

Who am I?

Joseph Sherman, Digital Accessibility Analyst, Office of Equity and Human Rights.

joseph.sherman@portlandoregon.gov

Open Office Hours every other Tuesday, 1pm to 3pm. Email for more information, or to set up consults and appointments.

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Why care about accessibility?

You want to reach the widest audience possible. You are required to provide accessible material under Federal, State, and local laws.

Accessible documents

A document or application is considered accessible if it meets certain technical criteria and can be used by people with disabilities. This includes access by people who have mobility challenges, are blind, low vision, deaf, hard of hearing, or who have cognitive difficulties. For text documents, we are primarily concerned with Assistive Technology users. Assistive Technology is any hardware or software that helps a user access digital content. Examples of Assistive Technology are screen readers, screen magnifiers, alternate input devices, and voice control.

In general, properly designed *html* is the most accessible format. PDF files are difficult to make completely accessible. They are also difficult to consume via mobile devices.

Creating accessible documents

To ensure that documents are ultimately accessible, content authors must utilize the formatting and layout options within Microsoft Word and Adobe Acrobat Pro that support structural markup. This structural markup ensures that assistive technology software can correctly discern and interpret the structure of the document.

Keep this in mind if you plan to convert a document to a PDF:

- Prep the Word document first so that it is accessible.
- Then convert it to a PDF.

- If a document needs significant remediation, it is generally easier to remediate the source file within Word than to work with the PDF.

List of best practices:

- Do not use images of text. Images of text are inaccessible to assistive technology.
- All documents must have descriptive titles.
- Use headings to structure and organize your document. Ensure that all heading styles are applied in a hierarchical manner. Only use headings with a name of Heading 1, Heading 2, etc.
- Include alt text for images, charts, and graphs. Also, include captions for charts and graphs where applicable.
- Try to avoid the use of text boxes. They are not accessible in Word. Use text styles to mimic a text box.
- Keep tables simple --- avoid nested tables and merged cells in Word. Do not use tables for layout. Include column headings and specify a header row for tables.
- Use descriptive hypertext links except for print documents or simple URLs.
- Use bulleted and numeric lists for related items.
- Include a table of contents for long documents (which Word can generate if you use styles).
- Avoid watermarks. If you must use one, make sure that the information it contains is also included elsewhere in the document.
- Be cautious as to the colors you choose. Some colors and color combinations can be difficult to read, especially for someone who has color blindness. Provide sufficient color contrast. Also, do not use color or styles alone to convey meaning.
- Include closed captions or transcripts for any audio or video elements.
- Provide file type and size when posting documents to the web. This allows users to decide whether they want to download the file.
- Do not use the "Enter" key to create space in your document. Instead use the paragraph spacing options built into Word.

Details for creating accessible Word documents

Headings and Styles

Paragraph headings (such as those you find in this document), provide not only visual cues to major topics, but they also provide a means for navigating the document by a assistive technology. Paragraph headings are not individually formatted (e.g., larger font size, bolded, and underlined), but are formatted by using styles.

Heading levels should be applied to paragraph headings based upon their hierarchy within a document. For example, the following headings may be applied as follows:

- Heading 1 – Title of document
- Heading 2 – Major headings
- Heading 3 – Subheadings
- Etc.

To apply a style to a paragraph heading:

1. Click the **Home** tab.
2. Click on the paragraph that you want to style as a heading.
3. From the Styles section of the ribbon, click on the desired style.



You can modify the default styles by Right-clicking on the Style and select modify, or “Update Style to Match Selection” if you have already styled your content.

Images

Images must have a description that explains the purpose or the content of that image. This description, referred to as alt text (or alternate text), is read by assistive technology.

