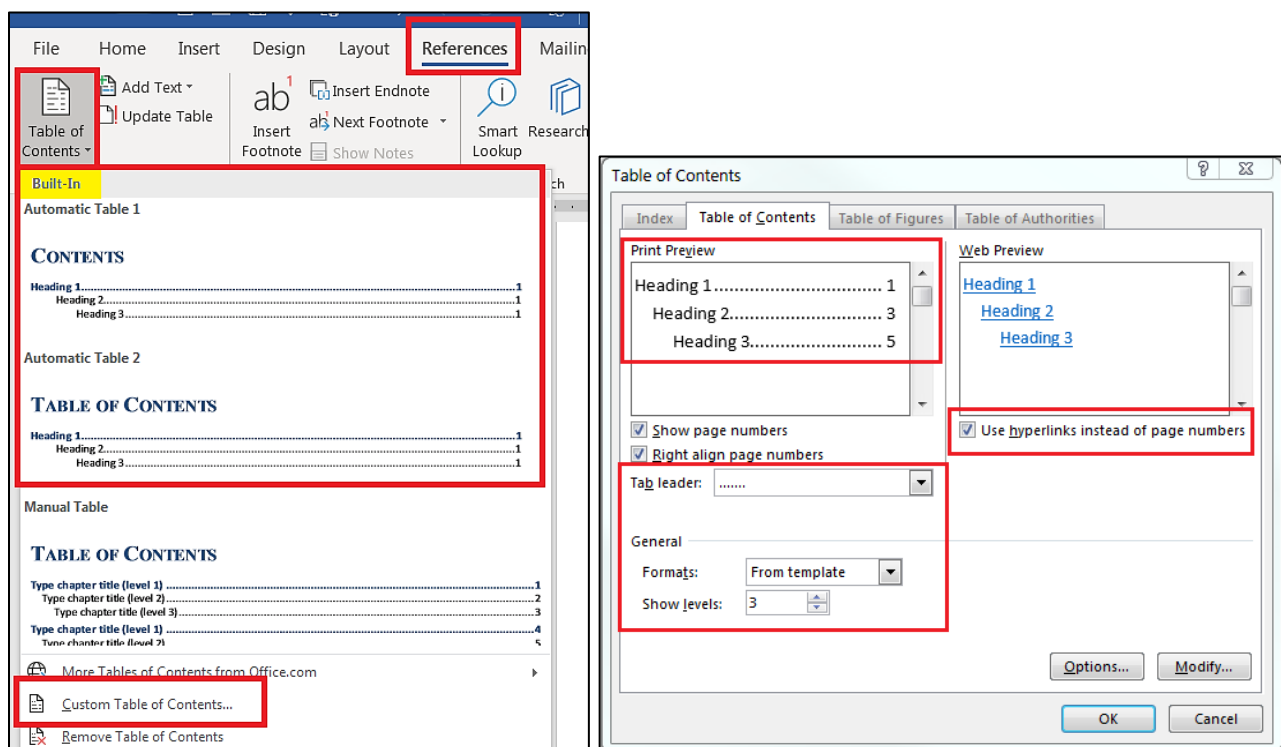
The Automated Table of Contents quickly inserts a TOC. You can change the looks of the text using the Styles commands. However, there are times when you want to have more control over the TOC. For total control over content and looks, use the Custom Table of Contents.

Insert the Table of Contents

On the **References** tab, select the **Table of Contents** button (Alt+S+T). Choose between the **Built-In** and the **Custom Table of Contents**.

Custom Table of Contents

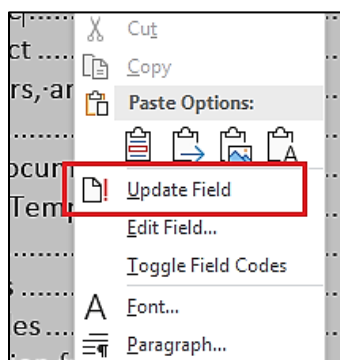
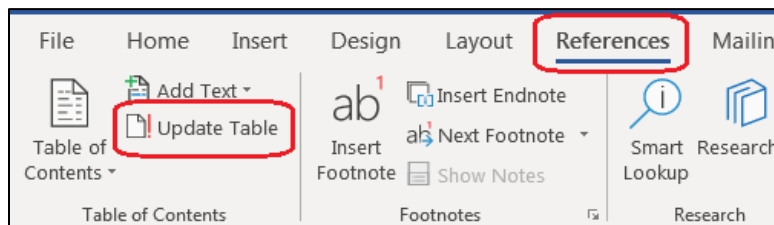
1. If choosing **Custom Table of Contents** to open the dialog box.
2. Choose desired options from the **Tab leader**, **Formats**, and **Show levels** settings.
 - a. **Tab leader**: choose line style (or no line) going from the heading to the page number.
 - b. **From Template**: match the TOC style to the document.
 - c. **Show levels**: choose number of heading levels to show.
3. Check **Use hyperlinks instead of page numbers**.
4. The **Print Preview** box allows you to see what the TOC looks like with your current choices.
5. Click **OK**. Review your TOC.
6. Add the Table of Contents Heading (not automatically added with the Custom TOC).



Update the Table of Contents

There are three ways to update the TOC.

1. Select the **References** tab. In the **Table of Contents** group, select **Update Table** (Alt+S+U).
2. Choose **Update page numbers only** or **Update entire table**.

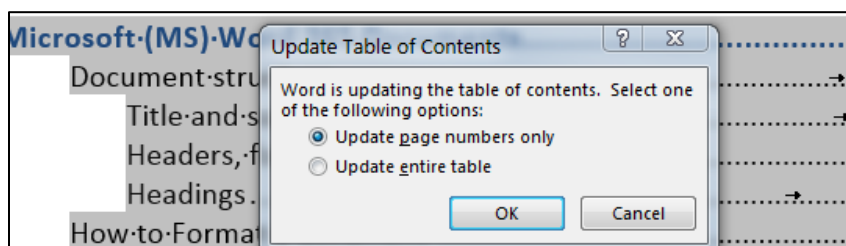


Alternate 1 (Only works with Automatic Tables 1 and 2)

1. Click anywhere on the TOC and then hover over the heading.
2. Select **Update Table**.
3. Choose **Update page numbers only** or **Update entire table**.

Alternate 2

1. Click anywhere on the TOC.
2. Right-click, and then choose **Update Field**.
3. Choose **Update page numbers only** or **Update entire table**.

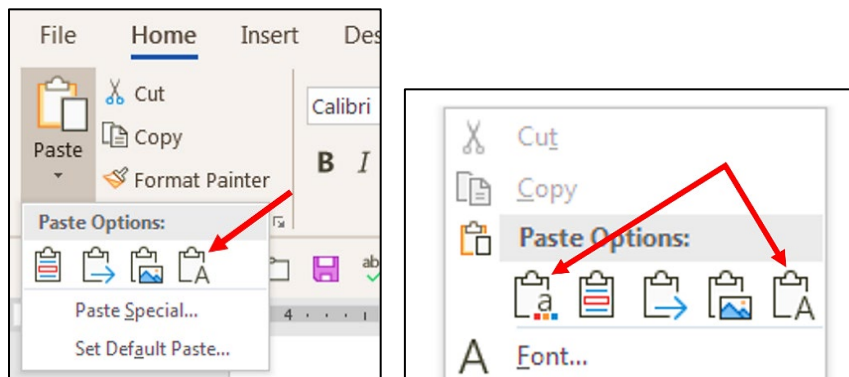


Import content from other sources

When importing text, tables, or other elements into MS Word, make sure to import only the information. You do not want to import any styles from other documents.

1. Copy the information from the source.
2. Right-click on the document where you want the information to be placed.
3. Choose either:
 - a. **Keep Text Only** for text (preferred); or,
 - b. **Use Destination Theme** (or **Use Destination Style**) for tables, graphs, charts, etc..
 You can also go to the **home tab**, Clipboard group, and use **Paste** and then **Paste Special** (Alt+Ctrl+V).
4. If you used **Keep Text Only**, highlight the text and choose the correct style from the **Style** Pane.

Note: There are eight different paste options to choose from, depending on the type of content. Choose Text Only, Use the Destination Theme, or Use the Destination Style.



Copy and Paste, keeping Track Changes

There are times when you may need to copy material and paste it into another document but need to keep the markup from the Track Changes feature in MS Word. This can be done if you follow these directions:

1. Turn off **Track Changes** in both documents.
2. Highlight the information in the source document you want copied.
3. Press **Ctrl + F3** and then **Ctrl+Z**. This cuts the information with the Track Changes information, and then replaces it back in.
4. Place your cursor where you want the content pasted in the new document. Press **Ctrl+Shift+F3** to place the content.
5. Turn **Track Changes** back on.

Color

Color enhances documents. It makes charts easier to read, brings ideas to life, and looks great. However, color presents a challenge for people who are colorblind or for those who print documents in black and white. Accessibility guidelines do not prohibit the use of color; they simply ask document creators to be selective about the colors they chose.

Contrast allowance for accessibility is determined through ratios, considering the size of the text and the contrast of light to dark. Therefore, there is no easy way to describe what level of contrast is okay. Make sure you have good color contrast. It is easiest to keep your form black and white. If you use color, check the contrast with a program such as the **Paciello Colour Contrast Analyser** (should be available upon supervisor request to all state users now or soon).

Best practices for using color

- Do not rely on color to give direction. If you are color-coding information, make sure there is an alternate way to get your point across (shapes, patterns, words, numbers, text, etc.).
- Make sure there is good contrast between font and background color. What looks clear to a sighted person may all blend together to a person with low vision or color blindness. When in doubt, check your color choices using a contrast checker tool. Some choices are:
 - Web Aim's online contrast checker <http://webaim.org/resources/contrastchecker/>.
 - Paciello Colour Contrast Analyzer (must be installed) <https://developer.paciellogroup.com/resources/contrastanalyser/>.
- Avoid palettes that rely mostly on a mix of reds, browns, and greens. If using a combination of these colors, use varying hue, saturation, and tint levels. Print a copy in black and white to check contrast.
- Do not use a combination of "state green" and white. That color combination is not accessible.



Examples

Color version:

X= on hold, **X**= ready, **X**= in progress

H= on hold, **R**= ready, **P**= in progress

Black and white:

X= on hold, **X**= ready, **X**= in progress

H= on hold, **R**= ready, **P**= in progress

****Required**

****Preferred**

****English**

****Spanish**

****German**

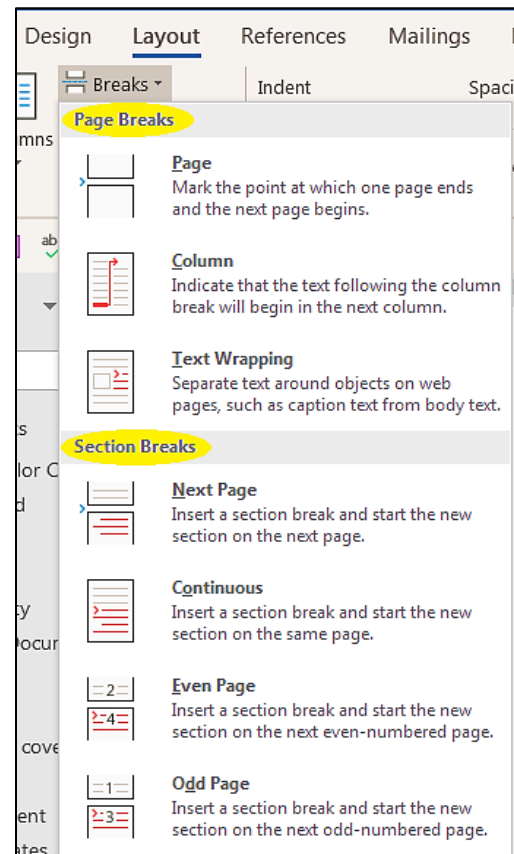
**State Green Text on a white background
fails color contrast standards**

White space

White space refers to any area of the page without text or graphics. White space can be used to make the page easier to read (e.g., blank spaces between paragraphs), make information easier to find (lists indented beneath headings), and make it aesthetically pleasing. Format white spaces correctly so assistive technology devices can interpret them properly. The following sections explain how to set up white space in your documents.

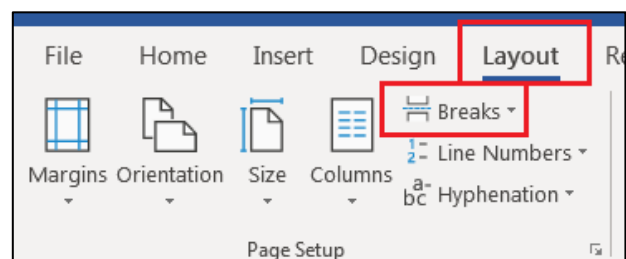
Breaks

- **Page Breaks:**
 - **Page Break:** ends the current page and starts new content on the next page.
 - **Column Break:** content following this break starts in the next column.
 - **Text Wrapping:** Separate text around objects on web pages, such as captions from body text.
- **Section Breaks:** allows you to format different sections independently.
 - **Next Page:** Inserts a section break and starts a new section on the next page. This is useful for changing the format of your document. Example: Going from portrait orientation to landscape orientation.
 - **Continuous Break:** used two different ways:
 - Inserts a small break and the next section starts on the same page.
 - Maintains an even amount of text in two or more columns.
 - **Even/Odd Page:** Used to start the next page on either an even or an odd page. Useful for printed documents where you need the next section to start on an even or odd page number.



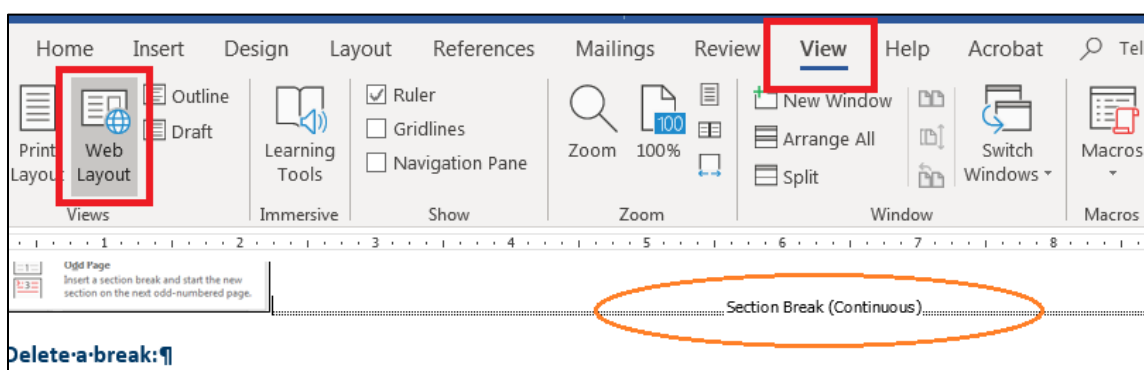
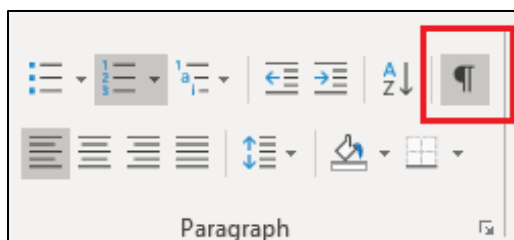
Access the Breaks menu

1. Click the **Page Layout** tab (Alt + P).
2. Select the **Breaks** button (B).
3. Select the desired type of break.



Delete a break

1. Click the **Show/Hide** button (Ctrl+Shift+8) on the **Home** page, **Paragraph** group to see the break.
2. Select the break to be deleted and press **Delete** on your keyboard.
3. It can sometimes be very difficult to find breaks, especially if they are at the far right side of the page. If you do not see the break, change to **Web Layout** on the **View** tab (Alt + W + L). Click on **Print Layout** (Alt + W + P) to return to the normal document viewing pane.



Columns

The way we format columns is important. Screen readers “read” pages from left to right, top to bottom unless they are told otherwise. This is fine for most text. However, formatting a page using the tab key makes the information confusing for those using ATs. Look at this example with the formatting marks left visible:

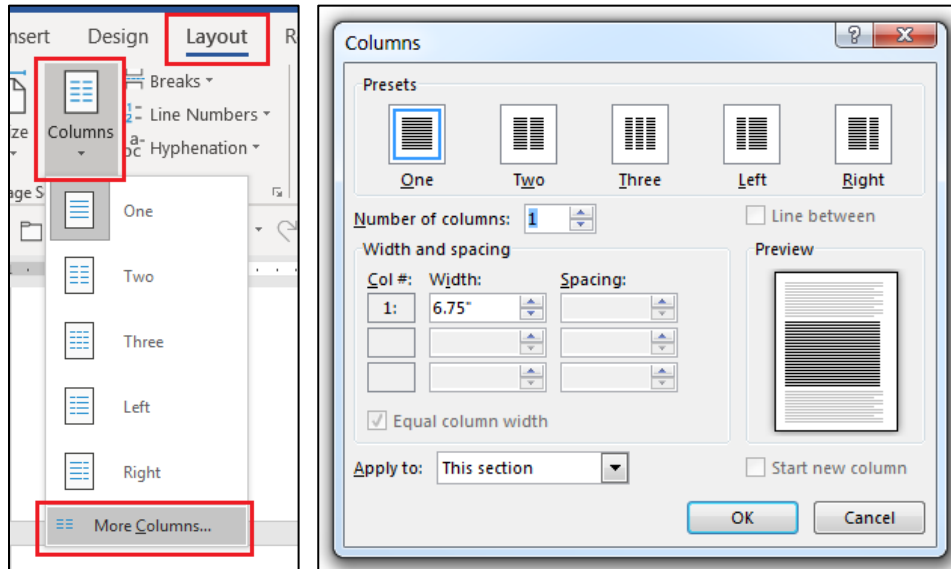
Employee-work-group:¶									
Lydia	→	→	→	→	Hassan	→	→	→	Sofia¶
(555)-251-6041	→	→	→	→	(555)-251-1027	→	→	→	(555)-251-5428¶
Lydia@state.us	→	→	→	→	Hassan@state.us	→	→	→	Sofia@state.us ¶

A sighted person would easily understand the intended layout. However, a screen reader reads this as “Lydia space space space Hassan space space space Sofia parens five five five parens dash two five one dash six zero four one parens five five five parens two five one dash.... You can see how confusing that would be to someone who cannot see the screen.

Improperly formatted columns render the information almost useless for blind users. You can still use columns, but you must format them properly.

Format columns

- 1 Click the **Page Layout** tab and select the **Columns** button (Alt+P+J).
- 2 Choose a preset option or, to customize your columns settings, select **More Columns**. Specify Number of columns and **Width and Spacing**. For unequal column widths, uncheck **Equal column width**.
- 3 Click **Apply to:** to choose a specific section or the whole document, and then click **OK**.



In the image below, the tab marks are gone, and screen readers have the necessary instructions to read the information in the correct order.

Employee work group:¶			Section Break (Continuous)		
Lydia¶		Hassan¶		Sofia¶	
(555)-251-6041¶		(555)-251-1027¶		(555)-251-5428¶	
Lydia@state.us ¶		Hassan@state.us ¶		Sofia@state.us ¶	
Column Break			Column Break		

Column breaks

When making columns, the text sometimes does not break where you want it to break. There are two ways of specifying where to break a column:

- **Column break:** This forces all text after the break to appear in the next column.
- **Continuous break:** This maintains an even amount of text in all your columns.

Apply a column break

- 1 Click on the location you want the break to start.
- 2 Click the **Page Layout** tab (Alt+P).
- 3 Select the **Breaks** button (B).
- 4 Select the desired type of break.

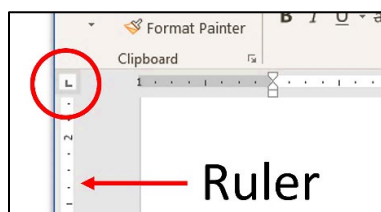
Tabs and indents

Depending on the settings chosen by the user, some screen readers read every blank space made by the space bar. In place of the space bar, use tab stops or create indents using the ruler.

Tabs

By default, there are no visible tab stops on the ruler. However, if you use the TAB key, it is set to stop every half inch by default. The tab stops can be customized to fit your needs:

- If you can't see the ruler, turn it on (**View** tab > **Ruler**, or Alt+W, R).
- Turn on **Show/Hide ¶** (Ctrl+*). It is very difficult to work with tabs when you cannot see the non-printable tab marks (arrows).
- Select the tab by clicking on the tab selector. You can view all seven tabs. I will discuss four in this manual. (For information on the other three, use the F1 key to open Help and search for Tabs).
- Click on the ruler at the top of the page where you want your tab set. Use the TAB key to move your content.



Left Tab: Place this where you want content to start (text is aligned to the right of the tab stop).



Center Tab: Place this tab where you want content centered.

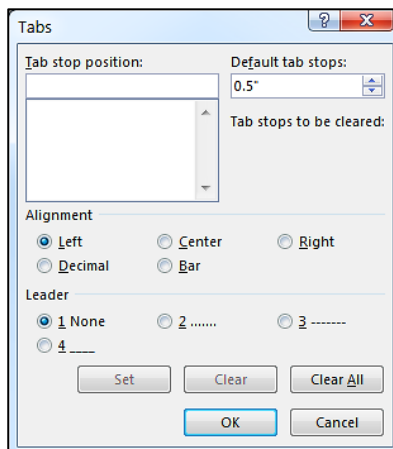
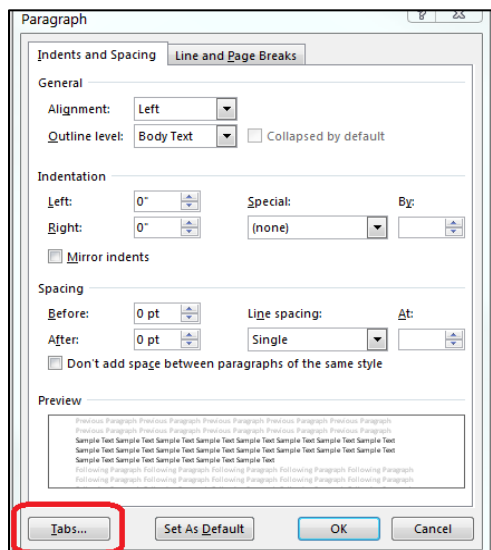


Right Tab: Place this tab where you want content to end (text is aligned to the left of the tab stop).



Decimal Tab: Numbers aligned by the decimal point. This makes columns of numbers appear very neat.

The Tabs dialog box can also be used to set tabs. It is found in the Paragraph dialog box (Alt+P, PG,).



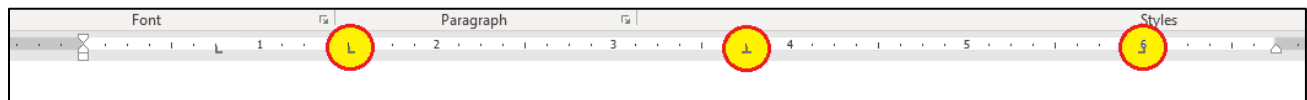
Using tabs

To place a tab:

1. Decide which type of tab you want to use (Left, Right, or Center).
2. Change the tab type if needed by clicking on the tab icon.
3. Use the tab key to insert a tab before the word/phrase/sentence you want to format.
4. Add the tab by clicking on the bottom half of the ruler where you want the tab.

Once a tab is placed:

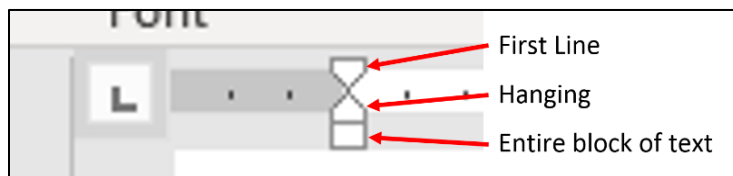
- **Move the tab:** click on the tab and drag it to the desired location on the ruler.
- **Remove the tab:** click on the tab and drag it off of the ruler.