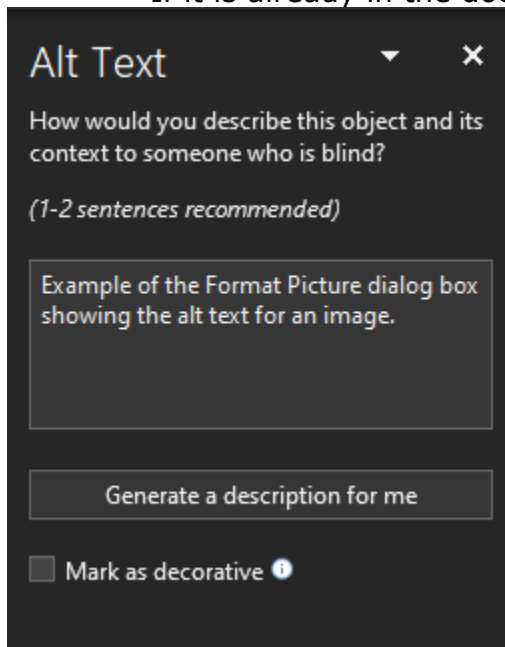
To add alt text to an image:

1. Right click on an image.
2. From the menu, select: **View Alt Text**.
3. In the box, type a brief description.
4. If the image does not convey information, select the “Mark as decorative” checkbox.

Alternative text should communicate the message conveyed by the image.

How to Create Good Alternate Text:

- Consider the content and function of your image.
- If it provides content to your document, make sure that the information the image provides is described in the alt text.
- Purely decorative images should have null alternative text or mark as decorative.
- Differentiate photos from illustrations from logos, etc.
- Do not repeat the information that is contained in the document itself into the alt text. If it is already in the document, that should be enough.



Tables

Do not use Tables for layout. Tables usually include column headers and may include row headers. Use the Insert Table command, not the Draw Table option.

Example of a table with column headers:

Class List

Name	Score	Date
John Smith	90	2/12/2023
Jane Doe	67	2/14/2023
Eric Mann	87	2/17/2023

Table Headers:

Make your tables more accessible to assistive technology using the header row option. (Also, this option is useful for another purpose: If you have a table that splits across more than one page, it will repeat the column headings for every page on which the table appears.)

To add a header row:

1. Type column headings in the first row of the table.
2. Select the first row containing the column headings.
3. From the ribbon, select: *Layout*.
4. Click the **Repeat Header Rows** button.
5. In addition, select **Header Row** in the Table Design Tab.

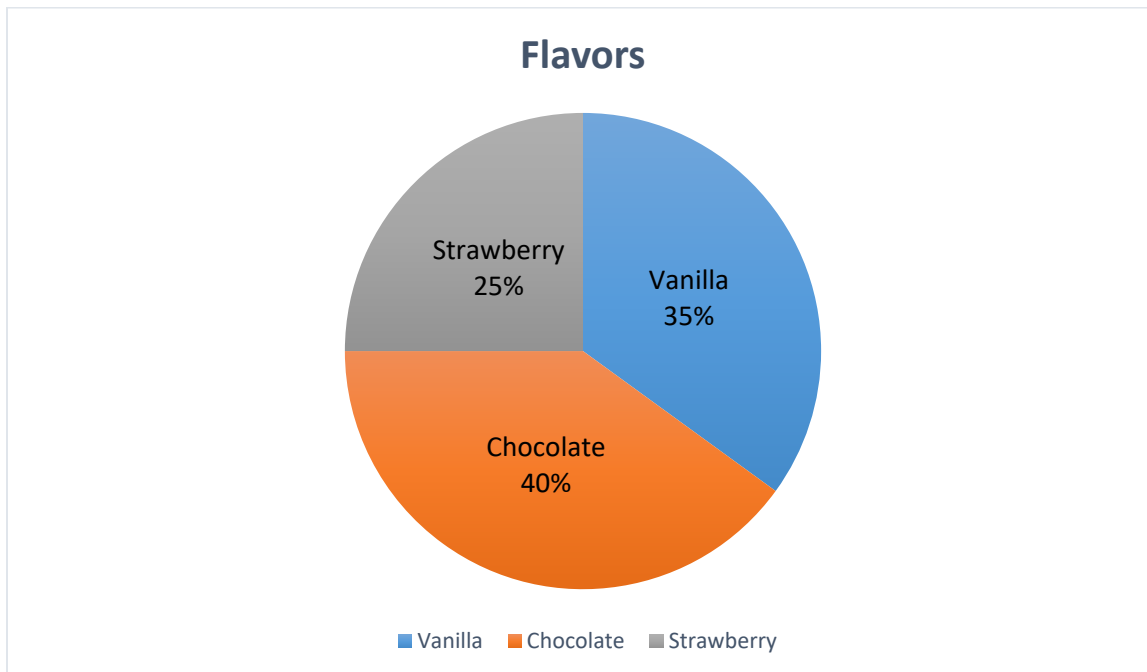
If your table has column headers, select the **First Column** option in the Table Design Tab.