Indents

Indents move entire blocks of text using the slide tabs on the ruler (just below the ribbon). This is useful for indenting a single paragraph or one line of text.

The tab had three sections. The top section indents the first line of the paragraph. The middle portion slide creates a hanging indent, and the bottom, rectangular portion of the slide moves the entire block of text. To use, highlight the text you wish to move and then move the tab slide to the desired location.



Indents and tabs in tables

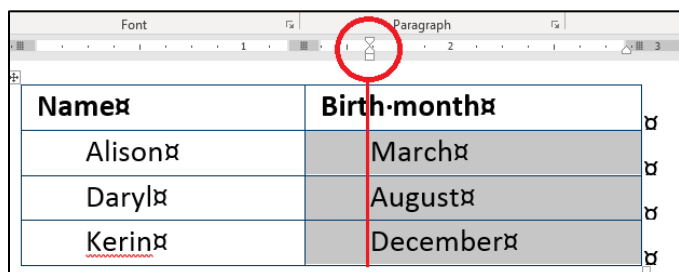
You can use both Indents and Tabs in tables. Look at the first table below. The names and months were aligned using the space bar. Once again, a sighted reader easily picks out the information. For people using screen readers, they may hear “Blank, blank, blank, blank, blank, Alison, blank, blank, blank, blank, blank, March...”

Name	Birth month
Alison	March
Daryl	August
Kerin	December

There are two ways of preventing blank spaces from interfering with how content is delivered by screen readers and braille displays. Adjust the spacing by using indents and tabs. Make sure the ruler is visible (**View** tab > **Ruler** or Alt+W, R).

Indents

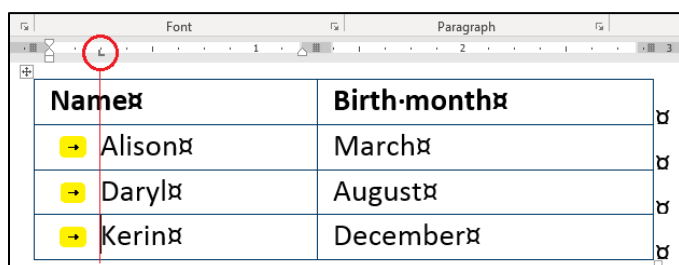
1. Highlight the text you wish to indent.
2. Use the slide bar to set the tab. (Ctrl+M, Ctrl+Shift+M and Ctrl+T, and Ctrl+Shift+T)



Name	Birth-month
Alison	March
Daryl	August
Kerin	December

Tabs

If you are in a cell and try to use the Tab key, the cursor moves to the next cell. The way around this is to use the Ctrl key at the same time as the Tab key (Ctrl+Tab). This sets the tab within the cell, and does not move you to the next cell. The tab is automatically set at .5", but again, you can change it using the tab settings discussed above.



Name	Birth-month
→ Alison	March
→ Daryl	August
→ Kerin	December

Note: For more information about using tabs, press F1 for help or refer to a Microsoft Word manual.

Paragraph dialog box

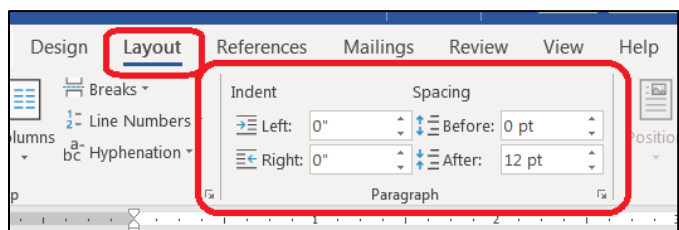
Use the Paragraph dialog box (Alt+H, PG) to adjust horizontal and vertical spacing.

Change paragraph spacing

There are two different ways you can access the paragraph spacing options.

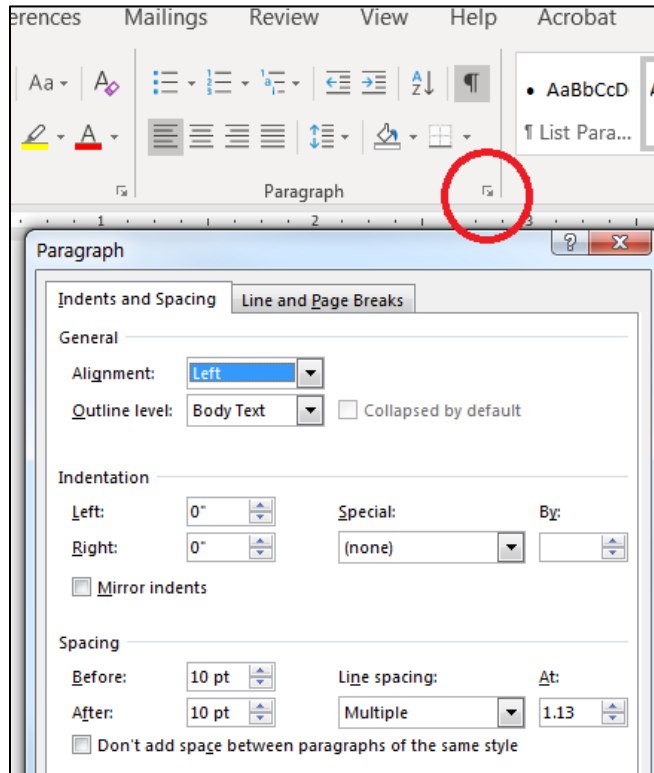
For basic controls:

1. Click on the **Page Layout** tab. The **Paragraph** group (Alt+P) has **Indent** (IL for left, IR for right) and **Spacing** (SB for before, SA for after) options.
2. Highlight the text you wish to affect.
3. Choose the appropriate spacing options.



For more Paragraph options:

1. Highlight the text you wish to affect.
2. Click the **Paragraph Dialog Launcher** (Alt+H, P, G) and select the **Indents and Spacing** tab.
3. Choose your **Indentation** and **Special** characteristics and **Spacing** settings.



Images

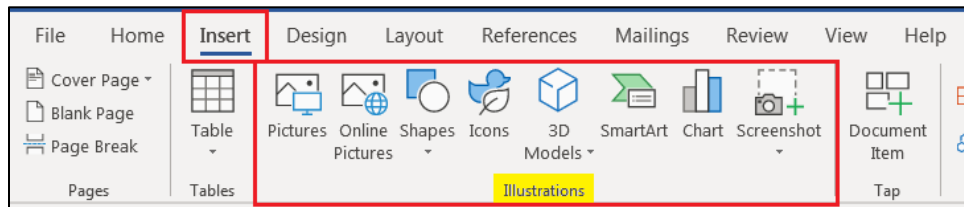
Images convey information in ways text cannot. They add visual interest and/or explain concepts difficult to describe with text alone. Accessibility guidelines do not prevent the use of images within documents. The guidelines simply state that for any visual content available for sighted users, there needs to be an alternate form of relaying the information to people with vision-related issues, including users of screen readers and braille displays.

Alternate text

Screen readers are unable to explain what a picture looks like to a user. That is where an Alternate Text (“Alt Text”) description comes in.

- Alt Text fully describes all non-text features in a document.
- Alt text should be clear, concise, and brief. Leave out extraneous wording such as “This is a photograph of...” (there may be times when you define image type. Example: Screenshot of...).
- Alt text should describe exactly what the image/graph/etc. conveys.
- Alt text should be kept to 140 characters or less when possible.

If you are in doubt whether something needs alt text, an easy way to decide is to look at the illustrations group on the Insert tab. If it is a Picture, Shape, Icon, SmartArt, Chart, or Screenshot, it most likely needs alt text.



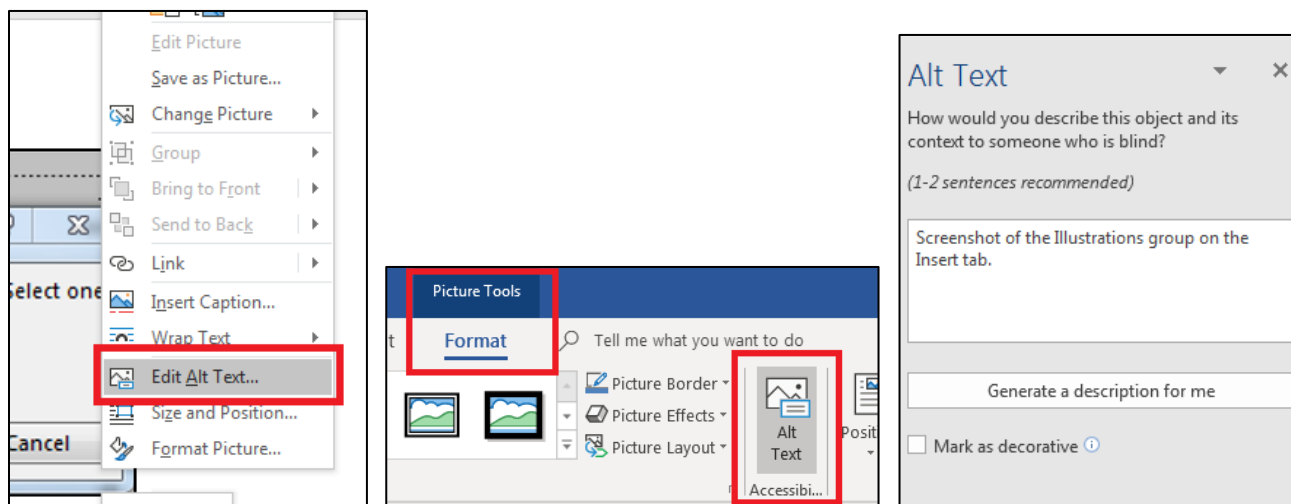
Exceptions:

- Tables are tabular information and do not need alt text.
- Divider lines and borders do not need alt text.

Alt text is the most challenging part of making your document accessible. It truly is an art form! The best advice I have is to pretend you are on the telephone with a friend and you are describing the image using as few words as possible.

Add alt text

1. After inserting your image, right-click on it, and choose **Edit Alt Text**.
Alternately, you can open the **Picture Tools, Format Tab**, and then choose **Alt Text**.
2. Describe the image in the text field. Use a clear, concise description. If the image shows something that is not written out in the body of your document, you must describe it. If it is something that is fully described within your document, you can refer to the existing text description.

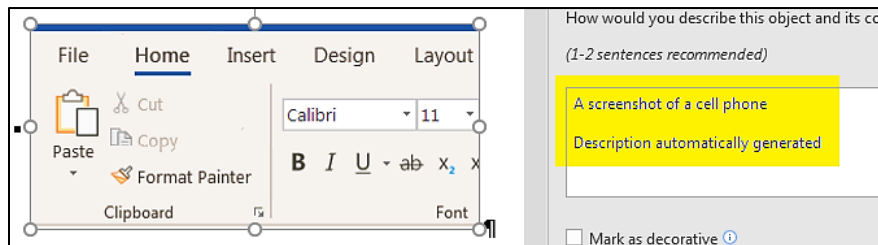


Examples:

- You've been working on a project for several years, and it's coming to a close. You send a memo to your team and have added a picture of a race car driving towards the checkered flag. Your alt text is "Race car nearing checkered flag – denotes project close to completion."
- You have an image of a bar chart. The chart is described in detail in the following paragraph. The alt text is "Bar chart, Chart Title. Full description in following paragraph."

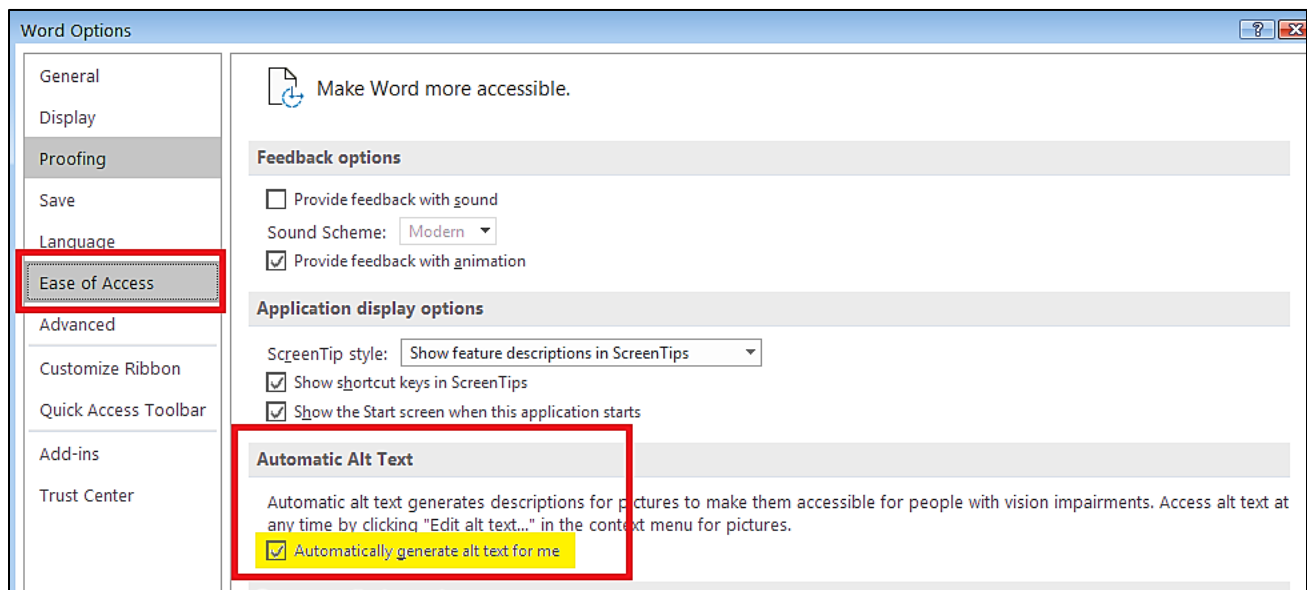
- You insert a pie chart, but do not have a table with the data, or a description of the chart in the document body. Your alt text starts with “Pie chart, Chart Title, followed by the tabular information listing the categories and percentages.
- Your newsletter has a pretty picture of a bench under a shady tree in a park for decoration. The alt text is “Decorative. Bench in park.”
- You have a dotted line to divide the paper into two sections. Check the Mark as decorative checkbox.

Note: Office 365 can automatically add alt text. I recommend this feature be turned off (at least until the software improves). Although it sounds like a great idea, it is not very accurate yet. In addition, some software electronic accessibility checkers may pass the inaccurate description as there is content in the field.



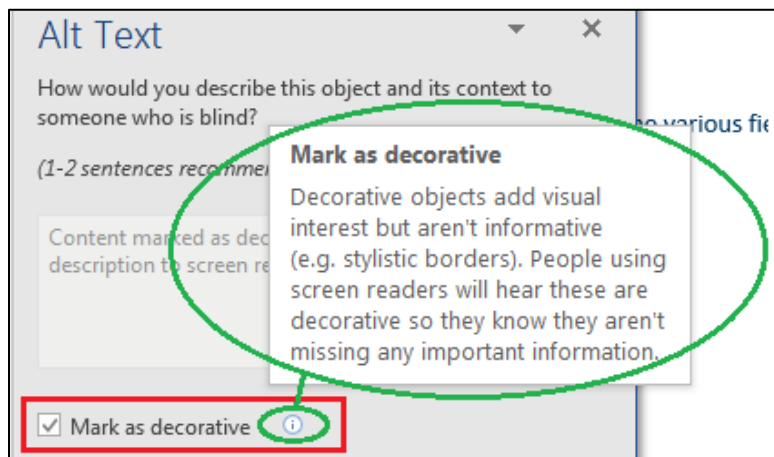
To toggle the automatic alt text on/off:

1. Open the **File** tab and then choose **Options**.
2. Select **Ease of Access** and then uncheck the selection box under **Automatic Alt Text**.



Decorative images

If you have an image that lends no information at all to the document, it can be marked as Decorative. Examples of decorative images include divider lines and borders, as well as page borders. This check box is located on the Alt Text pane directly under the text field.

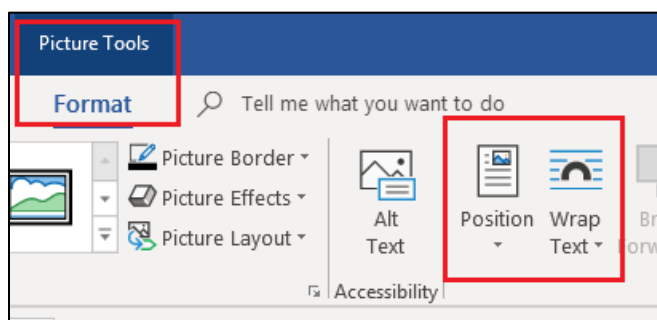
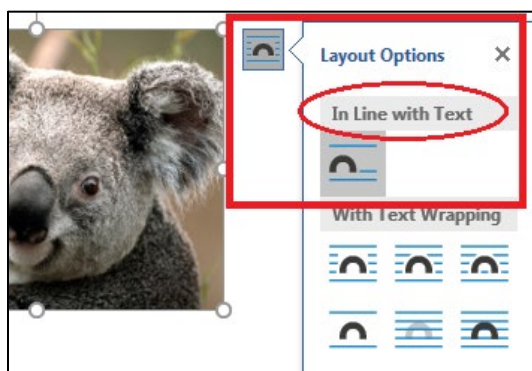


In Line with Text

Digital images “float” above the page until properly secured in place (think of taping a photograph into an album). To attach the image, set it “**In Line with Text**.” Although there are several options to choose from, the only accessible option is **In Line with Text**.

Set “In Line with Text”

1. Click on the image. The **Layout Options** button appears to the right of the image. Click on the button to open the menu and choose **In Line with Text** (Alt + JP + PO).
2. Another way of accessing the In Line menu is the **Picture Tools, Format** tab. Use either the **Position** or **Wrap Text** menus.



How to tell if an image is not In Line

Click on the image one time. If you see an anchor to the top left of the image, it is **not be In Line**. Next, open the Layout Options by selecting the icon on the screen to see which options are highlighted and which radio buttons are selected. In this screenshot, the “Move with text” radio button is selected. If either that radio button or the one below, “Fix position on page” is checked, you can expect to have problems. In addition, you can see that one of the options under With Text Wrapping are selected.

If you take a closer look, you can see how the sentences are cut in half when the image is inserted incorrectly. Your visual users will have difficulty reading the text. In addition, the alt text may not be read at the appropriate location within the text of the document.



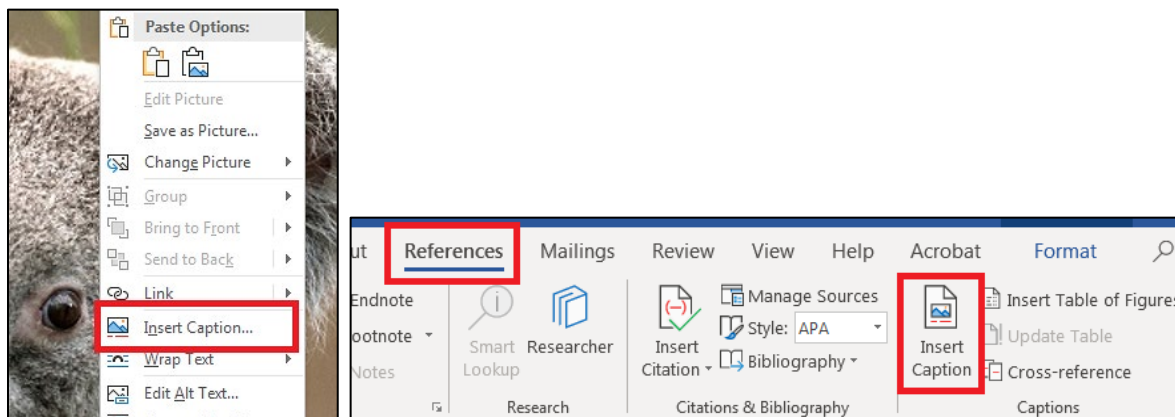
Text wrapping

- Use the **Columns** feature on the **Page Layout** tab to wrap text around the image (Alt+P, J, C).
- Place image in desired location using **Left**, **Center**, or **Right Justification** in the **Paragraph** group.
- Two or more images may be placed on the same line. Place each image **In Line with Text**.

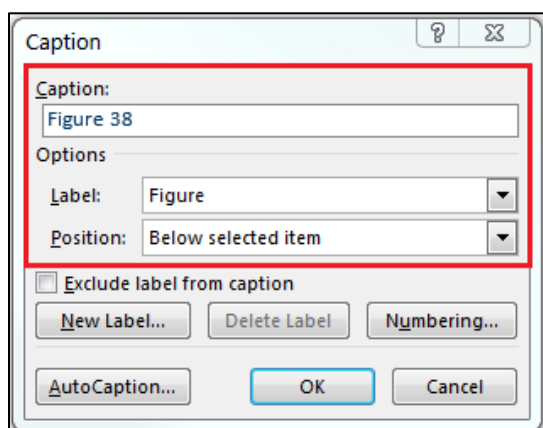
Caption image (optional)

You can caption images and tables. This is a very useful tool to increase accessibility for documents with many images and/or tables.

1. Click once on the image (or table) to select it.
2. Right click and select Insert Caption.
3. Alternately, select the References tab and then select Insert Caption (Alt+S, P).



4. Caption the figure using the **Caption:** field. Ensure the Label field is set on **“Figure.”** You can set the **Position** however you like (above or below the figure), but keep it consistent throughout the document.
 - Figure captions traditionally go below the figures.
 - Table captions traditionally go above the tables.
 - The numbering is automatically updated as figures are captioned.
5. Click on **Numbering...** to change your numbering options, and then click **OK**.



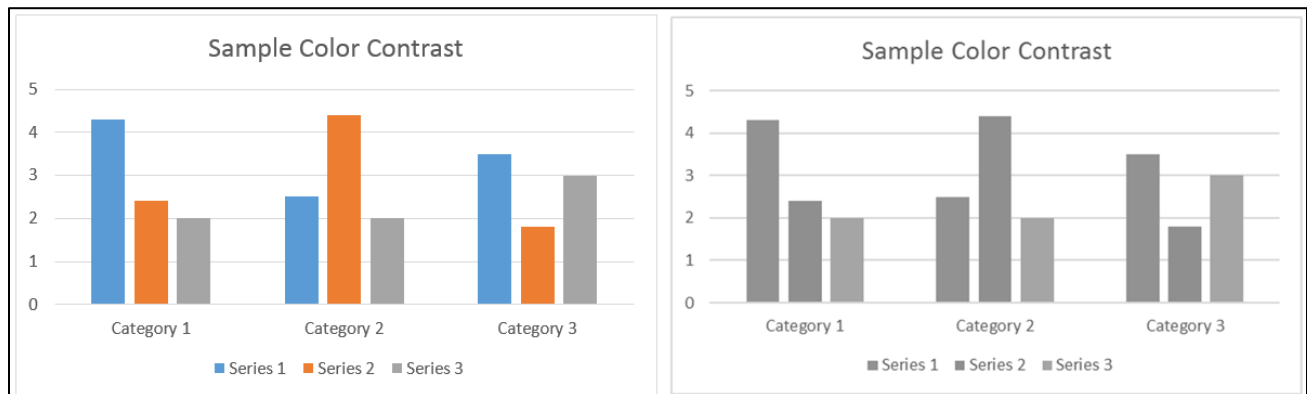
Graphs and charts

Graphs are an excellent way of imparting a lot of information in a very little area. Because of this, they can be difficult to work with.

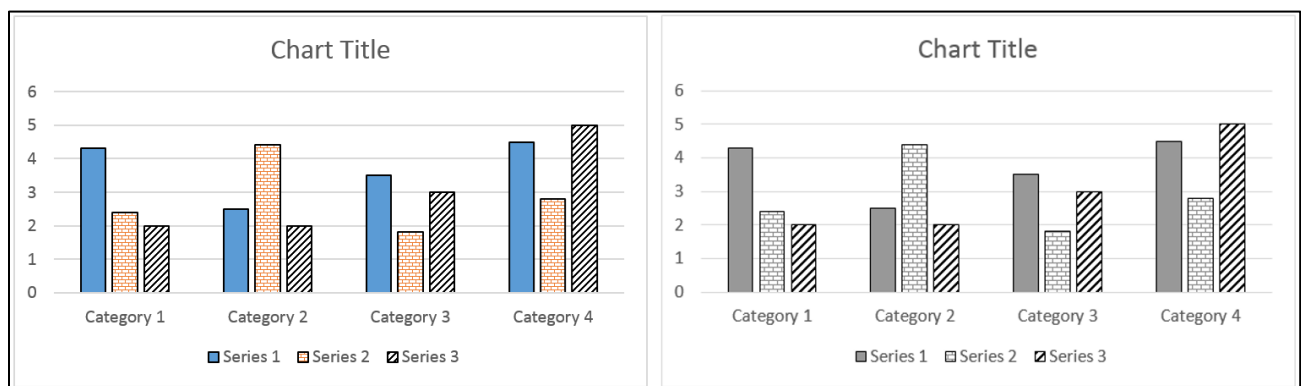
Most people design graphs in full color. Color adds visual appeal and makes the information stand out. Keep in mind many users print graphs in gray scale. In addition, many users have some form of color blindness. Use formatting tools to change colors, styles, and textures to ensure good color contrast for both colorblind users and those who print in gray scale. Examples of these techniques include placing the numbers on a pie chart or using different types of dotted and dashed lines in a line graph.

Note: The default chart colors in Microsoft Word (and Excel) are *not accessible*. They do not have enough contrast. Change the colors to increase the contrast. State employees should use templates with state approved colors. However, you must check that colors have enough contrast by using a color contrast checker and by printing the chart in black and white.

This is an example of the default chart colors with my current settings (your default settings may be different from those shown here). When viewed in gray scale, you can see there is very little difference in the three shades of gray.

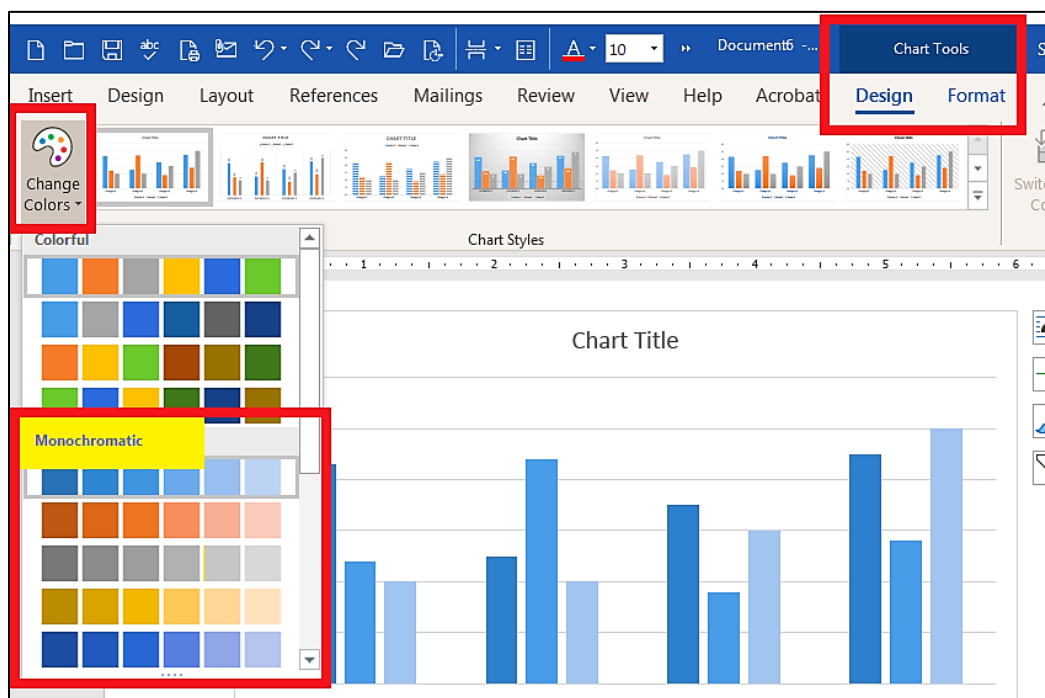


I have revised the texture settings on two of the bars so that whether viewed in color or in gray scale, there is enough contrast. Note: in Series 2, the orange color does not meet WCAG 2.0 standards. However, it is outlined in black which does meet standards. This is one way to use lighter colors and still have enough contrast.



Another good way to adjust contrast is to pick a monochromatic color scheme.

1. Click on the chart to open the **Chart Tools** tab, and then click on the **Design** tab (Alt + JC).
2. Click on the **Change Colors** button (H), and choose from the monochromatic options. You can also choose colors for each data point using the **Format Data Series** menu. If you have more than a two or three data sets, you have to adjust a few colors, but it is quicker than changing all of them.



Alt Text

Add Alt Text descriptions to your charts and graphs so listeners can also access the information.

Add alt text

1. After inserting your chart, right-click on it, and choose **Edit Alt Text**. Alternately, you can open the **Picture Tools, Format Tab**, and then choose **Alt Text**.
2. Describe the chart in the text field. Use a clear, concise description. If the chart has information that is not written out in the body of your document, you must describe it. If the information is fully described within your document, you can refer to the existing text description.

Complex graphs and charts

Some charts are simple; therefore, the alt text is short and easily understood (pie charts are a good example). However, some charts include multiple graphs to compare a lot of information. There are several options to handle the alternate text of a complex chart:

- Put the original table above or below the graph.
- Put the full information on another page or in another document and link to it.
- Put the full information in the text on the same page. Use the alt text to refer to the document text.

Tables

Tables are valuable tools for compressing large amounts of data. However, an improperly formatted table can be impossible for a blind user to understand. You must insert and format tables correctly for everyone to understand the information contained within.

General guidelines

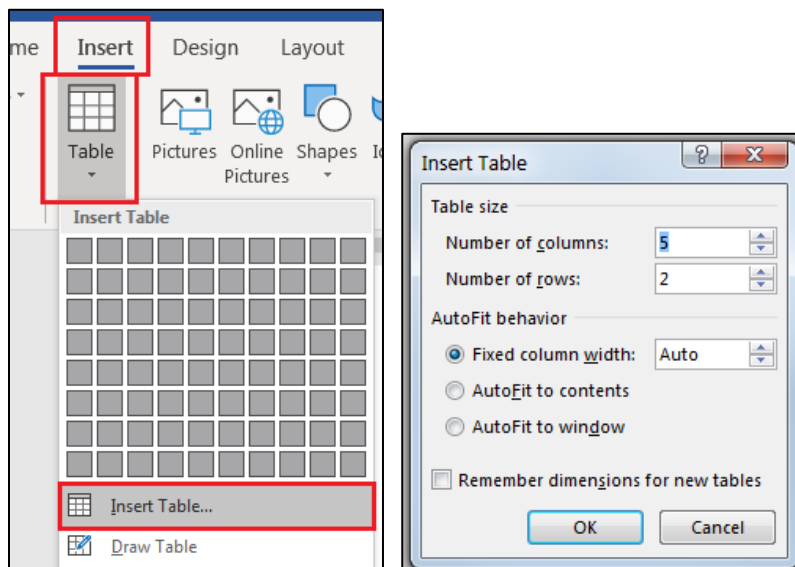
Screen readers read tables from left to right, top to bottom. Sighted people can easily understand the layout of a table but imagine if you could only hear tabular information read aloud. Proper formatting of tables helps readers access and understand the information provided in a table. Format your table properly:

Use one or more of the following:

- Meaningful title:
 - Structured as a heading or caption, or;
 - Introductory sentence defining the table, or;
 - Bookmarked.
- No blank cells: Assistive technology may not recognize a cell exists if it is left blank. There are several ways to handle a blank cell:
 - Add a dash (-), or;
 - Add NA (Not Applicable or Not Available), or;
 - Place a zero (0) – but only if the content should be a zero, or;
 - Use the words “Blank” or “No Data.” Change the font color to white so it is not visible.
 Note: if you have a subheading followed by an entire row of blank cells, do not add the word “blank” or “no data”. To decide if the word “blank” is necessary, read the information out loud skipping the blank cells. Does the information make sense? If so, leave it out.
- No merged or split cells unless it is absolutely necessary. Merging or splitting cells can become very confusing for a listener. If you must merge or split cells:
 - Tab through your table and make sure all cells are read.
 - Review the order that the cells are read.
 - Make sure information makes sense when read left to right, top to bottom.
- Use solid lines for borders. A screen reader may interpret dotted lines as a graphic.
- Do not use tables for layout purposes. For example, if you need two columns of text, use the columns feature, and not a two-column table.
- Do not use blank rows or columns as spacers. Adjust the line spacing instead.

Create a table

1. On the **Insert** tab, select the **Table** button.
2. Select **Insert Table** (Alt+N+T+I).
3. Enter the number of columns and rows you want, choose the **AutoFit behavior**, and click **OK**.

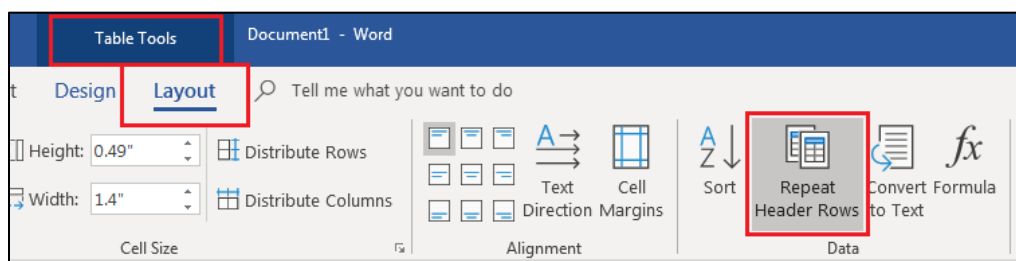


Identify header row

It is important to identify the header row of all tables for two reasons. First, it tells the computer how to code the background information. Second, if the table spans multiple pages, the header row repeats at the top of each page. This makes it easy for people to understand the information on long tables. You must still have the header rows identified for short tables that do not span multiple pages.

There are two ways to identify the header row.

- Highlight the header row(s).
- Select the **Layout** tab on the **Table Tools** tab (Alt + JL).
- Select the **Repeat Header Rows** button (J).

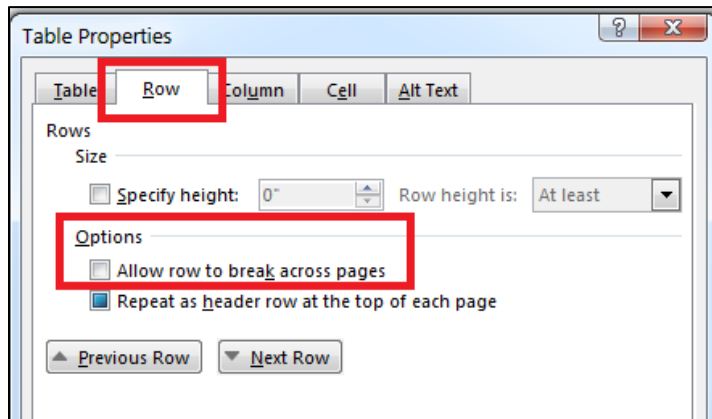


Alternatively:

1. Highlight the header row. Right-click and select **Table Properties**.
2. Select the **Row** tab and check the box labeled, **Repeat as header row at the top of each page**.

Restrict the page width

1. Highlight the table and then right-click and select **Table Properties (Alt + JL + O)**.
2. Open the **Row** tab.
3. Uncheck box labeled **Allow rows to break across pages**.

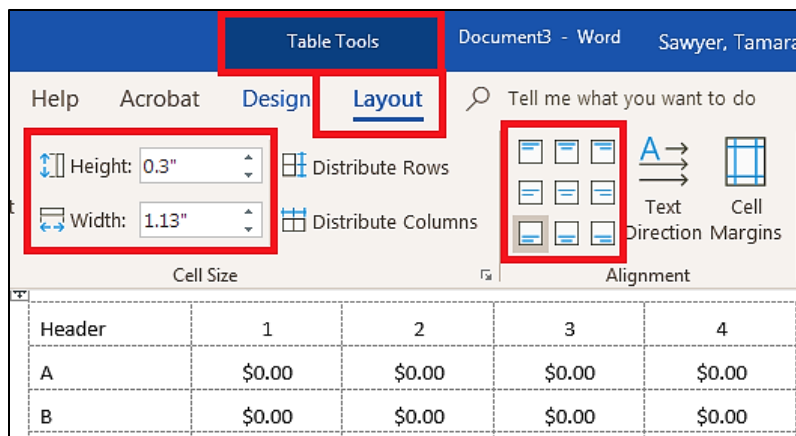


Spacing

- Extra rows and columns should not be used to provide extra spacing between cells.
- On the **Table Tools, Layout** tab, use the **Height** and **Width** spacing options to adjust the spacing of rows and columns.
- The **Alignment** features should be used to adjust how content is positioned within the cell. Do not use the Enter key or Space bar to change the alignment.

Header	1	2	2	4
A	\$0.00	\$0.00	\$0.00	\$0.00
B	\$0.00	\$0.00	\$0.00	\$0.00
C	\$0.00	\$0.00	\$0.00	\$0.00

Do not use blank rows/columns for spacing



Blank cells

There should be no blank cells in a table. Assistive technology may not recognize a cell exists if it is left blank. There are several ways to handle a blank cell:

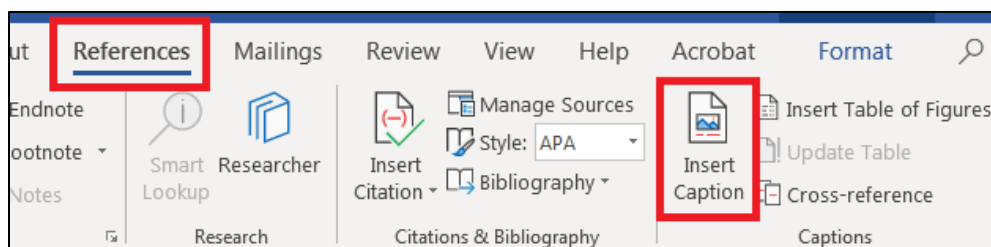
- Add a dash (-), or;
 - Add NA (Not Applicable or Not Available), or;
 - Place a zero (0) – but only if the content should be a zero, or;
 - Use the words “Blank” or “No Data.” Change the font color to white so it is not visible.
- Note: if you have a subheading followed by an entire row of blank cells, do not add the word “blank” or “no data”. To decide if the word “blank” is necessary, read the information out loud skipping the blank cells. Does the information make sense? If so, leave it out.

1	Income Taxes Paid Out	2012	2013	2014
2	Federal Tax	Subheading - empty cells ok		
3	Minnesota	1248	1389	1500
4	Wisconsin	1300	1482	1568
5	State Tax			
6	Minnesota	78	Blank	103
7	Wisconsin	59	72	89

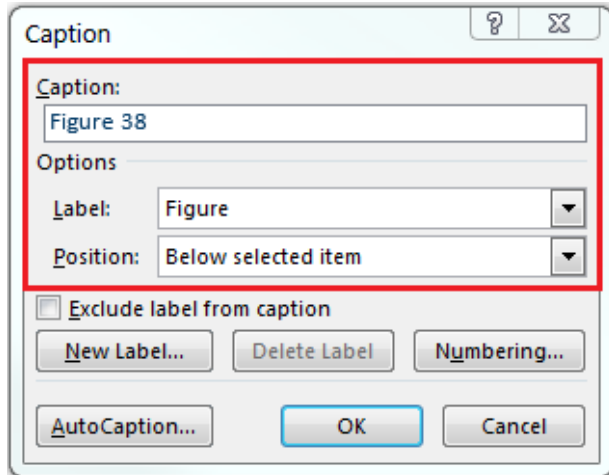
Caption table (optional)

Captioning tables is optional, but it is an easy way to add additional descriptive information and make the tables searchable.

1. Select any cell in the table.
2. On the **References** tab, choose **Insert Caption** (Alt+S+P).
Alternately, right-click the small box with the four-way arrow on the top left corner of the table and then select **Insert Caption**.



3. Caption the table. Ensure the Label field is set on Table. You can set the Position however you like, but keep it consistent throughout the document.
 - Table captions traditionally go above the table.
 - Figure captions traditionally go below the figure.
 - The numbering is automatically updated as figures are captioned.

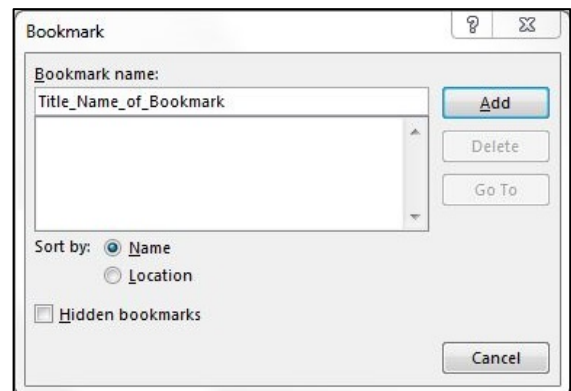


Bookmarks (optional)

Bookmarks allow users to find specific tables, especially in large documents with lots of tables. This is especially useful for users of assistive technological devices.

Bookmark tables

- 1 Click the top left cell. The bookmark **must be in the header row**; placing it in a data cell changes how the table is read by assistive technology.
- 2 On the **Insert** tab, select **Bookmark** (Alt+N+K).
- 3 Type the bookmark name following these guidelines:
 - a. Start with the word "Title" if the table contains both column and row headers.
 - b. If the table contains column headers only type "ColumnTitle"
 - c. If the table contains row headers only, type "RowTitle."
 - d. Use short but descriptive text.
 - e. There can be no spaces between words. Use underscores between all words or combination of capital and lowercase letters. Example: Title_Name_of_Table, or TitleNameOfTable.



Hyperlinks

When formatted properly, hyperlinks provide all users with valuable information. It is common to see “[Click here](#) for...” However, this outdated practice provides no information to those who print the document or use a screen reader. **Do not use “click here” or “More Information”.** Hyperlinks may link to websites, email addresses, and other areas within the document.

Formatting hyperlinks

Note: Due to recent software updates, hyperlinks are being treated differently by different brands of software. Best practices in this section may be updated soon.

Use common sense for what works best in each situation.

1. Give each link a unique, descriptive name. Follow this name with the URL (if it's not too lengthy) in either brackets or parenthesis.
2. Highlight the text and select **Hyperlink** on the **Styles** pane menu. Alternately, you can right click and choose **Hyperlink**, or open the **Insert** tab and click on **Hyperlink (or Ctrl + K)**.
3. Enter the full URL into the Address field.

Note: When creating a link using both unique text and the URL, the link Address may not import properly. Always check the hyperlink URL for accuracy, or copy/paste the URL into the Address field.

4. If the text to display is a URL rather than unique, descriptive text, then you must add a **ScreenTip**. A Screen Tip is a small window that is displayed when the mouse hovers over the link and is read by the screen reader.
 - a. Click on **ScreenTip** to open the dialog box. Type out the URL in the ScreenTip field.
5. Type out the address in parentheses following the link. The finished link looks like this:

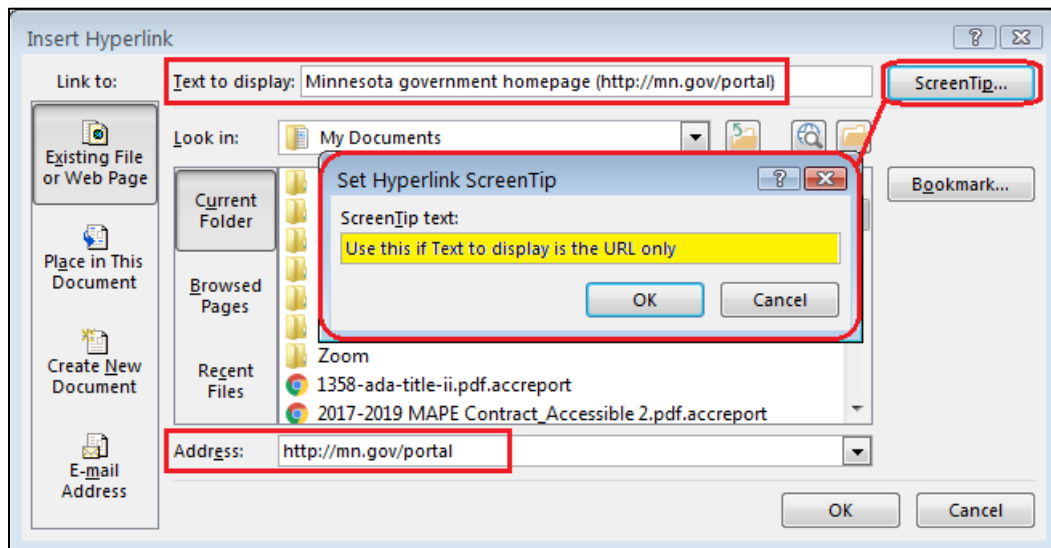
[Minnesota government home page \(http://mn.gov/portal/\)](http://mn.gov/portal/)

This link provides all information any user could use – a unique description and the full URL. This allows people who access your document electronically to know exactly where the link goes, while at the same time allowing those who print your material to manually type the link into a browser window.

There are times when you want the link to be the actual URL. If this is the case, enter the URL in the **Text to display** field and the unique text description into the **ScreenTip** text field.

6. To edit a hyperlink, right-click (Shift+F10) on the link and choose **Edit Hyperlink**.

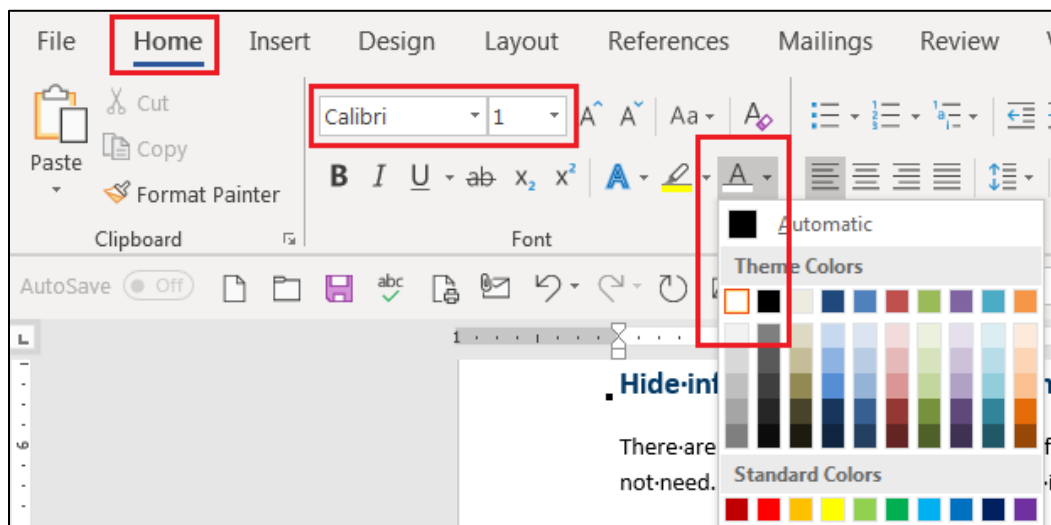
Note: this layout is not always possible due to link length, document space, etc. Use your best judgement on how to handle each link.