Charts and Graphs

Charts and graphs should have alt text as well as a short caption when appropriate.

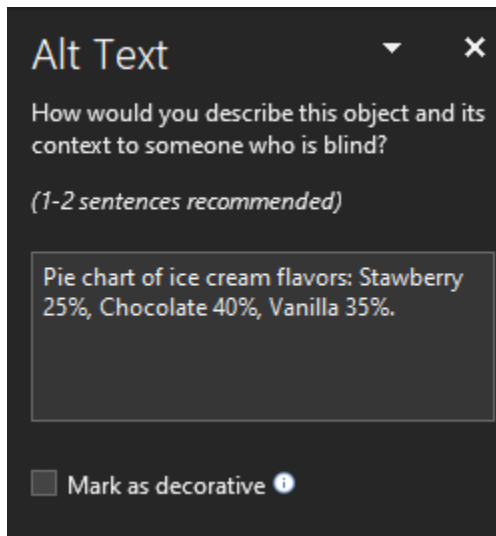
Example of a chart with a caption:

Figure 2: Ice Cream Flavor Pie Chart



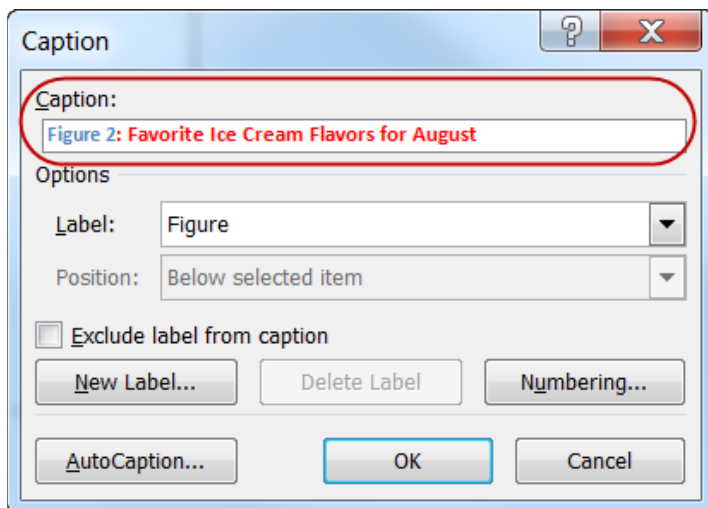
To add alt text to a chart:

1. Right click on the chart's border.
2. From the menu, select: **View Alt Text**.
3. In the box, type a summary that explains the chart.



To add a caption to a chart:

1. Right click on the chart's border.
2. From the shortcut menu, select: **Insert Caption**.
3. In the Caption box, type the desired text for the caption.



4. Format and position the caption as desired. Put the caption before the chart when possible.
5. Click **OK**.

List Items

Lists of related items should be formatted using bullets or automatic numbering. This is important since assistive technology will announce that there is a bulleted list and then read those items. Often a list can be used as an alternative to a table when presenting information.

To create a list:

- Type each item on a single line.

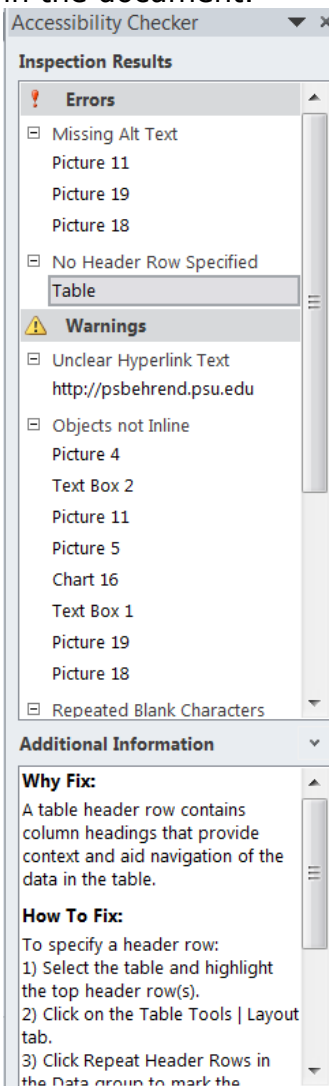
- Select the group of items.
- Click the bullet or numeric bullet button.
- Alternatively, take advantage of Word's automatic features to make lists.

Accessibility Checker (all Windows and Mac 2016+ Office versions)

The Accessibility Checker is a great tool to check for problems in your Word document. It points out things such as missing alt text, missing table row headers, unclear hyperlink text, and more. It also provides instructions on how to fix any items that have been flagged as inaccessible.

To use the Accessibility Checker:

1. Click on the **Review** tab.
2. Select: **Check Accessibility**.
3. An Inspection Results pane will appear. It provides a list of errors and warnings that it found in the document.

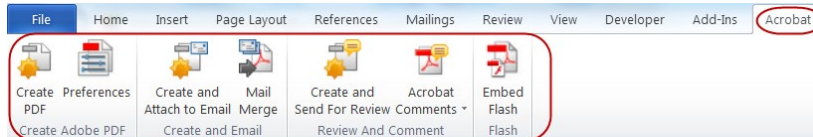


4. Under the errors section, click on an item.
5. Word navigates to the item in error.
6. In the Additional Information section of the Inspection Results pane, information is given explaining why the item needs fixed and how to remedy the error.
7. Under the warnings section, click on an item.

8. In the Additional Information section of the Inspection Results pane, information is given explaining why the item needs fixed and how to remedy the error.
9. Fix the errors and warnings as appropriate.
10. Note that just passing the Word accessibility checker does not mean your document is completely accessible. Some items must be manually verified.

Save a Word Document as a PDF

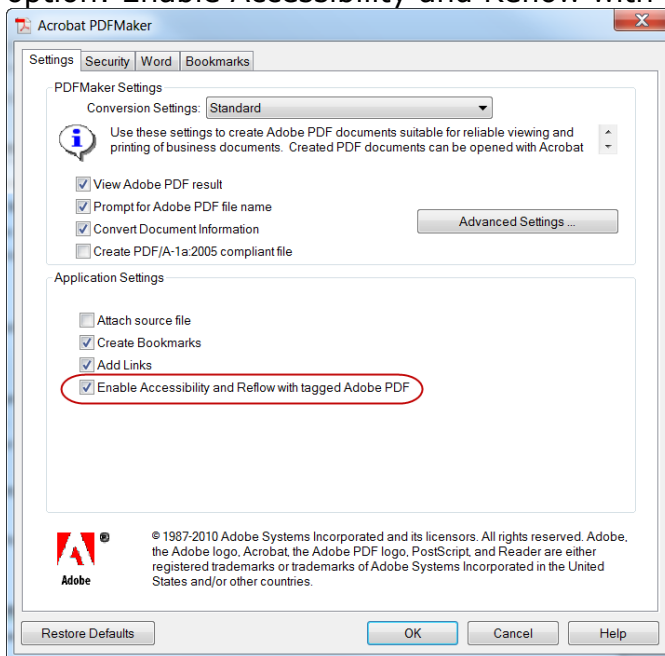
There is more than one way to save a Word document as a PDF. You can save a document as a PDF by using Adobe's Acrobat add-in or Word's add-in. It is essential that you create an accessible Word document *before* you convert it to a PDF. Do not use "Print to PDF" as that will result in an untagged PDF.



Adobe's add-in often produces a better-tagged and accessible PDF (especially for more complex documents). If you have the full version of Adobe Acrobat Pro DC installed on your PC, you will have an Acrobat tab on the ribbon. All Portland staff can have Acrobat Pro DC installed on their machine.

To save a document as a PDF (if you have the Acrobat tab in the ribbon):