Hide information within a document

There are times when you want to have information available to blind users that visual users do not need. Hide the text by following these instructions:

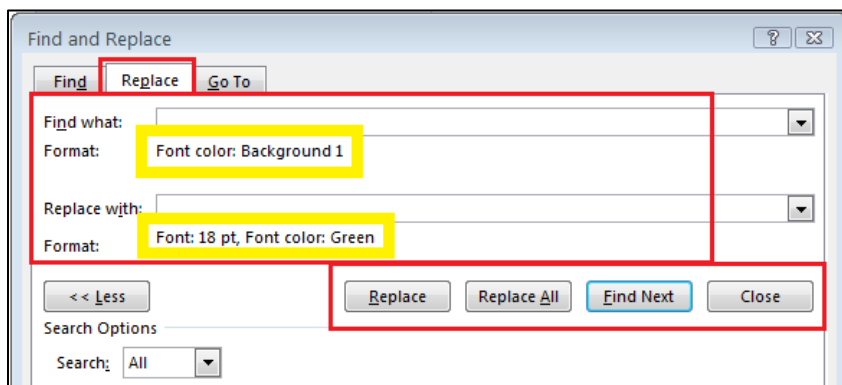
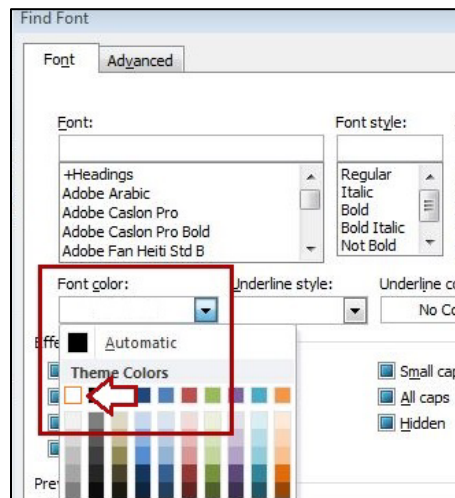
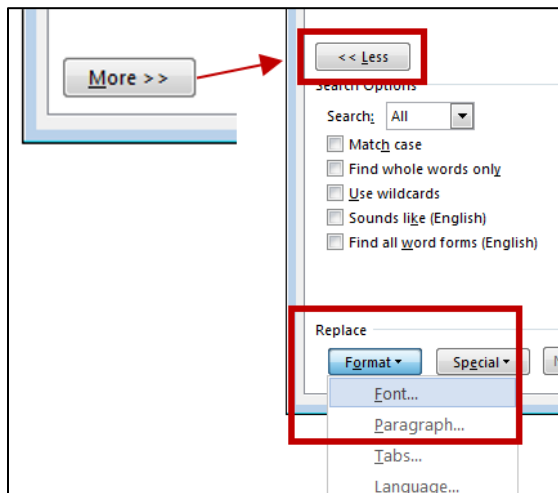
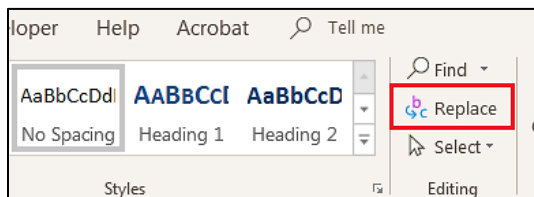
1. Type the text you want hidden using a normal font and color.
2. Highlight text.
3. Using the tools in the Font group on the home tab, change the **Font Size** to 1 and then change the **Font Color** to match the background color (ie: white on white) and then click OK.



Find hidden text

1. On the **Home** tab, click **Replace** (Alt + H + R).
2. Access further options by clicking the **More>>** button.
3. Click on **Format** and choose **Font** to open the **Find Font** dialog box.
4. Open **Font color** and choose the white **Theme Color** and then click **OK**.
5. Do the same with the **Replace with** box; click on the text form field, then click on the **Format** and choose **Font**.
6. Open the **Font color** drop-down box and choose either black or a bright color that is easy to see. In addition, change the font **Size** to match the rest of the document (or make it larger to easily find it).
7. The document showd you all the text formatted with the white **Theme Color**. Click on **Next** to go from the current hidden text to the next set of hidden text. Click **Replace** to change the font.

Alternately, you can choose **Replace All** to replace all the hidden text with viewable text.



Text boxes

Never use Text Boxes in a document (for example, to bring the reader’s attention to a specific paragraph). Screen readers treat text boxes as images, therefore, all words contained within becomes “invisible.” There are three ways to make a text box. Choose the best option each time you need a “text box.”

1. Format an existing Style such as the “Block Text” style that has been used throughout this document.

This is Block Text style.
It is accessible because it is a recognized Microsoft Word Style.
This is the preferred way of putting text within borders.

2. Use the **Borders and Shading** tool on the **Home** tab.

Here is an example of some text that I have placed a border around.

- You can place a border around almost any type of style and formatting.
- As you can see, it doesn’t always work the way you want.

3. Make a customized call out box by inserting a 1x1 table and format the borders for the look you want.

Here is an example of a 1x1 table used as a callout box. It can be structured to look the same as Block text (and text boxes).

- Use this when your box contains multiple styles such as headings and bullet points.
- This table has no need for headers, width restrictions, or bookmarks.
Ignore any warnings from the Accessibility Checker.
- You can change the look of the table cell by going to **Table Tools, Design** tab, and then using the **Borders** menu.

Watermarks

It is best if you do not use a watermark in your final document.

- In place of a watermark, use that text as part of the file name.
Example: If you want to use the word “Confidential” as a watermark, name your file Title_Confidential.
- Put the wording from the watermark on your cover page or somewhere on the first page. After page one, place the wording into the header or footer.
Example: If your watermark displays “Draft”, put Version 1.0 DRAFT in place of Version 1.0 on your cover page.
- If you’re converting your document into a PDF, use the Adobe software to insert the Watermark. Watermarks are picked up by Adobe as a non-text item so does not confuse assistive technologies.

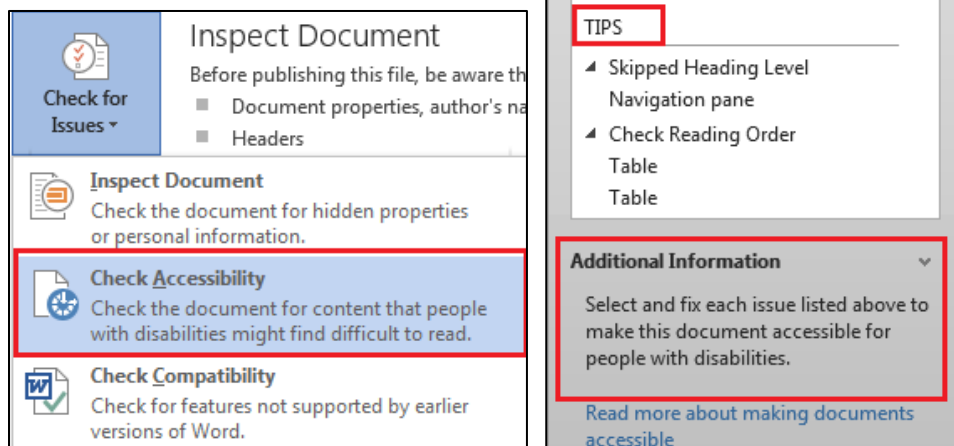
Check for accessibility issues

Microsoft Office 365 has a built-in an accessibility checker to determine if your document is ready to publish or if it needs additional work. For full information, see the Accessibility Checker Rules in the Appendix.

Check document for accessibility

1. Save your file as a “.docx”
2. On the **File** tab, select **Check for Issues** button and then choose **Check Accessibility** (Alt+F+I+I). Your document reopens with the **Accessibility Checker** dialog box.
3. There are three levels of results:
 - **Errors:** Fix all errors to make your content accessible for AT users (Exceptions: Tables do not need alt text. Single cell tables used for formatting do not need header rows or alt text).
 - **Warnings:** This is content that may pose a problem for people with disabilities to access or understand. You may need to fix these.
 - **Tips:** Offers tips on how to make that area better organized or more user-friendly.
4. The bottom of the Accessibility Checker has an **Additional Information** dialog box that explains in further detail why and how a problem is fixed.
5. Select each result; Word goes to the page with the problem and highlights the problem area.

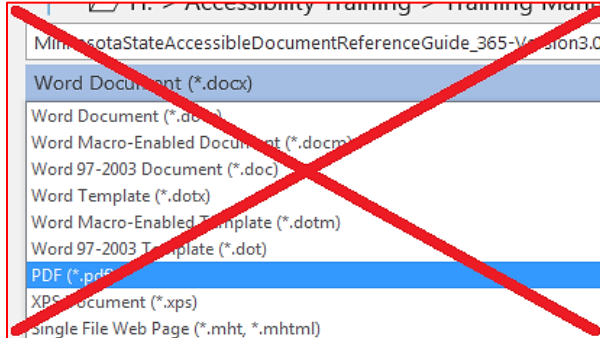
Note: The Accessibility Checker is a computer program. It cannot take the place of a person. A document that passes the checker may still be completely unusable by people with assistive technology. Do not rely only on the checker.



PDF conversion

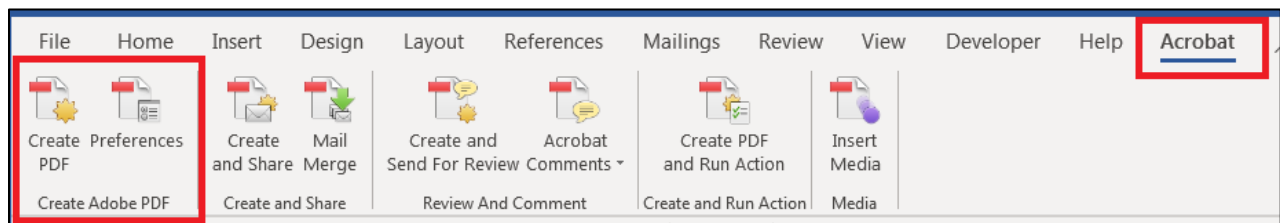
Note: If you do not have Adobe Acrobat Pro XI or later, give your Word document to someone who does. Acrobat Pro is a superior conversion program.

If you have Adobe Acrobat Pro, there are multiple ways of saving a “.docx” as a PDF but only two of them create accessible documents. **Do NOT use Save As and choose PDF from the drop-down menu.** This does not produce an accessible document.



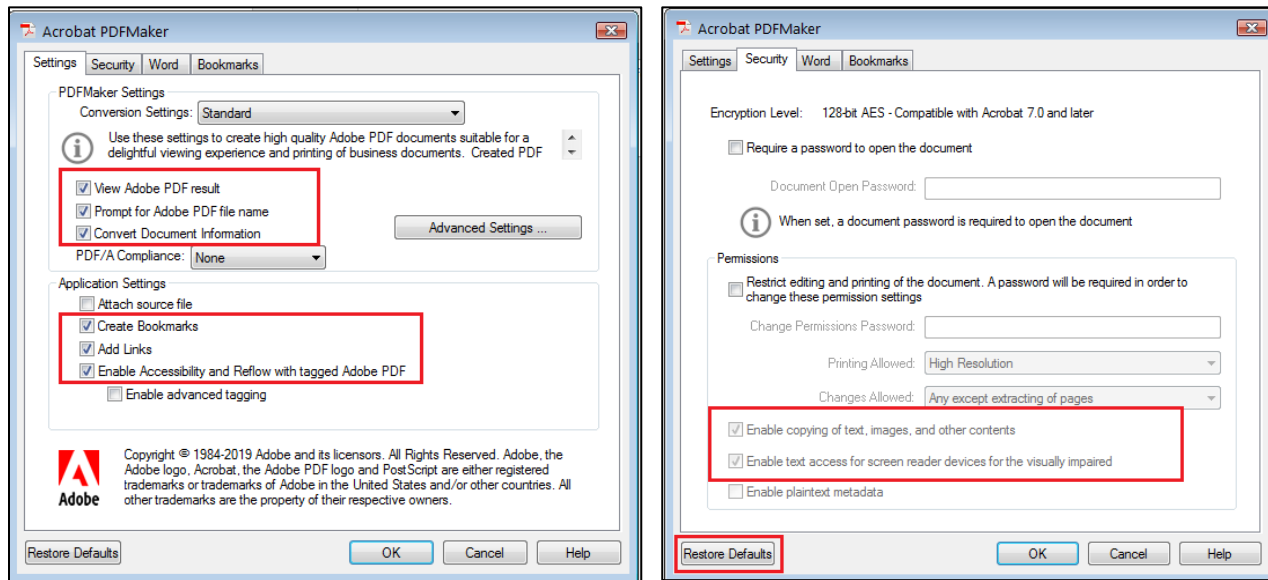
Create PDF

1. Use the **Acrobat** tab. Select **Preferences** (Alt+B+S).



2. On the **Settings** tab, ensure these boxes are checked:
 - **View Adobe PDF result**
 - **Prompt for Adobe PDF file name**
 - **Convert Document Information**
 - **Create Bookmarks**
 - **Add Links**
 - **Enable Accessibility and Reflow with tagged Adobe PDF**

Do not check **Enable advanced tagging**.



3. On the **Security** tab, ensure boxes labeled **Enable copying of text, images, and other contents** and **Ensure text access for screen reader devices for the visually impaired** is checked.
Note: This box is grayed out but should be checked. If it is not, check **Restore Defaults**.
4. On the **Word** tab, leave the default settings checked:
 - **Convert footnote and endnote links**
 - **Enable advanced tagging**
5. On the **Bookmarks** tab, leave the default settings checked:
 - **Convert Word Headings to Bookmarks**
6. Click **Create PDF** (Alt+B+C).

MS EXCEL 365 DOCUMENTS

Microsoft Excel has many built-in features to help you make accessible documents with very little effort. This document goes through the necessary steps.

Note: this document does not teach the user how to create Microsoft Excel 365 documents. It only assists the user with accessibility issues. Refer to a Microsoft 365 user manual for help with Excel.

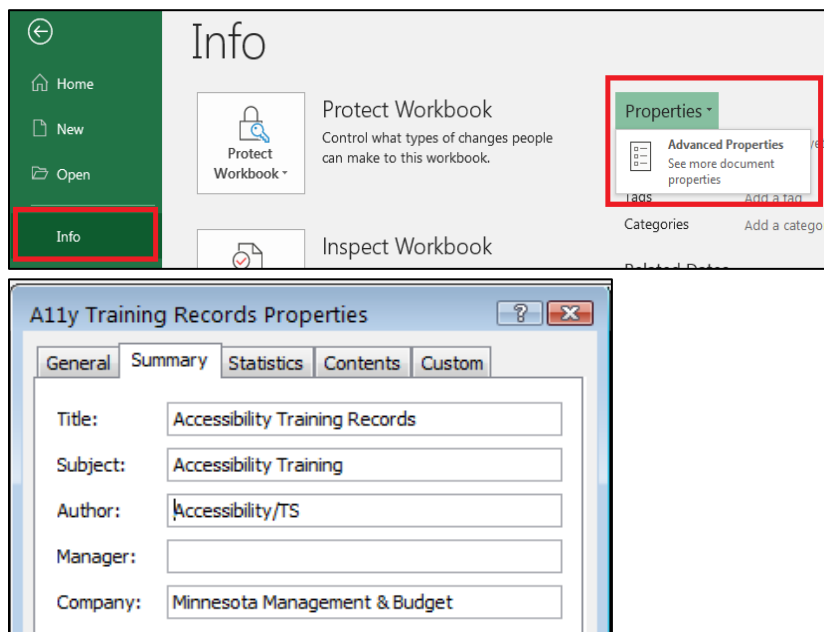
Document properties

Title and subject

All Excel documents must have a title and subject. The title should clearly state the chart subject. Try to make the title and subject descriptive. While there is no length restriction for the title, keep it short and relevant. Your agency may require something different from what is here. Check with your supervisor if you are unsure of your agency's needs.

Edit title and subject

1. On the **File** Tab, select **Info (Alt+F, I)**.
2. Select **Properties (QS)** and then choose **Advanced Properties** to open the dialog box.



3. Click the **Summary** tab.
 - a. **Title:** This should be the same as the document title in your document.
 - b. **Subject:** The subject is the broad topic of the document. For some documents, the Title and Subject may be very similar or the same.
 - c. **Author:** This field should contain your division and your name or initials (your agency may require something slightly different). If the final document will be a PDF, there is no Company field. You should then start the Author field with your agency name or initials.
 - d. **Company:** This should be autopopulated with your agency name.

Worksheets

Name tabs and naming guidelines

All worksheets must have good, descriptive names to give users content information.

1. Double-click the desired tab (or press **Alt, O, H, R**). Type the name of the sheet.
 - Names can be up to 31 characters long.
 - Some characters, such as backslash and brackets, cannot be used.
 - If using colors, ensure good color contrast between text and background. Do not use color alone to “color code” or define content.

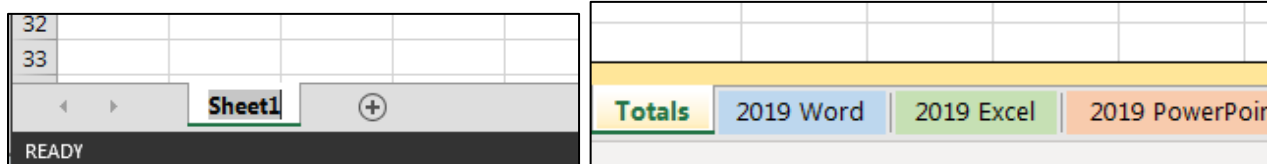
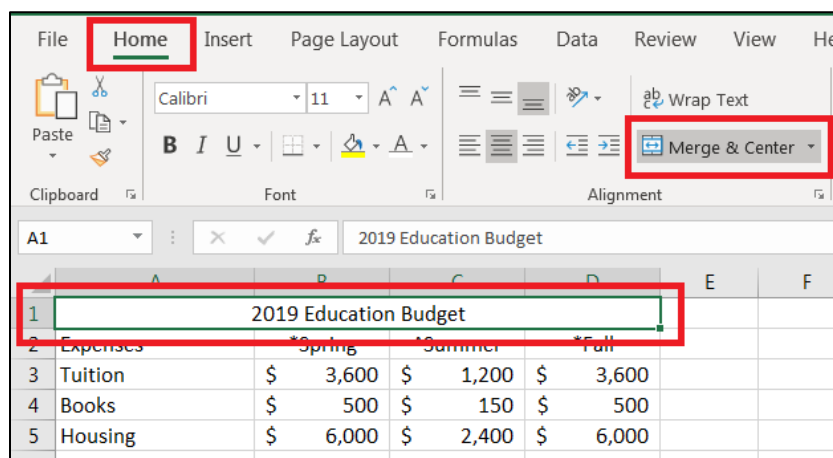


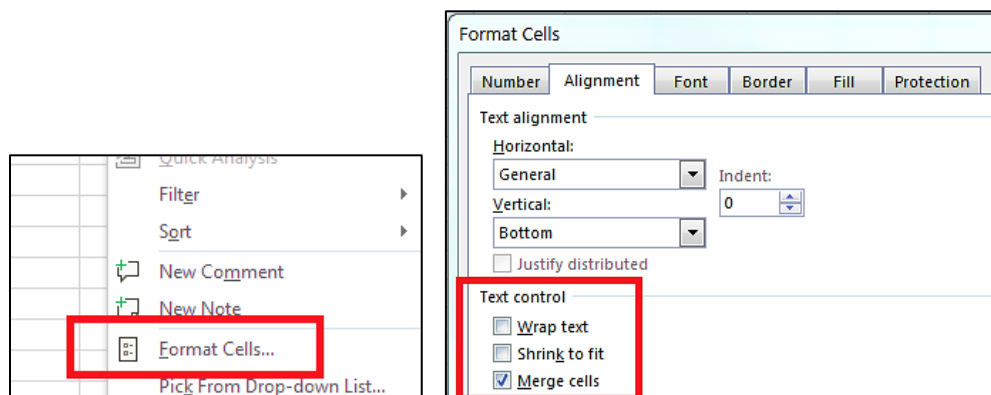
Table titles

The table title should start in cell A1. You may merge cells to center your title. This is the only time you should merge cells. There are two ways to merge cells and type the title:

- Highlight the cells you want merged. On the **Home** tab, select **Merge & Center** in the **Alignment** group.



- Type the title into the left cell. Highlight the rows you want merged. Right-click, choose **Format Cells**, **Alignment** tab, and select **Merge Cells**.



Row and column headers

Every Column should have headers. Row headers are optional. Do not leave any header cells blank.

	A	B	C	D
1	2019 Education Budget			
2	Expenses	*Spring	*Summer	*Fall
3	Tuition	\$ 3,600	\$ 1,200	\$ 3,600
4	Books	\$ 500	\$ 150	\$ 500
5	Housing	\$ 6,000	\$ 2,400	\$ 6,000

No blank headers

Merging and splitting

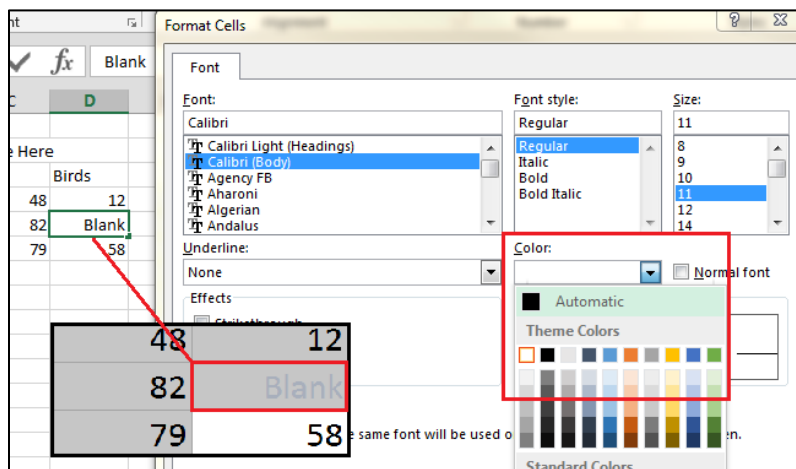
You should never merge or split cells in an Excel table. The only exceptions are when merging cells for the titles or charts. It is difficult for blind or low vision users to understand tables with merged/split cells. If cells must be merged/split, ensure all users, including those using assistive technology, can understand information. Tab through the table ensuring:

- All information is read.
- All information is read in the proper order.
- The information makes sense.

Blank cells

Sighted users can easily see where blank cells are and which headers the existing information belongs to. Users who rely on screen readers are not able to do that. Do not leave blank cells. There are several options for blank cells:

- Type NA (Not Available or Not Applicable), or;
- Place a zero (0) – but only if a zero applies in that particular situation, or;
- Type the word “Blank” or “No data.” If you do not wish it to be visible, match the text color to the background color. Assistive technologies such as screen readers and refreshable braille displays read white text on a white background.
- Note: a dash (-) can be used if you use find/replace or alt + 0150, but I suggest users stay away from dashes for simplicity.



Exceptions: If the blank cells follow a Row Subheading, do not fill the entire row with the work “Blank.”

In the example below, Federal Tax and State Tax are subheadings of Income Taxes paid out. Leave the following cells empty. The highlighted empty data cell must have the words “blank.”

1	Income Taxes Paid Out	2012	2013	2014
2	Federal Tax	Subheading - empty cells ok		
3	Minnesota	1248	1389	1500
4	Wisconsin	1300	1482	1568
5	State Tax			
6	Minnesota	78	Blank	103
7	Wisconsin	59	72	89

Color

The best practices for using color in Excel charts are the same as for using color in a Word document. Your audience may have vision disabilities or want to print the document in black and white.

- Do not use color as the only means of conveying information. You must have an alternate way of making the information available. You can use symbols or words along with the color. For example, negative numbers are often red. Add the standard symbol, the parenthesis, around the number in addition to the red color.

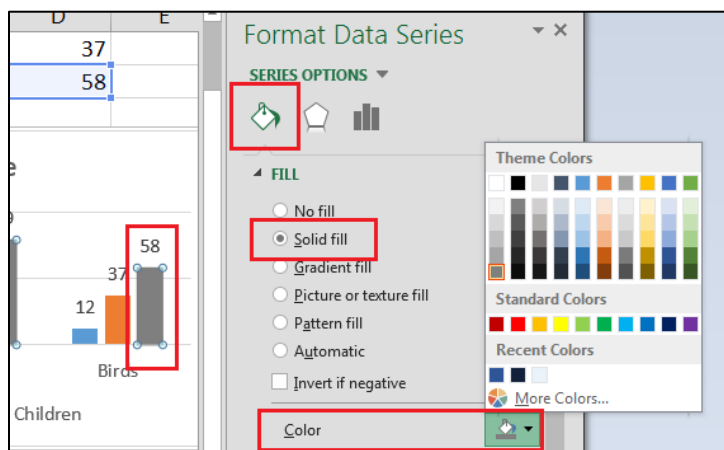
Example: \$95.34 vs. (\$95.34) Can you tell which is negative when printed in grayscale?

- If you use color, check your color contrast with a program such as the Paciello Colour Contrast Analyser (should be available to most state employees with supervisor request).

Note: The default colors Microsoft Excel uses to make charts and graphs are NOT acceptable. You must change them to higher contrasting colors.

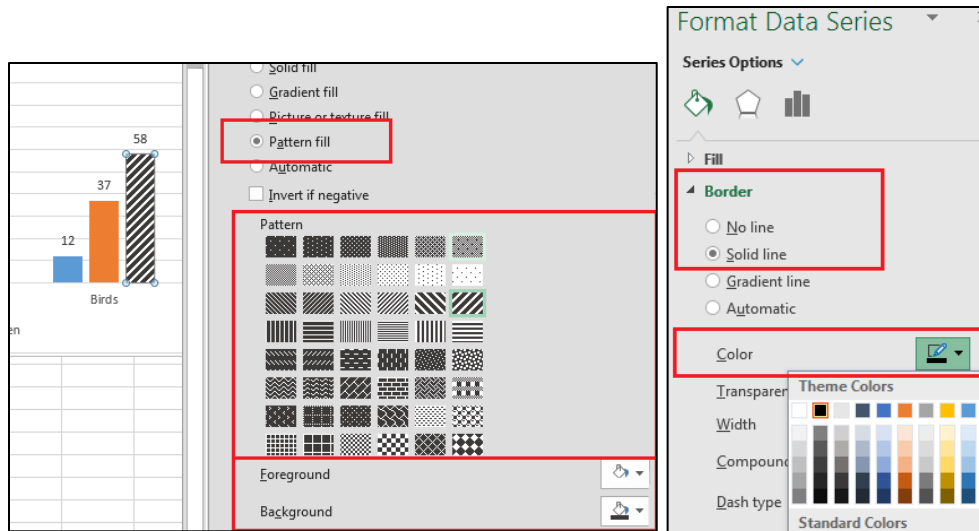
To change colors on a graph

- Double-click on the data bar (line, area, etc). The **Format Data Series** panel appears (Alt+JA, M). Click on **Fill & Line** under **Series Options**, then choose **Solid fill**. Open the full color chart by clicking on **More Colors...**



- After choosing a color, if you want to add a pattern, click **Pattern fill**. Choose the desired pattern, foreground color, and background color.

3. Add a border if using a pattern or lighter color.
 - a. Open the Border menu, and select the Solid line radio button. Choose a Color from the dropdown menu.



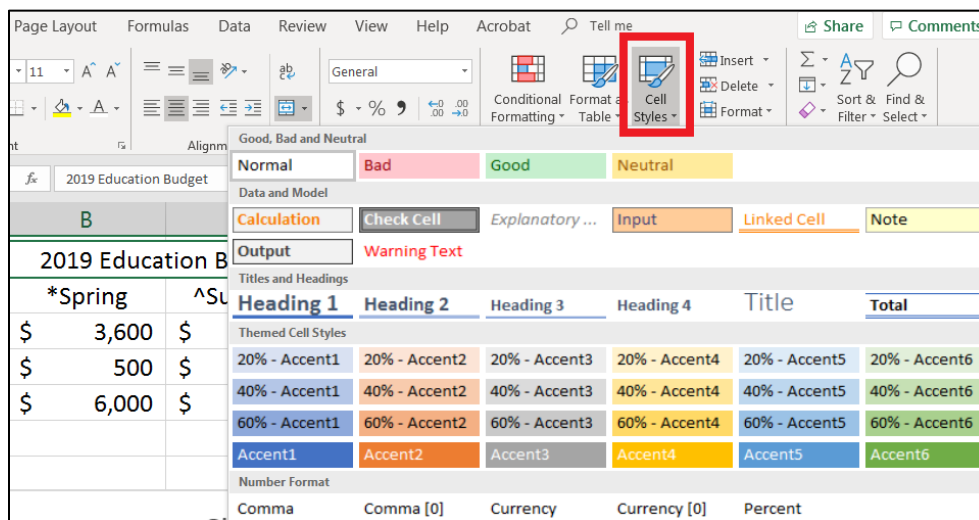
Format cells and text

Use Styles to format your text. While the dialog box looks different from Microsoft Word it works in a similar manner. To format text:

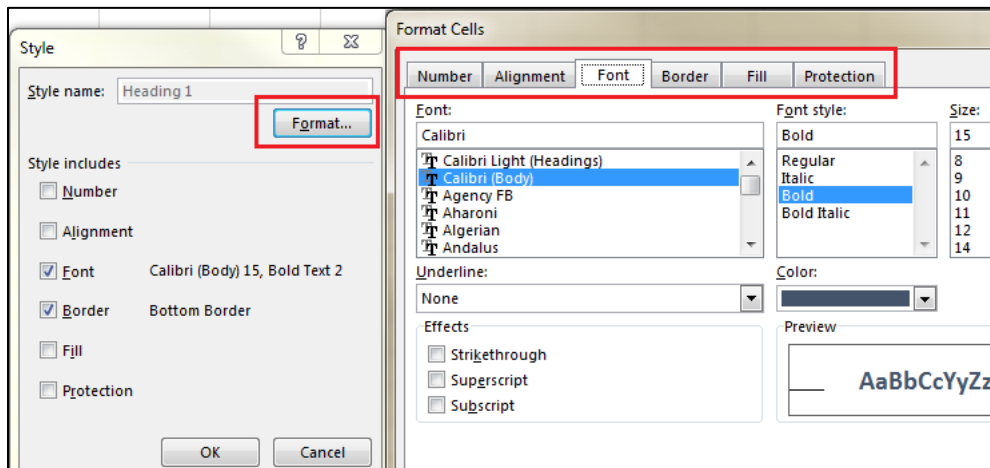
1. On the **Home** tab, select the **Cell Styles** button in the **Styles** group on the ribbon (Alt+H+ J).
2. Select the style you want.
3. If you want to modify a style, right-click the style you want changed and choose **Modify**.

Considerations for fonts:

- Keep the font large enough to read; size 12 is good for most users. Do not use a font below size 11.
- Do not rely on color alone. Always use a second method of conveying information.
- Use bold, italics, and underlines sparingly.
- Do not underline anything other than a hyperlink with bright blue.
- Do not use condensed spacing.
- Ensure good color contrast between text and background.



1. Select **Format** in the **Style** dialog box. You can change:
 - Number properties
 - Alignment
 - Font Properties
 - Border properties
 - Fill colors and effects
 - Protection
2. Change the desired attributes and click **OK**.



Adjust spacing

Row height

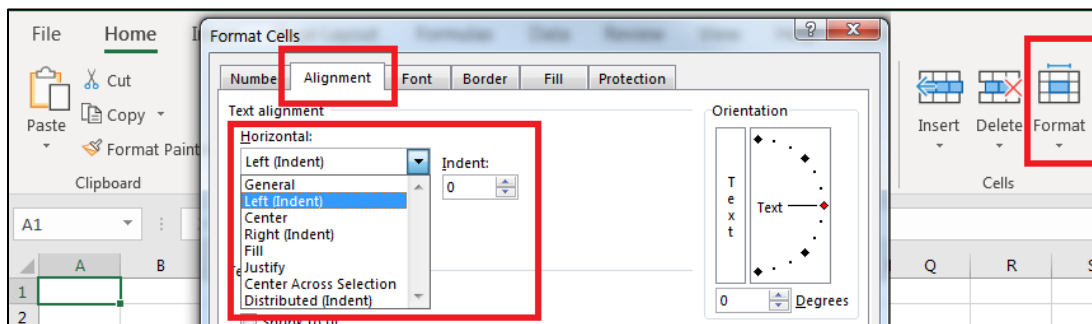
There are three ways to add/change row height.

- Hover between two rows. The mouse pointer becomes a double arrow. Click and drag the line up or down until you get the desired size.
- Select the row(s) you want to change, right-click (or Shift+F10), and then choose **Row Height**.
- Alternately, choose the row(s), go to **Home** tab, **Format** menu, and select **Row Height**. The Format button also has “Autofit Row Height.”

Cell padding

Use Cell Padding in place of Gutter columns. This creates white space around the content without adding extra columns.

On the Home tab, open the Format menu and choose Format Cells. Choose Horizontal: Left (Indent) or Right (indent). Set desired indent using whole numbers.



Alternate (Alt) text

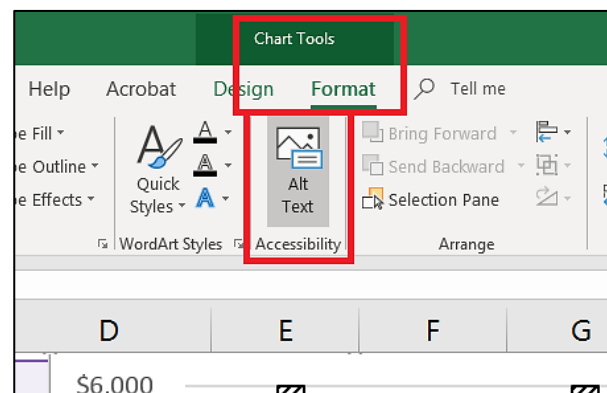
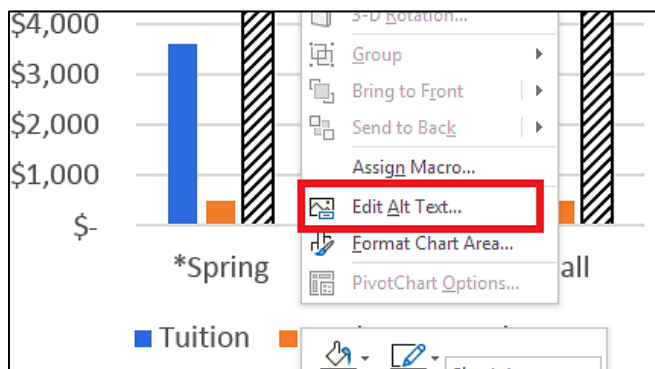
All non-text elements that are informative must have alternate (alt) text. This text allows those who cannot see images to understand the material. This affects those who do not download all images (popular for people with dial-up internet) and people with visual disabilities

Charts and graphs

Charts and graphs must have alternate text descriptions (alt text). As the table used to create the chart should be on the spreadsheet, start with the name and style of chart, followed by the starting cell of the table. If the chart is moved to a different tab than the table, add the Tab name to the alt text.

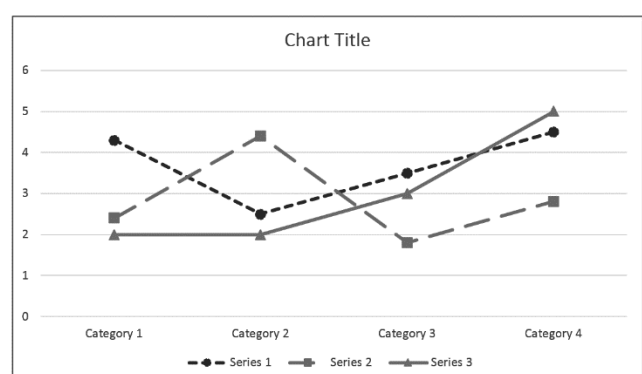
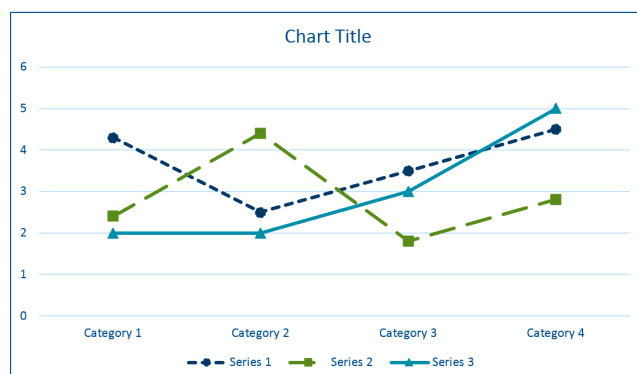
Add alt text

1. After inserting your chart/graph, right-click on it, and choose **Edit Alt Text**.
Alternately, select the chart, open the **Chart Tools**, **Format** tab, and then choose **Alt Text**.
2. Describe the chart in the text field in the Alt Text pane. Use a clear, concise description. If the chart shows something that is not written out in the body of your document, you must describe it. If it is something that is fully described within your document, you can refer to the existing text description.



Remember: format your charts and graphs so all people can use them:

- Use different shapes for plot points on charts.
- Change chart colors. The default colors are **not** accessible. Choose colors and textures with high contrast. If you look at the below images, you can tell the difference between the three lines, even when printed in gray scale. I used different shaped plot points and different textured lines for each one. In addition, even the lightest line has enough contrast against the white background to be easily seen.



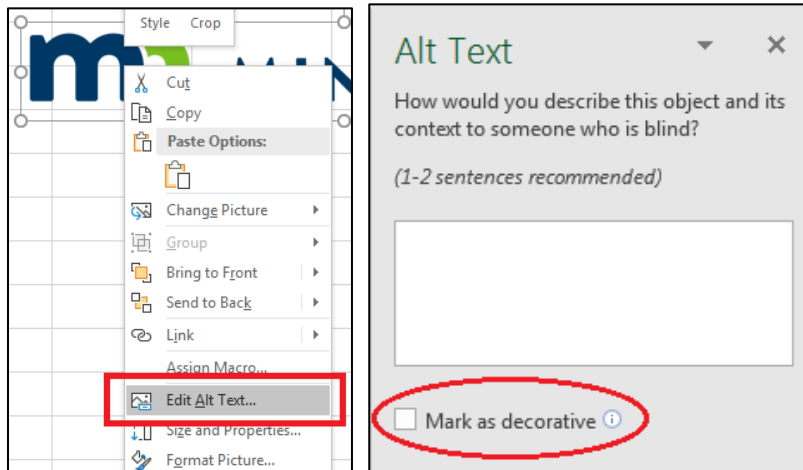
Images

All images (with some exceptions) must have alternate text (alt text). This allows people who either cannot see the image, or have their computer set to not automatically download images know what they are.

Add alt text

1. After inserting your image, right-click on it, and choose **Edit Alt Text**.
Alternately, you can open the **Picture Tools, Format Tab**, and then choose **Alt Text**.
2. Describe the image in the **Description** text box. Use a clear, concise description. If the image shows something that is not written out in the body of your document, you must describe it. If it is something that is fully described within your document, you can refer to the existing text description.
3. If the image has no information (a border, for example), then use the **Mark as decorative** check box on the Alt Text pane.

There is more information on Alt Text in the MS Word portion of this user guide.



Hyperlinks

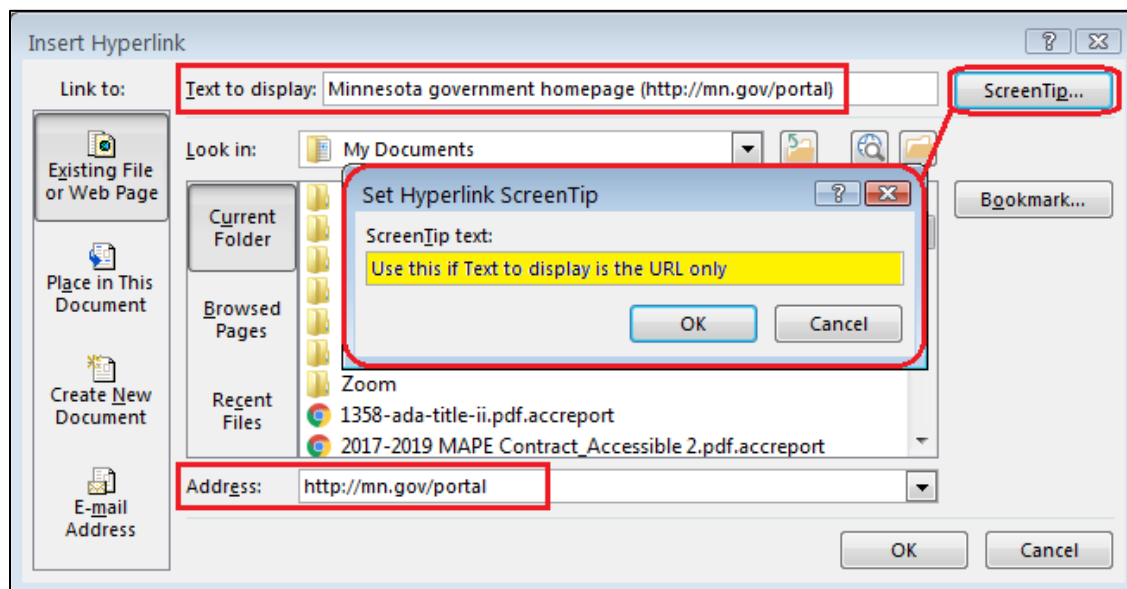
Note: Due to recent software updates, hyperlinks are being treated differently by various brands of software. Best practices in this section may change soon.

Hyperlinks are set up in Excel the same as in Word.

1. Type a unique, descriptive, meaningful name into the desired cell.
2. Click on the cell and then click on **Hyperlink** on the **Insert** tab.
Alternately, you can right click and choose **Hyperlink**.
In the **Text to display** field, add the URL behind the meaningful text (optional).
3. Enter the full URL into the **Address** field. If this field autopopulated, make sure it is ONLY the URL. It may pick up the meaningful text and punctuation along with the URL.
4. Add a **ScreenTip**. If the visible text is the URL, you must add a screen tip. If your visible link is meaningful text, you do not need to add a screen tip.

Example: [Minnesota government homepage \(http://mn.gov/portal/\)](http://mn.gov/portal/)

- This link provides all information – a unique description and the full URL. People accessing your document electronically now know where the link goes and people printing your material can type the URL into their browser.
- If you need the URL as the link, enter the URL in the **Text to display** field and the unique text description into the **ScreenTip** text field.
Note: this layout is not always possible due to link length, document space, etc. Use your best judgement on how to handle each link.
- To edit a hyperlink, right-click on the link and choose **Edit Hyperlink**.



Hidden instructional text

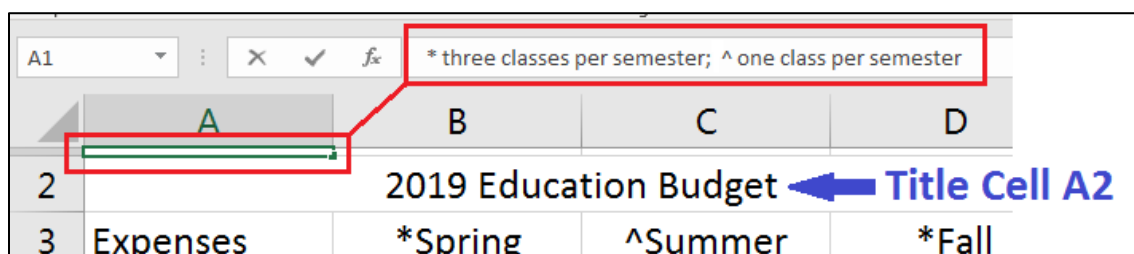
Many Excel spread sheets are very straight forward. However, occasionally you may create a spreadsheet that is very confusing to someone who is blind. You can add two types of help text – tips on understanding the content or layout and notices at the end of tables and worksheets.

Navigation help text (optional)

You can provide specialized instructions or information for users of screen readers. These instructions are specifically for people who use assistive technologies such as screen readers or refreshable braille displays. As an author, you may realize something may be obvious to a sighted user, but confusing to someone who cannot see the document. Screen reader navigation help text can help blind users navigate your document.

The example below has a table that uses symbols to denote information. The legend is at the bottom of the page. Help text with the meaning of the symbols has been placed in Cell A1.

1. Place navigational help in Cell A1 (title now starts in Cell A2).
2. Format text to size 1 with color matching the background (white, background 1).
3. Reduce height of Row 1 (optional). Do **not** use the Hide function.
4. Put the title in Cell A2.



The screenshot shows an Excel spreadsheet with a table. Cell A1 contains hidden help text: "* three classes per semester; ^ one class per semester". The table starts in row 2, column B. Row 2 is the title row: "2019 Education Budget". Row 3 is the first data row: "Expenses", "*Spring", "^Summer", "*Fall". A blue arrow points from the text "Title Cell A2" to cell A2, which is empty. A red box highlights the formula bar for cell A1, showing the hidden text. Another red box highlights the first row of the table (row 2).

	A	B	C	D
2		2019 Education Budget		
3	Expenses	*Spring	^Summer	*Fall

End of table or worksheet

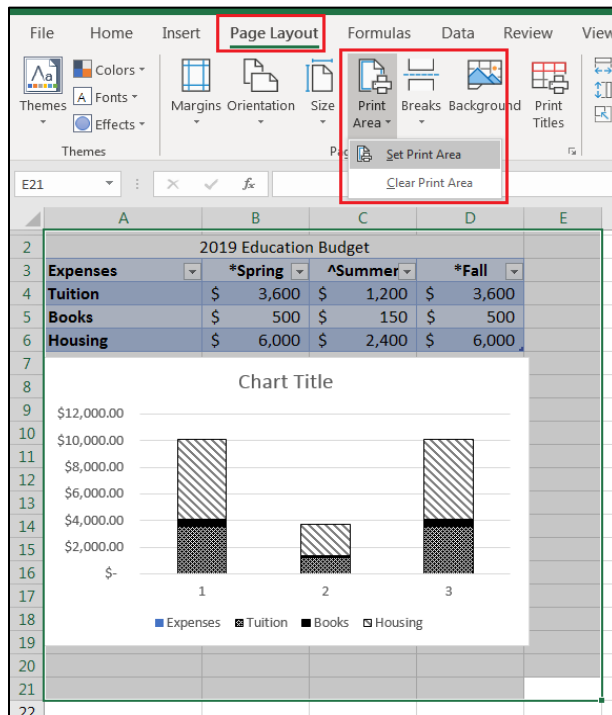
Add hidden guides to help people who rely on screen readers or refreshable braille by typing either “**End of Table**” or “**End of Worksheet**” where applicable. If your spreadsheet has multiple tables, it may help to add extra information, such as “**End of table, 1 of 4**” This tells your users know exactly where they are on the worksheet. At the bottom of each worksheet, add “**End of Worksheet.**” Again, it may help to add extra information such as “**End of Worksheet, 2 of 7.**”

Print area

Define the print area of your spreadsheet to prevent printing unused rows and columns. Not only does this help cut down on wasted printer paper, those with low vision find it much easier to read a table with clearly defined borders.

To define the print area

1. Highlight all the information in your spreadsheet, including titles and header rows.
2. On the **Page Layout** tab, select **Print Area** (Alt + P + R).
3. Choose **Set Print Area** (S).
4. To remove print area, open **Print Area** menu and choose **Clear Print Area** (Alt + P + R + C).