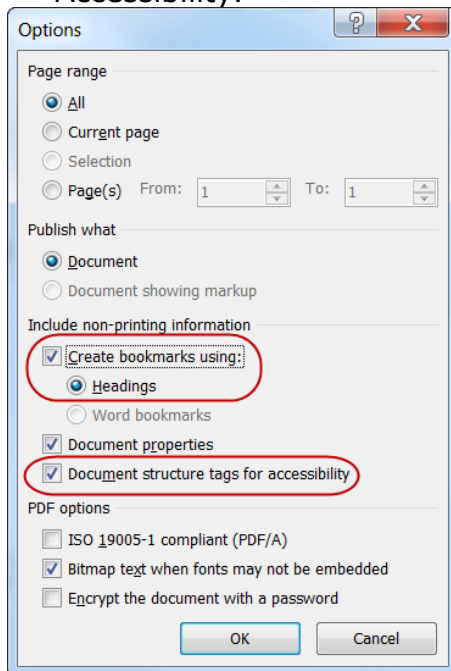
1. Open a Word document.
2. Prepare the document so that it is accessible.
3. Click the **Acrobat** tab.
4. Click the **Preferences** button.
5. In the Application Settings section, make sure that there is a checkmark in the box for this option: **Enable Accessibility and Reflow with Tagged Adobe PDF**.



6. Click **OK**.
7. Click the **Create PDF** button.
8. Click the **Save** button.

To save a document as a PDF (if you DO NOT have the Acrobat tab in the ribbon):

1. Open a Word document.
2. Prepare the document so that it is accessible.
3. Click the **File** tab.
4. From the menu, select: **Save as**. Select the location where you want to save the file (i.e. Current Folder, Recent Folders, or Browse options).
5. Click the drop-down arrow for the Save as Type box and select: **PDF**.
6. Click the **Options** button.
7. Click to place a checkmark in the box for this option: Create Bookmarks Using.
8. Underneath the option, 'Create bookmarks using', click: Headings.
9. Click to place a checkmark in the box for this option: Document Structure Tags for Accessibility.



10. Click **OK**.
11. Click the **Save** button.

Details for accessible PDF documents

The easiest method is to use accessible source documents and convert to PDF. If you created a PDF from a scanned document, then it will be inherently inaccessible to assistive technology and other assistive technologies. The document will also be less useful because graphic representations of text cannot be selected, edited, or searched.

In this case, it is necessary that you convert the scanned images of text to searchable content using optical character recognition (OCR) before addressing the accessibility features of the document.

The second basic requirement for a PDF document to be accessible is for it to be "tagged" with hidden labels ("tags") that describe the structure of the document (e.g., that text should be interpreted as a header, paragraph, table cell, etc.). Assistive technologies use these tags to convey the document's information effectively to people with access needs, and use the tag tree to convey reading order. Each element in the document should be identified with the appropriate tag.

The other requirements for a PDF document to be accessible (e.g., alternate text, logical reading order, etc.) can only all apply once the document is tagged.

Adobe Acrobat Pro DC provides an Accessibility Check within the Accessibility tool panel. Color contrast and logical reading order will always need manual checks. The logical reading order for assistive technology is based on the Tags panel order.

In addition to Full Check, Acrobat provides other methods to check PDF accessibility:

- Use the Reading Order tool, along with the Tags, Order, and Content panels to examine the structure and contents of a PDF.

Adobe has provided a series of [tutorials on accessible PDF creation](#).

PowerPoint

The following tips will help make your PowerPoint presentations more accessible:

- Use built-in templates and layouts.
- Try to avoid the use of text boxes (use content placeholders on template layouts instead). Text boxes are generally accessible in PowerPoint but require remediation if converted to Word for large print or braille.
- Every slide must have a unique descriptive title.
- Add alternative text descriptions to images. Images on the Slide Masters are ignored by assistive technology.
- Use bulleted and numbered lists.
- Smart Art components are not accessible. Paste as a graphic and describe the graphic in Alt-text.
- Make sure slide contents can be read by assistive technology in the order that you intend. The Selection and Reading Order Panes control the reading order for the PowerPoint file. The Selection Pane reads from bottom to top, and the Reading Order Pane reads from top to bottom. The panes are linked, so a change in one pane will change the order in the other pane.
- PowerPoint Designer may interfere with Reading Order. Be sure to confirm the order in the Selection or Reading Order Panes.
- Add meaningful and accurate hyperlink text.
- Ensure that color is not the only means of conveying information.
- Use sufficient contrast for text and background colors.
- If you use tables, create a simple table structure for data only, and specify header information.
- Run the accessibility checker to identify possible issues.

More details at: [Creating accessible PowerPoint presentations from Microsoft](#)

Please let me know how I did by filling out this short [form](#)

<https://forms.office.com/g/6uhz8P2s4v>