Hide unused rows and columns

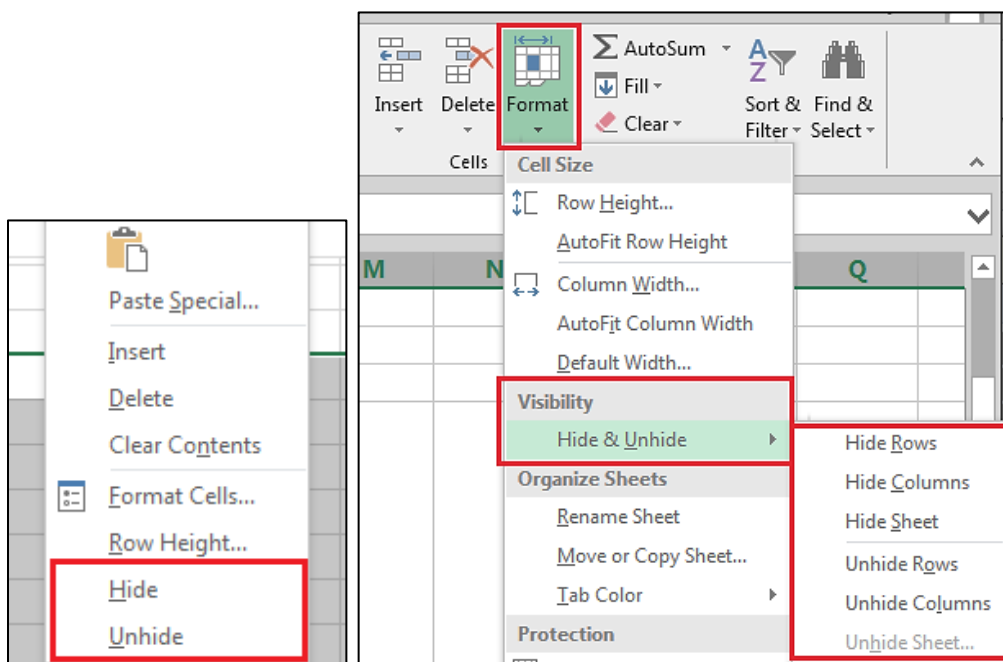
Give your spreadsheet a clean look by hiding the unused rows and columns. This action can be easily undone to add more content.

Hide unused rows

1. Select the entire row. Leave one blank row between your data and your selected row.
2. Hold down the **Shift** key, press and release the **End** key. While still holding the **Shift** key down, press the **Down Arrow** key. This selects all rows from the one you selected downwards.
3. There are three ways to hide the selected cells: Hover your cursor in the selected area, Right-click and choose **Hide**; press **Control +9**; or, on the **Home** tab, click on **Format** in the **Cells** group, select **Hide & Unhide**, and then select **Hide Rows**.

Hide unused Columns

1. Select the entire column. Leave one blank column between your data and your selected column.
2. Hold down the **Shift** key, press and release the **End** key. While still holding the **Shift** key down, press the **Right Arrow** key. This selects all columns from the one you selected to the right.
3. There are three ways to hide the selected cells: Hover your cursor in the selected area, Right-click and choose **Hide**; press **Control +0 (zero)**; or, on the **Home** tab, click on **Format** in the **Cells** group, select **Hide & Unhide**, and then select **Hide Rows**.



Unhide rows and columns

1. On the **Home** tab, click on **Format** in the **Cells** group (Alt+H+O).
2. Select **Hide & Unhide** (U).
3. Select **Unhide Rows** (O) or **Unhide Columns** (L).

Note: Do not use the Hide feature for anything you want recognized by assistive technology. If you hide a row, column, or page, the screen reader or braille display cannot recognize it. Only use this feature to hide non-published information or unused rows and/or columns.

Deleting unused tabs

Delete unused worksheets. Make sure you only delete unused worksheets. Deleted data cannot be recovered.

1. Right-click on unused sheet tab.
2. Choose the **Delete** command (Alt+H+D+S).

Spelling

Microsoft Excel does not automatically check for spelling errors. You must manually check your document. Excel only checks one worksheet at a time. It cannot check the whole workbook

1. On the Review tab, select Check Spelling in the **Proofing** group (F7).

Remove comments

Screen readers are unable to read comments. Place comments intended for all readers in a cell.

Table? Spreadsheet?

Create Accessible Tables (4:24): [\[https://support.office.com/en-us/article/video-create-more-accessible-tables-in-excel\]](https://support.office.com/en-us/article/video-create-more-accessible-tables-in-excel)

It is important to know exactly how your document will be used when it is completed. For example:

- Is this document an ongoing spreadsheet with lots of changes/updates?
- Is this document complete and going to be converted into a PDF and distributed on the web?
- Is this document going to be posted online in the Excel format?
- Are you taking the content and putting it into a Word document?

If your document will have ongoing changes and updates, it should be left as a spreadsheet. However, if you decide this document is complete, no more changes will be made, and it is ready for final distribution, you may want to convert it from a spreadsheet into a table.

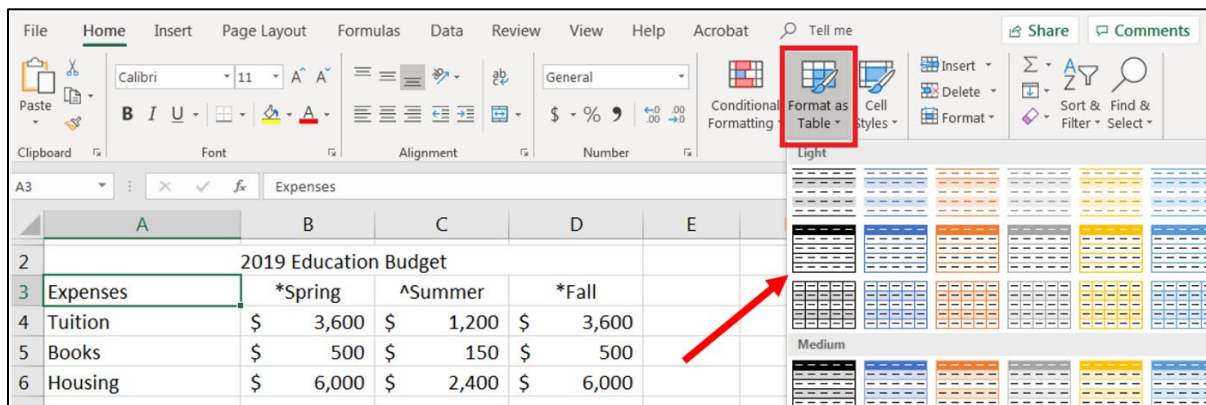
IMPORTANT!

Before converting the document into a table, save a copy of the spreadsheet! Once the document is converted from a spreadsheet into a table, you lose the spreadsheet functionality. Saving a copy allows you to go back to the spreadsheet if changes are necessary.

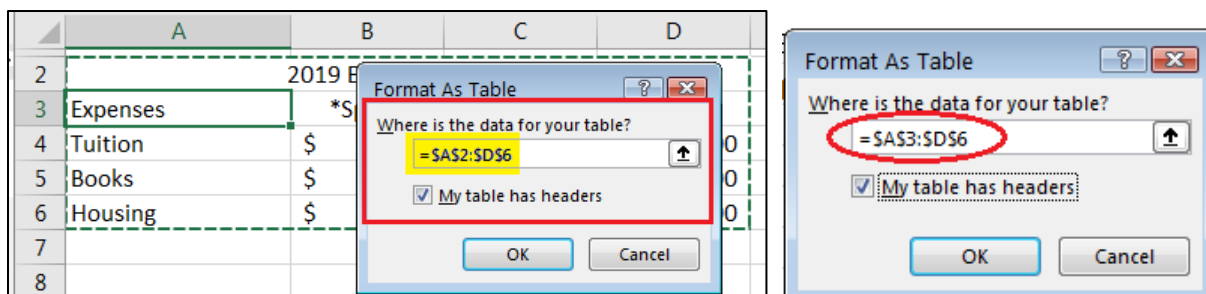
There are several ways to insert a table. I have instructions for both ways. The result is the same - an accessible table. There is a link at the top of this section to the Microsoft Office Support page with a helpful video.

Method 1:

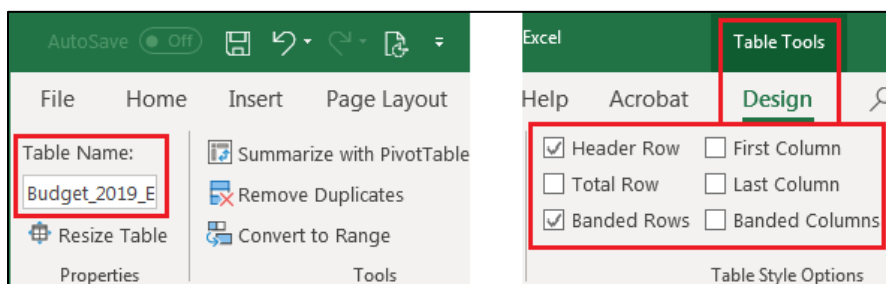
- 1 Go to the **Home** tab and select **Format as Table**.
- 2 Choose a style for your table.



- 3 Check the correct data is selected inside the dashed line. If not, you can change it by either selecting the desired area on the spreadsheet (click and drag) or by changing the data within the Create Table dialog box.
- 4 Check the **Table has headers** checkbox and then select OK.

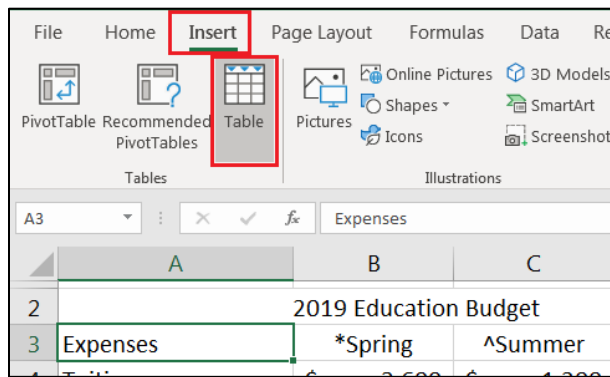


- 5 Open the **Design** tab. In the **Properties** group, type a descriptive name in the **Table Name:** field. Use the check boxes to finish the table layout.

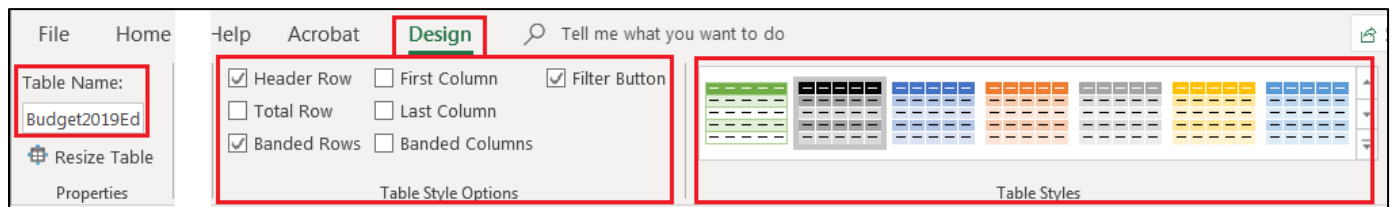
**Method 2:**

This gives you the same results as Method 1, just with a slightly different process.

- 1 Select any cell within the data.
- 2 Go to the **Insert** tab, open the **Tables** menu, and then select **Table**.



- 3 Check the correct data is selected inside the dashed line. If not, you can change it by either selecting the desired area on the spreadsheet (click and drag) or by changing the data within the Create Table dialog box. Your information is now in a table.
- 4 Open the Design tab. Use the tools available to change the Table Style and Style Options. Be sure to choose a table with good color contrast.
- 5 Name your table in the Table Name: text field.
- 6 Once your table is in place, with good color contrast, adjust your line spacing using the row height and column width settings.



	A	B	C	D
2	2019 Education Budget			
3	Expenses	*Spring	^Summer	*Fall
4	Tuition	\$ 3,600	\$ 1,200	\$ 3,600
5	Books	\$ 500	\$ 150	\$ 500
6	Housing	\$ 6,000	\$ 2,400	\$ 6,000
7				

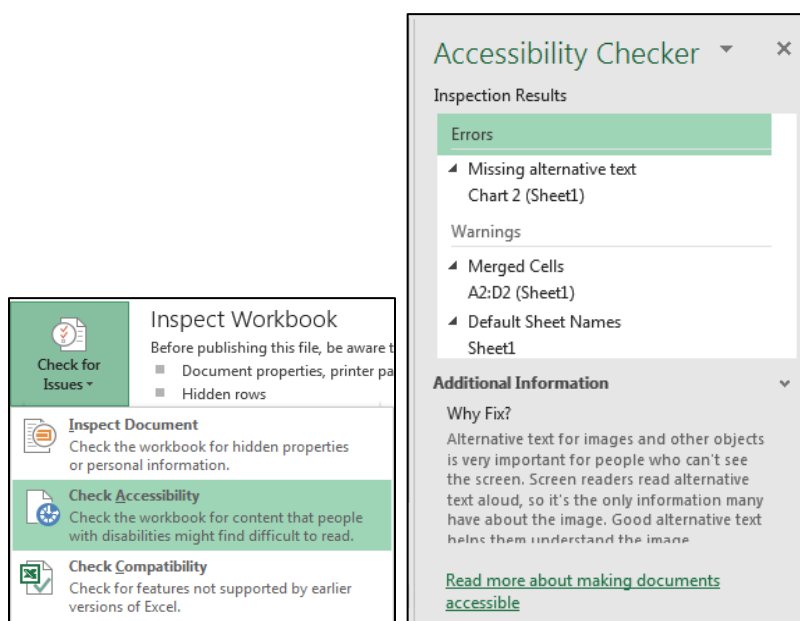
Check accessibility

Microsoft Excel has a built-in accessibility checker to assist you in ensuring your spreadsheet is accessible. Just like in Word 2013, the checker gives you three levels of results:

1. **Errors:** Fix all errors (with exception of Table needs alt text).
2. **Warnings:** This is content that may pose a problem for people with disabilities to access or understand. You may need to fix these.
3. **Tips:** Offers tips on how to make that area better organized or more user-friendly.

To use the Accessibility checker

1. Save your document.
2. On the **File** tab, select the **Check for Issues** button and then on **Check Accessibility** (Alt+F+I+I). The **Accessibility Checker** dialog box opens.
3. The **Additional Information** dialog box is located at the bottom of the **Accessibility Checker**. It explains why and how a problem is fixed.
4. Click on the results to see what the issue is and how to solve it.



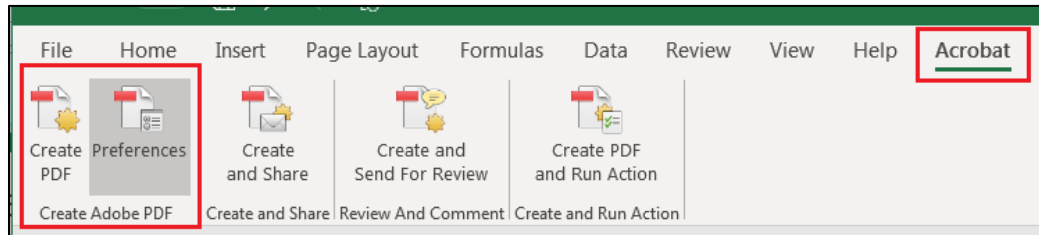
PDF Conversion

Do not create PDFs if you do not have Adobe Pro XI or later.

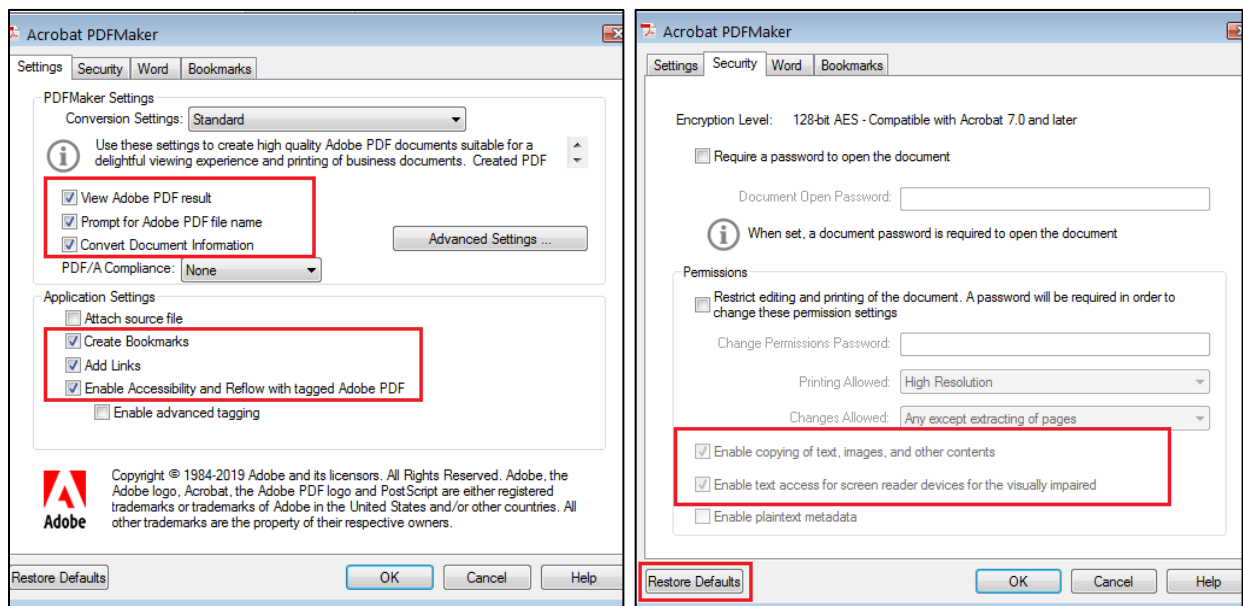
If you have Adobe Acrobat Pro, there are multiple ways of saving a PDF file. **Do NOT** use Save As and choose PDF (*.pdf). This does NOT produce an accessible document.

Create PDF

Use the **Acrobat** tab. Select **Preference**



- On the **Settings** tab, ensure these boxes are checked:
 - **View Adobe PDF result**
 - **Prompt for Adobe PDF file name**
 - **Convert Document Information**
 - **Create Bookmarks**
 - **Add Links**
 - **Enable Accessibility and Reflow with tagged Adobe PDF.**



- On the **Security** tab, ensure box labeled **Ensure text access for screen reader devices for the visually impaired** is checked.
 Note: This box is grayed out but must be checked. If it is not, check "Restore Defaults and then OK.
- Click **OK**, and then select **Create PDF**.

Note: PDF's have inherent accessibility issues. If you do not have Adobe Acrobat Pro, the problems increase. Even if you convert it correctly, the document may not be accessible. You must use Adobe Acrobat Pro to convert the document.

For help with PDF files, refer to the [Acrobat DC Pro Support page](https://helpx.adobe.com/support/acrobat.html):
<https://helpx.adobe.com/support/acrobat.html> or contact your agency accessibility coordinator.

MS POWERPOINT 365

Making accessible PowerPoint (PPT) presentations is very similar to accessible Word and Excel documents. However, a few things are specific to PPT that you do not see in the other programs.

General guidelines

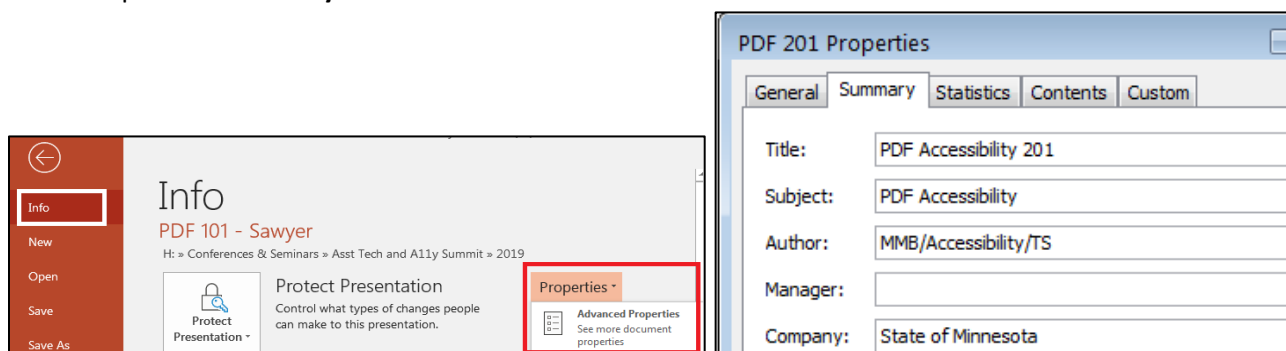
- Use the state-approved template.
- Use contrasting colors for text and background.
- Minimum text sizes may be different depending on how it will be used. Remember: PowerPoint slides may be printed, viewed on a computer monitor, accessed by a person using assistive technologies, or viewed on an overhead projection screen. Choose the best font size for all the uses of your particular presentation
- Do not put too much information on one slide.
- Use bullet points to keep text short, simple, and easy to read.
- Avoid both types of animations. This may cause a screen reader to repeat the information multiple times or cause difficulty for those with cognitive disabilities.
- Do not use text boxes. They are not read by screen readers. Insert additional “text placeholders” instead.

Title, subject, and author

All documents must have a title and subject. The title is the first thing read by assistive technologies such as screen readers and braille displays. Your agency may require something different from what is here. Check with your supervisor if you are unsure of your agency’s needs.

Add/Edit Title, subject, and author

1. On the **File** tab, select **Info** (Alt+F+I).
2. Select **Properties** and then choose **Advanced Properties** to open the dialog box (QS).
3. Open the **Summary** tab.



4. Type the title, subject, author, and company in the text boxes.
 - a. **Title:** Same as PowerPoint title. The title is autofilled when you add the title to the title slide.
 - b. **Subject:** broad overview – what is the document about?
 - c. **Author:** This field should contain your division and your name or initials (your agency may require something slightly different).
 - d. **Company:** Either State of Minnesota or Agency name. If using the State of Minnesota, then place the agency name at the beginning of the Author line.

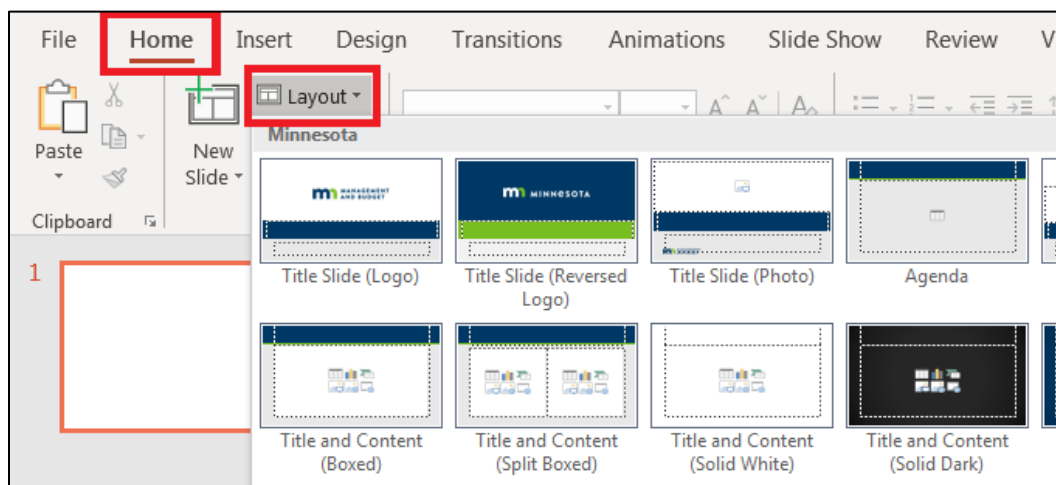
Slide Layout

Choosing an appropriate layout for each slide is one of the most important aspects of creating an accessible document. Microsoft has taken a lot of the guesswork out of that for you with a set of ready-made layouts. Each slide's layout can be different to fit the information presented.

Many agencies are making accessible templates. Check with your supervisor to see if your agency has accessible templates to use.

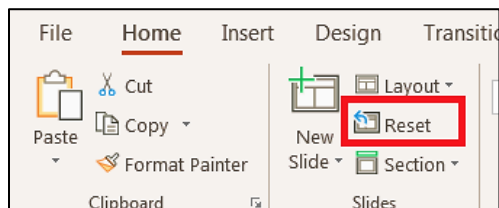
To access the available layouts:

1. With the slide selected, select **Layout** on the **Home** tab (Alt+H+L).
2. Choose the layout that suits the content of your slide.



Reset layout

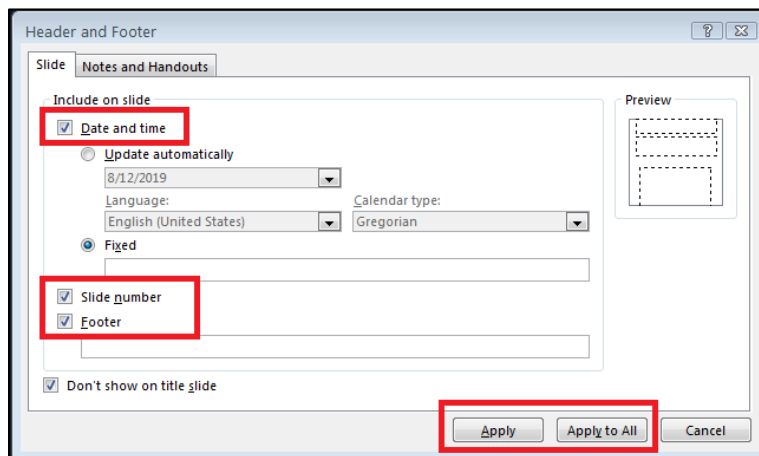
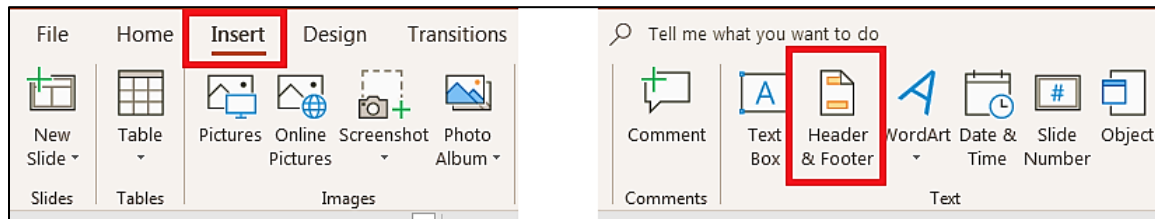
If you changed the look of a layout and want to go back to the original layout without losing any of your content, use the **Reset** command located on the **Home** tab, **Slides** group.



Footers

Footers are automatically added to slides unless the option has been turned off in the Slide Master (discussed in the Placeholders section). However, there are times when you may want to turn the footer off for one slide. To turn the footer off in one slide:

1. Open the **Insert** tab and choose **Header & Footer** from the **Text** group.
2. Uncheck the options you do not want shown on that particular slide.
3. Choose **Apply** to apply settings to one slide, or;
Choose **Apply to All** to apply settings to the entire deck.



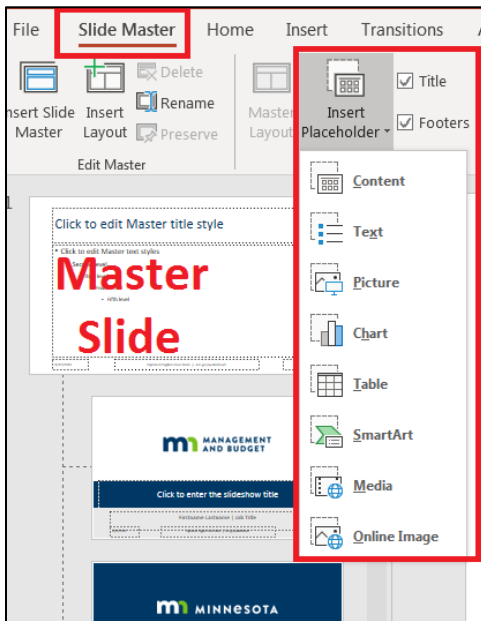
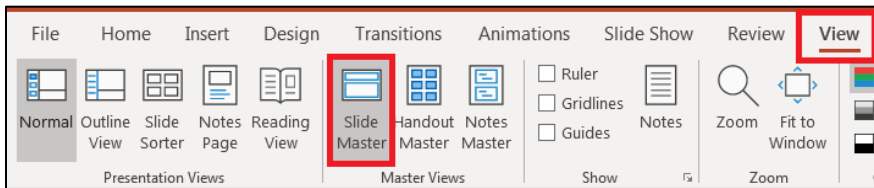
Placeholders (and text boxes)

Text boxes are not accessible. Use Content Placeholders in place of text boxes.

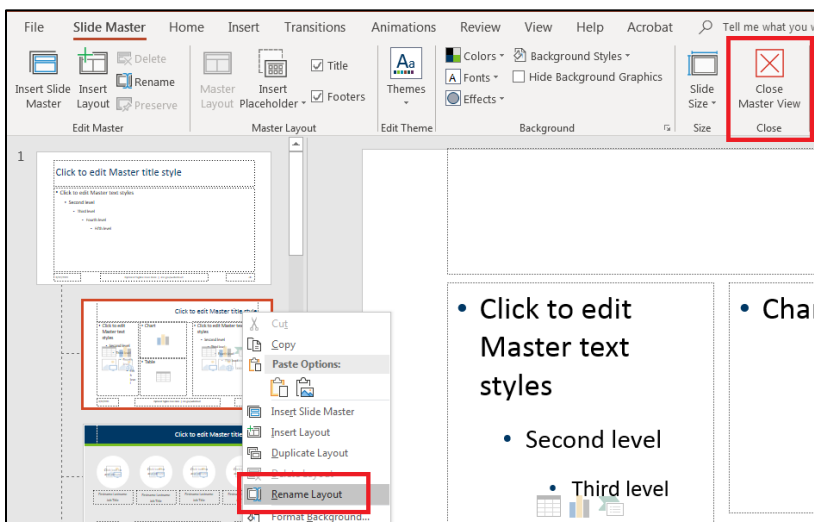
- Use Placeholders to add text, pictures, charts, tables, smart art, media, and clip art. If you are making a template, the **Content Placeholder** accepts any type of content.
- Content inside placeholders automatically transfers when you change layouts.

To format a custom layout

1. On the **View** tab, in the **Master Views** group, click **Slide Master** (Alt+W+M). The top slide on the left hand panel is the master slide for the entire theme. Changes to this slide have a global effect.



2. Choose a slide from the panel on the left-hand side of the screen you want the placeholders. Alternately, you can right click on a slide and select **Duplicate Layout** to create a completely new slide (Ctrl + D when in Slide Master View).
3. On the **Slide Master** tab, in the **Master Layout** group, select **Insert Placeholder** and choose the desired style (Alt+M+A).
4. Drag your mouse on the slide to create the placeholder.
5. The text in the "Text" and "Content" placeholder may be changed if desired.
6. To give the new format a name, right-click on the thumbnail and select **Rename Layout**.
7. Adjust font styles, colors, and size if desired.
8. Select **Close Master View** on the **Slide Master** tab.

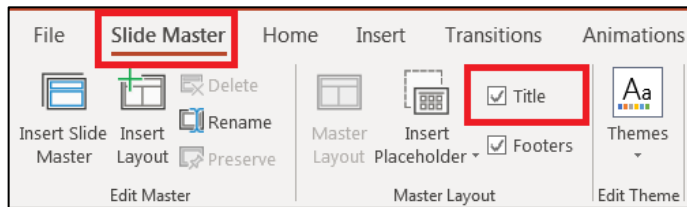


Slide titles

It is important to title all slides. A screen reader uses the titles in the same way it uses headings in a word document. It allows a blind user to scroll through the slides and jump directly to a specific location.

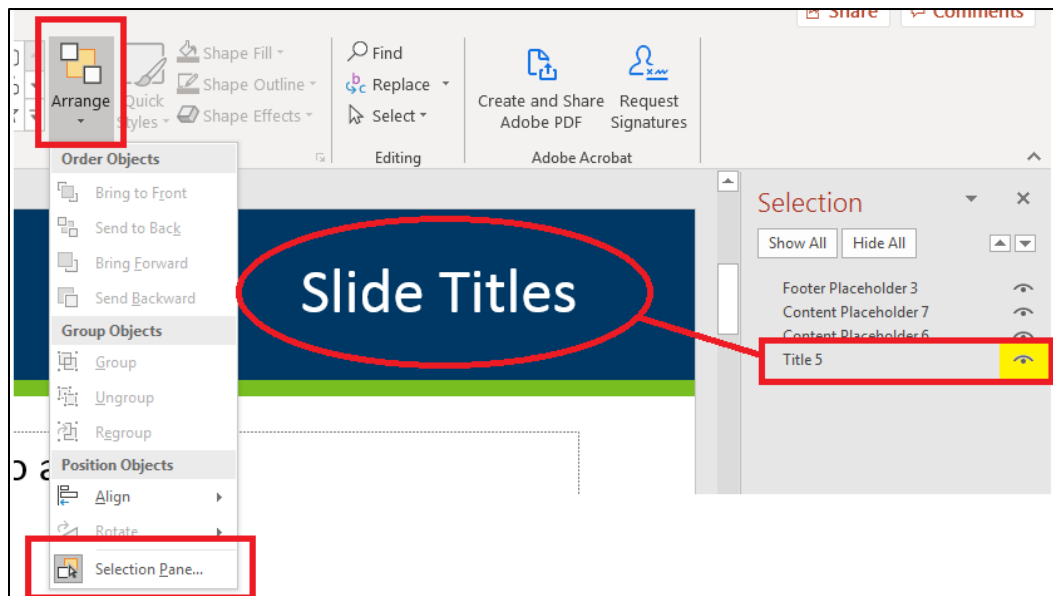
Title slides

1. Click on the title placeholder to select it, and then enter the title name.
2. If slide has no title placeholder, open the Slide Master to add it (Alt+M, E).



If you do not want the title to be visible on the slide:

1. On the **Home** tab, select **Arrange** in the **Drawing** group.
2. Choose **Selection Pane** (Alt+H+G+P).
3. Click the eye icon next to the text box.

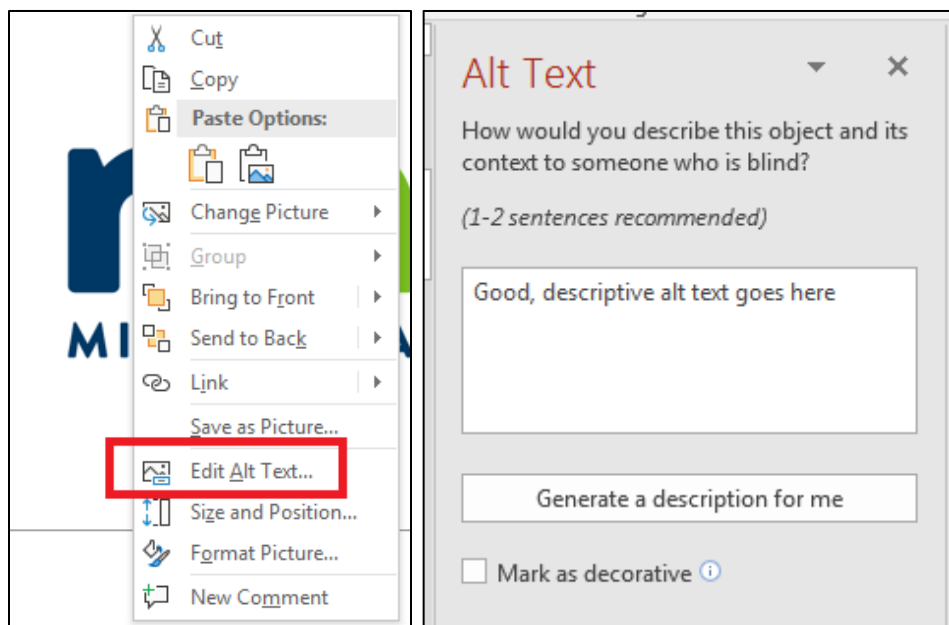


Alternative text

Just like making Word and Excel accessible, all images, graphs, charts, clip art, audio and video files, and embedded objects must have an alternate text associated with them. There is one exception; images that are strictly decorative and impart no meaning to the content do not need alternate text. These include things such as divider lines, borders, and “fluff” images. Most of these should be placed in the slide template (using the Slide Master). Alt Text in PowerPoint is added the same way as in Word and Excel.

1. Right click on the graphic (Shift+F10) and choose **Edit Alt Text**.
Alternately, you can open the **Picture Tools, Format Tab**, and then choose **Alt Text**.
2. Describe the image in the **Description** text box. Use a clear, concise description. If the image shows something that is not written out in the body of your document, you must describe it. If it is something that is fully described within your document, you can refer to the existing text description.
3. If the image has no information (a border, for example), then use the **Mark as decorative** check box on the Alt Text pane. Note: this feature may not be available on all versions of MS Office. For decorative items such as divider lines, leave the Alt Text field empty.

There is more information on Alt Text in the MS Word portion of this user guide.



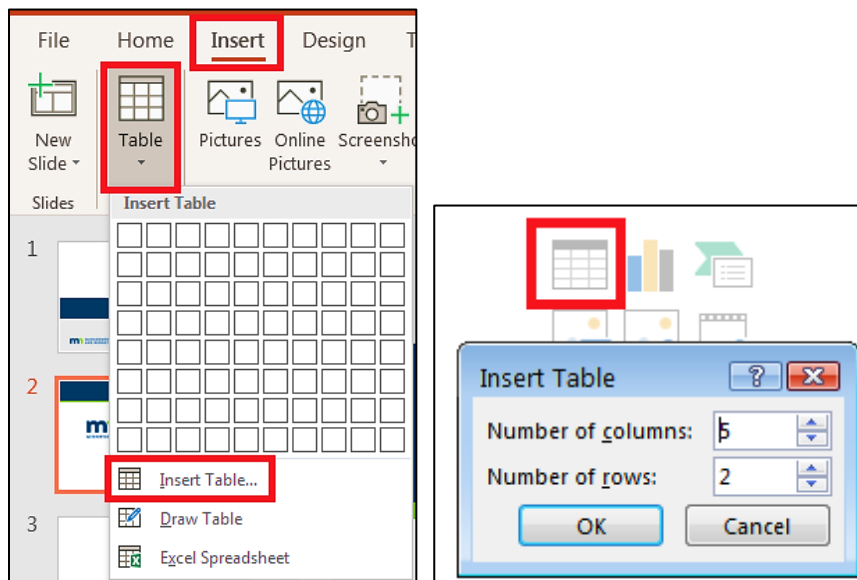
Tables

Insert a table

There are two ways to properly insert a table:

1. On the **Insert** tab, click the **Table** button.
2. Select **Insert Table** (Alt+N+T+I).
3. Enter the number of columns and rows you want.

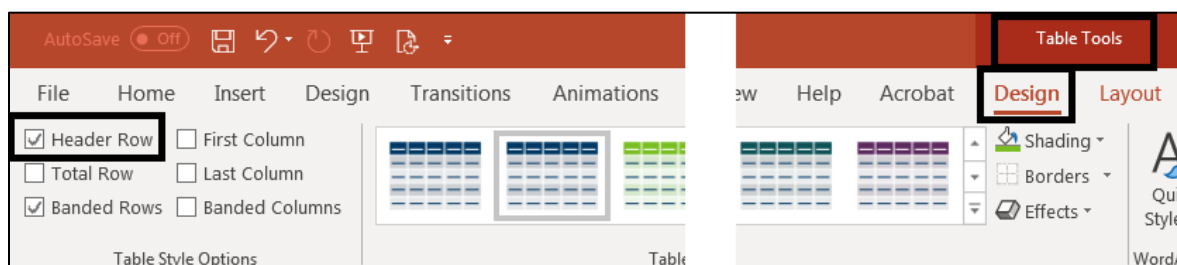
Alternately, select the Table icon in the content placeholder. Choose the number of columns and rows.



Column header

You must have clear column headers for easy navigation and providing context for the table's information. To add headers:

1. Click anywhere on the table to open the **Table Tools** group with the **Design** and **Layout** tabs.
2. In the **Table Style Options** group, select the **Header Row** check box.



Formatting

The same best practices for tables apply in PowerPoint as they do in Word.

- Do not use tables in place of columns. Use or make a layout that suits your needs.
- Do not use blank rows or columns as spacers. Adjust the line spacing instead.
- Use solid lines for borders. A screen reader may interpret dotted lines as a graphic.
- There should be no empty table cells. Screen readers usually skip them, making it impossible for the listener to know which column the information belongs in. If there are blank cells you have several options:
 - Use a dash (-), or;
 - Type NA for Not Applicable or Not Available, or;
 - Type a zero (0) – but only if the zero is the correct numerical value, or;
 - Type the word(s) “Blank” or “No Data.” You can highlight the color and change it to match the background color. Be careful – if the background color is anything other than white, it may be seen when printed in black and white or grayscale.
- Try not to merge or split cells unless you absolutely need to. That quickly becomes very confusing for people relying on assistive technology. If you do merge or split cells, make sure the auditory information makes sense.
- Make sure information makes sense when read left to right, top to bottom.
- Test the table for usability:
 - Click on the first cell.
 - Using the Tab key, go through the table ensuring the information would make sense to a auditory user.

Hyperlinks

There are two methods of creating links. One is to use both unique, descriptive text along with the URL. The other is to use unique, descriptive text on the slide, and then place all URLs on a reference slide at the end of the deck. This next section describes both ways. This is especially good for links with long URLs.

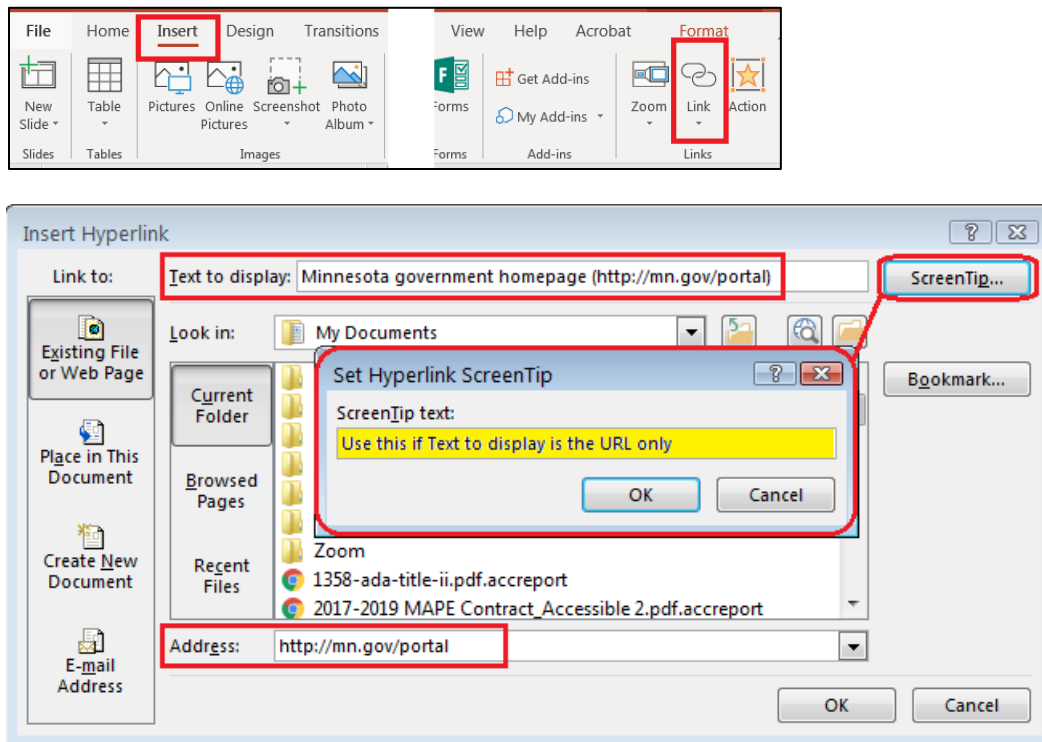
It is important to know how your PowerPoint will be distributed. If it will be converted into a PDF and sent out electronically, it is best to place to create the link using descriptive text on the slide and the URLs on a separate slide. PDFs are now treating unlinked URLs as hyperlinks, but without all the information necessary to make them accessible. If you are distributing the presentation as a PowerPoint, you can use either technique.

Example: Go to the [Minnesota State Government website \(www.mn.gov\)](http://www.mn.gov) for more information.

1. Select the location within content placeholder you want the link in.
2. On the **Insert** tab, select **Hyperlink (Ctrl+k)** in the **Links** group. The **Hyperlink dialog box** opens.
3. Type the descriptive name in the **Text to display** box.
4. Type the full URL in the **Address box**.

If you place just the descriptive text for the link on the slide, put a link containing the URL on the Reference slide at the end of the PPT. For links created with only the URL, you must add the descriptive text in the ScreenTip.

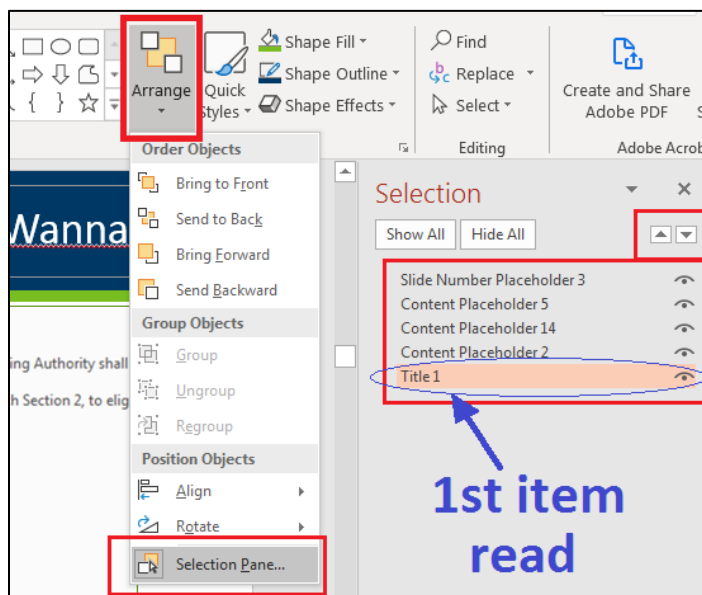
Example: www.mn.gov



Reading order

Screen readers may not read the information in the intended order. You can check the order and rearrange it to suit your needs.

1. On the **Home** tab, select **Arrange** in the **Drawing** group and then click on **Selection Pane** (Alt+F10).
2. The objects on the slide are read in the order they appear on the pane from bottom to top (the first object at the top of the list is actually the last object read).
3. To change the reading order, highlight the section you wish to move and click the **up** or **down** arrows. Alternately, you can click and drag the items in the order you want.

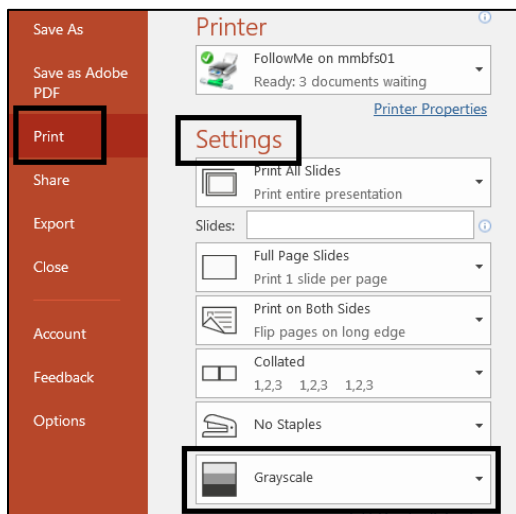


Color

Color can add a lot to your PowerPoint presentation. But keep in mind those users who have low vision, color blindness, or wish to print your slides in black and white. Here are some basic guidelines for including color in your presentation.

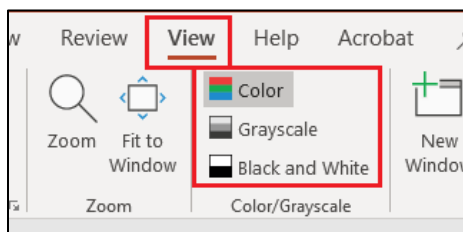
- Keep the contrast between text, images, and background high.
- Do not use red, orange, or green for text.
- When using graphs, use texture and/or high contrast colors. Follow this up with good Alt Text.
- Highlight text with arrows or circles instead of using color.

There are two ways to check how your presentation looks when printed in black and white.



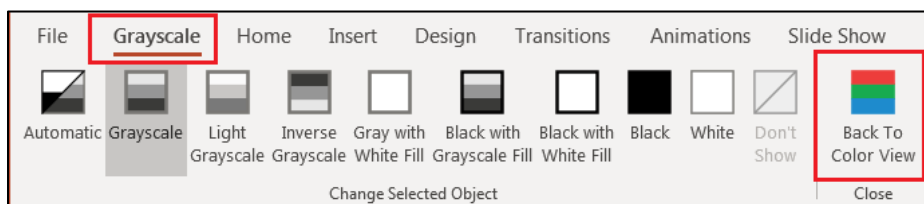
Method 1: Print Preview

1. Open the **File** tab and choose **Print**.
2. Change the print **Settings** to either **Grayscale** or **Pure Black and White**.



Method 2: Color/Grayscale command

1. On the **View** tab, select the **Grayscale** button in the **Color/Grayscale** region (Alt+W+O).
2. Click on an element you wish to view, and then select **Grayscale** in the selection panel to see how your slide looks (Alt+B+G).
3. Click **Back To Color View** when finished (Alt+B+C).

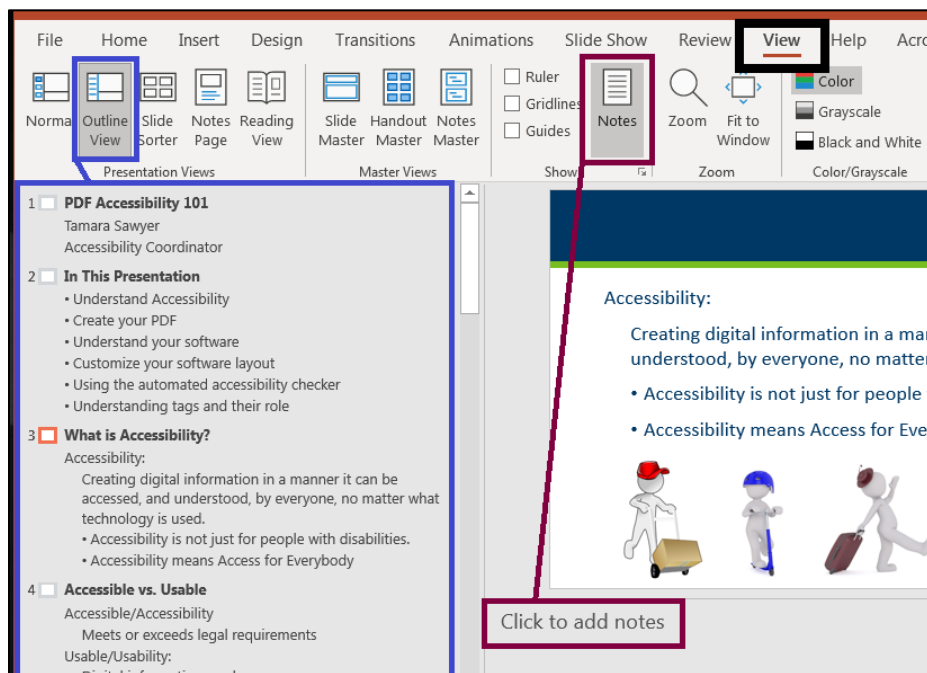


Note, before printing color presentations in grayscale, use print preview to make sure all elements are visible. You may have to change the properties to get them to print properly.

Outline and notes panels

There are two panels that can be very useful for the author, the Outline panel and the Notes panel.

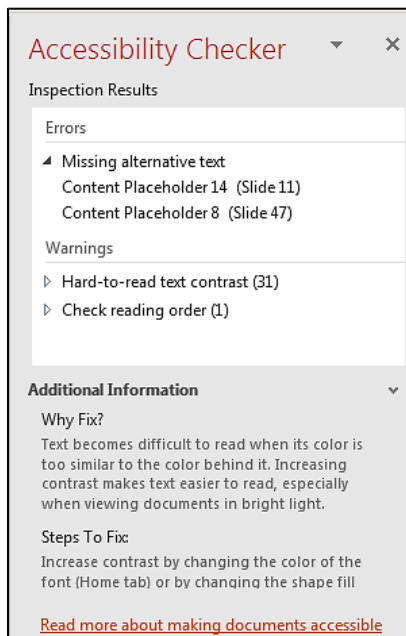
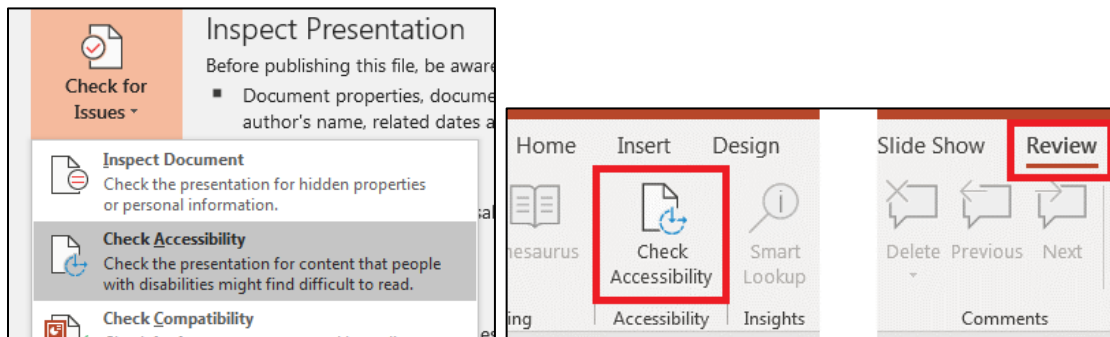
- The **Outline panel** is in the **Presentation Views** group on the **View** tab (Alt+W+PO). Click it to bring up the full text outline of your PowerPoint presentation. This panel makes it very easy to check:
 - Each slide has a unique and meaningful title.
 - The slides are in the proper order.
 - The text on each slide is in the proper order.
 - **All slide text appears on the outline.** Note: if text is on a slide that is not on the outline, that means it is in a text box. This text is invisible to assistive technology, so must be placed in a Content Placeholder.
- The **Notes panel (Ctrl _ + Shift + H)** is used to add information that does not show up on the slides. Any information in the Notes panel is not recognized by most assistive technology. Do not put information for the end-user in the notes panel. This is only used for the author or presenter of the PowerPoint. An example would be a note to remind the speaker to discuss something pertinent to that slide.



Accessibility checker

Microsoft has a built-in Accessibility Checker like Word and Excel. Check for issues after finishing the presentation.

1. On the **File** tab, select **Info** (Alt+F, I, I).
2. Select **Check for Issues** and then select **Check Accessibility**.
Alternately, use the **Check Accessibility** command on the **Review** tab (Alt+R, A1)
3. The **Accessibility Checker Inspection Results** panel opens along with your presentation.



4. There are three levels of alerts:
 - **Errors:** Fix all errors to make your content accessible for AT users (exception: tables do not need alt text; ignore this error).
 - **Warnings:** This is content that may pose a problem for people with disabilities to access or understand. You may or may not need to fix these.
 - **Tips:** Offers tips on how to make that area better organized or more user-friendly.
5. Click each item. There is an **Additional Information** panel below that explains the problem and how to fix it.

Create PDF

If you do not have Adobe Acrobat Pro, give your PowerPoint document to someone who does. Acrobat Pro is a superior conversion program.

If you have Adobe Acrobat Pro, there are multiple ways of saving a “.pptx” as a “.pdf”, but only two of them create accessible documents. **Do NOT use Save As and choose PDF (*.pdf)**. This does **not** produce an accessible document.

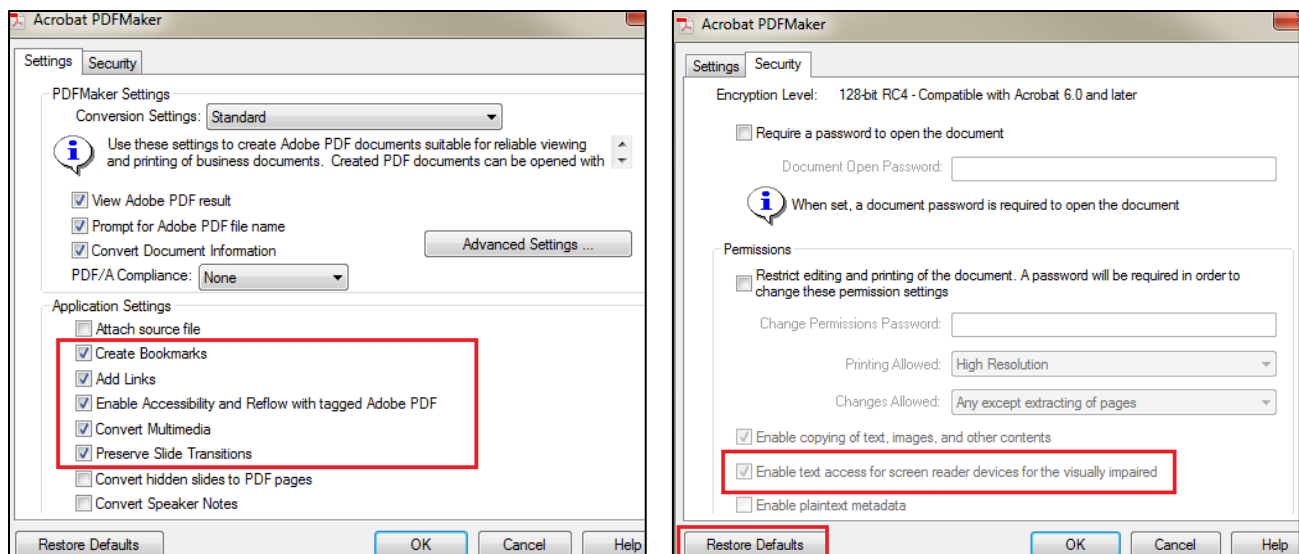
Create PDF

1. Open the **Acrobat** tab. Select **Preferences**.



2. On the **Settings** tab, ensure these boxes are checked:
 - **Create Bookmarks**
 - **Add Links**
 - **Enable Accessibility and Reflow with tagged Adobe PDF.**
 - **Convert Multimedia**
 - **Preserve Slide Transitions**
3. On the **Security** tab, ensure box labeled **Enable text access for screen reader devices for the visually impaired** is checked.
4. Click **Create PDF**.

Note: This box is grayed out but should be checked. If it isn't, check "Restore Defaults" and then select OK.



After converting the document into a PDF, check it for accessibility. Properly created documents may still have accessibility issues.

For help with PDF files, refer to [the Adobe Acrobat User Guide page \(https://helpx.adobe.com/acrobat/user-guide.html\)](https://helpx.adobe.com/acrobat/user-guide.html).

Note: PDFs have some inherent problems with accessibility. Even when doing everything correct, they may not be accessible for some users. Check for and correct all errors.

MULTIMEDIA

There are best practices for making multimedia files accessible for all users, including those with vision, hearing, motor, or cognitive disabilities. The following sections deal with the best practices, but not with specific types of software necessary to carry it out. Speak with your supervisor about the appropriate software for your needs.

General requirements

- Ensure site can be navigated by keyboard.
- Provide links to download sites for special applets or plug-ins to play multimedia.
- Provide keyboard navigation for all media players (play, stop, volume, etc).
- Do not interfere with accessibility features of programs and site.
- Do not override user-defined settings in the operating system.
- Do not rely on color for direction. Must use alternate means of communication in addition to color.
- Do not use an auto-play feature for audio files on your web sites. Always have an On/Off button and allow the user to make the choice to play the file or not.
- Provide keyboard shortcuts in both audio and visual formats when giving instructions. Example: To open the Font Dialog box, click on the Font Group launcher or press Ctrl+D.

Audio

- Provide a word-for-word transcript of the audio file. This can either be on the same page or as a link to a text file.
- Provide description of background sounds/music if it provides context and/or content.

Video and other multimedia

- Provide synchronized open or closed captioning for all files that contain speech or other auditory information.
- Provide synchronized audio equivalent of all visual information necessary for understanding the content. Example: Voiceover explaining a task a person is carrying out.
- Do not use any flashing, strobing, blinking, or flickering elements between rates of 2 Hz and 55 Hz (three flashes/second) for any video, whether live or animated. This range can cause seizures, dizziness, and nausea, as well as being distracting for users with cognitive disabilities.
- If you must use some of these elements on a web page, you must place a warning on the web page.
- Provide a play/stop button for media. Do not have it automatically play when a person goes to the site.

MICROSOFT WORD STYLES

Styles			
Clear All	Default	¶ Normal	¶
Default Paragraph Font	a No Spacing	¶ Heading 1	¶
Heading 2	¶ Heading 3	¶ Heading 4	¶
Heading 5	¶ Heading 6	¶ Heading 7	¶
Heading 8	¶ Heading 9	¶ Title	¶
Subtitle	¶ Subtle Emphasis	a Emphasis	a
Intense Emphasis	a Quote	¶ Intense Quote	¶
Subtle Reference	a Intense Reference	a Book Title	a
Caption	¶ Bibliography	¶ TOC 1	¶
TOC 2	¶ TOC 3	¶ TOC 4	¶
TOC 5	¶ TOC 6	¶ TOC 7	¶
TOC 8	¶ TOC 9	¶ TOC Heading	¶
Balloon Text	¶ Block Text	¶ Body Text	¶
Body Text 2	¶ Body Text 3	¶ Body Text First Indent	¶
Body Text First Indent 2	¶ Body Text Indent	¶ Body Text Indent 2	¶
Body Text Indent 3	¶ Closing	¶ Comment Reference	a
Comment Subject	¶ Comment Text	¶ Date	¶
Document Map	¶ E-mail Signature	¶ Endnote Reference	a
Endnote Text	¶ Envelope Address	¶ Envelope Return	¶
FollowedHyperlink	a Footer	¶ Footnote Reference	a
Footnote Text	¶ Hashtag	a Header	¶
HTML Acronym	a HTML Address	¶ HTML Cite	a
HTML Code	a HTML Definition	a HTML Keyboard	a
HTML Preformatted	¶ HTML Sample	a HTML Typewriter	a
HTML Variable	a Hyperlink	a Index 1	¶
Index 2	¶ Index 3	¶ Index 4	¶
Index 5	¶ Index 6	¶ Index 7	¶
Index 8	¶ Index 9	¶ Index Heading	¶
Line Number	a List	¶ List 2	¶
List 3	¶ List 4	¶ List 5	¶
List Bullet	¶ List Bullet 2	¶ List Bullet 3	¶
List Bullet 4	¶ List Bullet 5	¶ List Continue	¶
List Continue 2	¶ List Continue 3	¶ List Continue 4	¶
List Continue 5	¶ List Number	¶ List Number 2	¶
List Number 3	¶ List Number 4	¶ List Number 5	¶
List Paragraph	¶ Macro Text	¶ Mention	a
Message Header	¶ Normal (Web)	¶ Normal Indent	¶
Note Heading	¶ Page Number	a Placeholder Text	a
Plain Text	¶ Salutation	¶ Signature	¶
Smart Hyperlink	a Strong	a Table of Authorities	¶
Table of Figures	¶ TOA Heading	¶ Unresolved Mention	a

ACCESSIBILITY CHECKER RULES

The following section is taken directly from the [Microsoft Office Support website](https://support.office.com/en-us/article/rules-for-the-accessibility-checker-651e08f2-0fc3-4e10-aaca-74b4a67101c1#bkmk_checkererrorswarnings) :
(https://support.office.com/en-us/article/rules-for-the-accessibility-checker-651e08f2-0fc3-4e10-aaca-74b4a67101c1#bkmk_checkererrorswarnings).

The Accessibility Checker verifies your file against a set of rules that identify possible issues for people who have disabilities. Depending on how severe the issue is, the Accessibility Checker classifies each issue as an error, warning, or tip.

- Error. Content that makes the document difficult or impossible to read and understand for people with disabilities
- Warning. Content that in most (but not all) cases makes the document difficult to understand for people with disabilities
- Tip. Content that people with disabilities can understand but that could be presented in a different way to improve the user's experience
- Intelligent Services. Content that is automatically made accessible by AI, and that you should review for accuracy and context

Accessibility Checker errors, warnings, and tips

The following tables itemize the Accessibility Checker rules, what they check for, where to learn how to fix each issue, and why you should fix each one.

Errors

If content in the file makes it very difficult or impossible for someone with a disability to use, the Accessibility Checker classifies it as an error.

Rule	Accessibility Checker verifies	Why fix this?	Applies to these applications
All non-text content has alternative text (alt text).	All objects have alt text and the alt text doesn't contain image names or file extensions.	Screen readers speak the alternative text to describe images and other non-text content that users can't see. Based on alt text, users can understand the purpose and meaning of the described content.	Excel , PowerPoint , Word , Outlook , OneNote , Visio

Rule	Accessibility Checker verifies	Why fix this?	Applies to these applications
Tables specify column header information.	Tables and/or blocks of cells have the header box selected or a header row indicated.	Users rely on the table headings to understand the content that is subsequently read by the screen reader. Also, assistive technology often uses the table header row to help convey to the user the current cursor location in the table and to provide information that enables the user to navigate the table.	Excel , PowerPoint , Word , Outlook , OneNote
All slides have titles.	Slides have titles.	Slide titles enable users to navigate within a presentation, including finding and selecting a single slide to immediately go to.	PowerPoint
Cells in an Excel worksheet don't use red-only formatting for negative numbers.	Cells that are set to Number format and use only the red color for negative numbers (e.g. show 1000 in red instead of -1000).	Users who have difficulty distinguishing color won't be able to tell the difference between positive and negative values.	Excel
Image or object is inline with the text.	Images or objects are positioned inline with the surrounding text.	If the image or object is not inline, it may be difficult for screen reader users to interact with the object. It may also be difficult to know where the object is relative to the text.	Word
Document access is not restricted.	Any document that has disabled the Access content programmatically option in the document permissions settings: Review > Restrict Editing > Restrict permission.... Select Restrict permission to this document > More options.	Information Rights Management (IRM) protection may prevent devices such as screen readers from having access to this document. For more info, go to Allow changes to parts of a protected document .	Excel , PowerPoint , Word

Warnings

If the content in most (but not necessarily all) cases is difficult for people with disabilities to understand, the Accessibility Checker gives a warning.

Rule	Accessibility Checker verifies	Why fix this?	Applies to these applications
Table has a simple structure.	Tables are simple rectangles with no split cells, merged cells, or nesting.	Users navigate tables via keyboard shortcuts and assistive technology, which rely on simple table structures.	Excel , PowerPoint , Word , Outlook , OneNote
Sheet tabs have meaningful names.	Sheets in the workbook include descriptive information and there are no blank sheets.	Descriptive sheet names, such as “October sales totals,” make it easier to navigate through workbooks than do default sheet names, such as “Sheet1.”	Excel
Sufficient contrast between text and background.	Colors of the text and background are different enough to make the text easy to see.	People with low vision often find it hard to read text that does not contrast with the background. If your document has a high level of contrast between the text and background, more people can see and use the content.	Excel , PowerPoint , Word , Outlook
Closed captions are included for inserted audio and video.	All audio and video objects have closed captioning.	Without captioning, the information in a video or audio segment may be entirely lost to people with disabilities.	PowerPoint , OneNote
Slide titles in a deck are unique.	Non-blank slides have unique titles.	Users rely on titles to know where they are in the deck and to navigate the deck.	PowerPoint

Tips

When there is content that people with disabilities can understand but that could be better organized or could be presented in a way that can improve their experience, you see a tip.

Rule	Accessibility Checker verifies	Why fix this?	Applies to these applications
The reading order of the objects on a slide presentation is logical.	Objects on a slide are in a logical order.	Assistive technology reads slides and the elements on them in the specified order. If the reading order isn't logical, the content doesn't make sense.	PowerPoint
Layout tables are structured for easy navigation.	The layout order is logical for the language, and the tab order is not circular.	Users rely on the table layout to navigate through the content. It must be ordered logically for users to understand and navigate the content.	Word

Rule	Accessibility Checker verifies	Why fix this?	Applies to these applications
Documents use heading styles.	Content is organized with headings and/or a Table of Contents (TOC).	Headings and TOCs provide structural context to users and enable navigation and easier searching in the document.	Word , Outlook , OneNote

Intelligent services

The Accessibility Checker lists all pictures with an alt text generated by the Intelligent Services.

Rule	Accessibility Checker verifies	Why fix this?	Applies to these applications
Suggested alternative text.	All pictures whose alt text was generated by Office's image recognition service.	<p>The Intelligent Services automatically generates alt text in your document (when the feature is switched on). Review each suggestion carefully to make sure it accurately describes your picture. If you want to edit the suggestion, type over the suggested text in the Description box.</p> <p>To learn how to switch on this feature, go to Turn automatic alt text on.</p>	PowerPoint , Word , Outlook

Accessibility checker limitations

There are some accessibility issues the Accessibility Checker can't detect. Also, some issues listed in the Accessibility Checker findings aren't necessarily accessibility issues that need to be fixed.

- Color: Information is conveyed using color alone.
- Closed captions: The Accessibility Checker reports missing closed captions in a video, but if your video already has in-band closed captions, open captions, or has no dialog, then there might be no accessibility issue with the video.

URLs for the Microsoft links in table:

Word: <https://support.office.com/en-us/article/make-your-word-documents-accessible-to-people-with-disabilities-d9bf3683-87ac-47ea-b91a-78dcacb3c66d>

Excel: <https://support.office.com/en-us/article/make-your-excel-documents-accessible-to-people-with-disabilities-6cc05fc5-1314-48b5-8eb3-683e49b3e593>

PowerPoint: <https://support.office.com/en-us/article/make-your-excel-documents-accessible-to-people-with-disabilities-6cc05fc5-1314-48b5-8eb3-683e49b3e593>

Outlook: <https://support.office.com/en-us/article/make-your-outlook-email-accessible-to-people-with-disabilities-71ce71f4-7b15-4b7a-a2e3-cf91721bbach>

OneNote: <https://support.office.com/en-us/article/make-your-onenote-notebooks-accessible-to-people-with-disabilities-3c82a6cf-17aa-4e8b-bb2b-7ce210855616>

Turn automatic alt text on: https://support.office.com/en-us/article/everything-you-need-to-know-to-write-effective-alt-text-df98f884-ca3d-456c-807b-1a1fa82f5dc2#bkmk_autoalton

Allow changes to parts of a protected document: <https://support.office.com/en-us/article/allow-changes-to-parts-of-a-protected-document-187ed01c-8795-43e1-9fd0-c9fca419dadf>

RESOURCES

http://mn.gov/mnit/images/Stnd_State_Accessibility.pdf

<http://www.howto.gov/web-content>

<http://webaim.org/>

<http://www.section508.gov/>

http://www.section508.va.gov/section508/support/terms/term_at.html

<http://www.section508.gov/Section-508-Of-The-Rehabilitation-Act>

<http://www.w3.org/>

<http://www.w3.org/standards/webdesign/accessibility>

http://romeo.elsevier.com/accessibility_checklist/

<https://support.office.com>

<https://www.revisor.mn.gov/statutes/>

http://www.ehealth.va.gov/508/tutorials/pdf/13forms_1.asp

<http://governor.state.tx.us/disabilities/accessibledocs/>

<http://www.freedomscientific.com/documentation/screen-readers.asp>

<https://www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-section-508-standards/section-508-standards>

<http://www.udlcenter.org/aboutudl/whatisudl>

<https://www.eeoc.gov/facts/ada17.html>